A worker falls 20 metres. A manual labourer is hit by a forklift truck. A cook is splattered with boiling oil. A co-worker suddenly has difficulty breathing. What should you do?

Accidents happen fast. So you have to be ready to act quickly and efficiently in emergency situations. The casualty's life may depend on it; thus, the action taken by first aiders in the workplace is of crucial importance.

A basic training tool developed by the Commission de la santé et de la sécurité du travail (CSST), the First Aid in the Workplace manual offers first aiders a well-structured, efficient intervention plan that will help them respond appropriately in emergencies. Concise texts and numerous illustrations cover key topics such as the survey, resuscitation and first aid techniques to be used in assisting people suffering from an emergency medical condition or trauma. This edition also includes the new Heart and Stroke Foundation of Québec standards for cardiopulmonary resuscitation (CPR), a section on defibrillation and the use of automated external defibrillators (AED), a section on stress management in emergency situations, and additional information on oxygen therapy. This manual is therefore an essential part of the process first aiders follow in acquiring the knowledge and skills they need to intervene effectively.

First Aid in the Workplace is a reference document useful to anyone who may be required to administer first aid in emergency situations. A manual designed to be read and reread periodically ... to ensure readiness at all times.
First Aid in the Workplace

LES PUBLICATIONS DU QUÉBEC
1000, route de l'Église, bureau 500, Québec (Québec) G1V 3V9

SALES AND DISTRIBUTION
Case postale 1005, Québec (Québec) G1K 7B5
Telephone: 418 643-5150 or toll-free: 1 800 463-2100
Fax: 418 643-6177 or toll-free: 1 800 561-3479
Web site: www.publicationsduquebec.gouv.qc.ca
Foreword

By virtue of its mandate, the Commission de la santé et de la sécurité du travail (CSST) is responsible for applying the laws and regulations in respect of occupational health and safety, including the First-aid Minimum Standards Regulation.

This Regulation requires employers of establishments and principal contractors on construction sites to provide for effective first aid services and to ensure that a minimum number of first aiders are available at all times during working hours. The Regulation also specifies the circumstances under which nursing staff must dispense emergency medical care. The following distinctions are made between “first aid” and “emergency medical care”: “first aid” is provided by first aiders, whereas “emergency medical care” is administered by personnel trained in prehospital care (first responders, paramedics/ambulance technicians) or by qualified medical personnel (health-care practitioners).

This manual deals strictly with first aid. It is intended to help first aiders acquire the knowledge they require to meet the needs that arise in various environments — particularly in their own workplace — and to serve as a reference tool they can rely on in their day-to-day activities.

The intervention of first aiders in the workplace is part of an overall context in which access to prehospital emergency services, such as those provided by first responders and paramedics/ambulance technicians, is offered in virtually every inhabited area of Québec. The role of the first aider is to take the crucial steps of alerting Emergency Medical Services (EMS), maintaining the life of the injured person, preventing his injuries from worsening, and providing comfort and reassurance. Care of the injured person must be

1. The masculine form is used throughout this text solely in the interests of readability. No gender discrimination is intended.
handed over to the next level of intervention as soon as possible to make sure the casualty receives all the specialized treatment his condition may require, within the shortest possible timeframe.

In this sixth edition of the manual, the care given by first aiders is aligned with that provided by EMS in order to ensure continuity in the effective care dispensed to casualties. This edition takes into account newly accepted standards in the area of first aid and cardiopulmonary resuscitation. It incorporates the procedural approach outlined in the Practical Guide for First Aiders in the Workplace – Intervention Protocols.

It is our hope that this document will support the training of first aiders in the workplace and ensure that those who call for help in the event of an accident receive all the assistance they need.
Acknowledgements

In addition to the people who in one way or another contributed to the previous editions, we wish to thank all those who have helped breathe new life into first aid in the workplace by contributing to the preparation of this edition of the manual. In this sixth edition, we have updated the approach taken to first aid on the basis of the accessibility of emergency prehospital care.

We would also like to thank Cégep de Sainte-Foy, and particularly Hélène Morin, an Educational Consultant in the continuing education department, as well as the writers of this manual — Céline Deschênes, André Caron and Éric Hamel.

Finally, we wish to extend our thanks to Michèle Mainguy from Secourisme PME Québec for her special collaboration in the writing of the sections “Stress Management in Emergency Situations” and “Oxygen Therapy.”
# Table of Contents

## Introduction
- Overview of the Manual 3
- Proposed Approach 4
- Chain of Prehospital Intervention 5

## General Legal Obligations of First Aiders
- Legal Obligations of First Aiders in the Workplace 9

## First Aid Interventions

### Chapter 1
- Intervention Approach Used 17
- Protocol 1 Intervention Approach Used 18
- Intervention Sequence 19
- Legend Used in the Intervention Protocols 22
- Protection for First Aiders 26
- Stress Management in Emergency Situations 30

### Chapter 2
- Assessing the Situation 37
- Protocol 2 Assessing the Situation 38

### Chapter 3
- Clinical Survey: Emergency Medical Condition or Trauma 43
- Protocol 3 Clinical Survey: Emergency Medical Condition or Trauma 44
Emergency Medical Conditions

Chapter 4
Change in Level of Consciousness
Protocol 4

Chapter 5
Cardiopulmonary Arrest: Adult
Protocol 5
Respiratory Arrest
Cardiopulmonary Arrest
Defibrillation

Chapter 6
Convulsions
Protocol 6

Chapter 7
Heat Stroke
Protocol 7

Chapter 8
Respiratory Difficulty
Protocol 8

Chapter 9
Chest Pain
Protocol 9

Chapter 10
Hypothermia
Protocol 10

Chapter 11
Occupational Poisoning
<table>
<thead>
<tr>
<th>Protocol 11</th>
<th>Occupational Poisoning</th>
<th>94</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Information on Cyanide Poisoning</td>
<td>99</td>
</tr>
<tr>
<td><strong>Chapter 12</strong></td>
<td><strong>Airway Obstruction: Adult</strong></td>
<td>103</td>
</tr>
<tr>
<td>Protocol 12</td>
<td>Airway Obstruction: Conscious Adult</td>
<td>104</td>
</tr>
<tr>
<td>Protocol 12</td>
<td>Airway Obstruction: Unconscious Adult</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>Partial Obstruction (Conscious Casualty)</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>Total Obstruction (Conscious Casualty)</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>Total Obstruction (Unconscious Casualty)</td>
<td>110</td>
</tr>
<tr>
<td><strong>Chapter 13</strong></td>
<td><strong>Diabetic Emergency</strong></td>
<td>113</td>
</tr>
<tr>
<td>Protocol 13</td>
<td>Diabetic Emergency</td>
<td>114</td>
</tr>
<tr>
<td><strong>Chapter 14</strong></td>
<td><strong>Allergic Reaction</strong></td>
<td>117</td>
</tr>
<tr>
<td>Protocol 14</td>
<td>Allergic Reaction</td>
<td>118</td>
</tr>
</tbody>
</table>

**Trauma**

| **Chapter 15** | **Eye Injuries** | 125 |
| Protocol 15 | Eye Injuries | 126 |
|            | Penetrating Foreign Body and Eyeball Out of Socket | 127 |
|            | Other Types of Lesions, Non-Penetrating Foreign Body Burns | 128 |
| **Chapter 16** | **Burns** | 133 |
| Protocol 16 | Burns | 134 |
|            | Thermal Burns | 136 |
|            | Chemical Burns | 137 |
Electrical Burns 139
Inhalation Burns 140

Chapter 17
Shock 143
Protocol 17 Shock 144

Chapter 18
Frostbite 147
Protocol 18 Frostbite 148

Chapter 19
Bleeding 151
Protocol 19 Bleeding 152
Internal Bleeding 153
External Bleeding 154

Chapter 20
Head and Spinal Injuries 159
Protocol 20 Head and Spinal Injuries 160
Head Injuries 161
Spinal Injuries 161

Chapter 21
Trauma to the Extremities 165
Protocol 21 Trauma to the Extremities 166

Techniques

Rescue Carries and Immobilizing a Casualty on a Spine Board 173
Technique 1 Immobilizing a Casualty on a Spine Board 174
Moving a Casualty With No Risk of Having a Spinal Injury 175
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moving a Casualty With a Risk of Having a Spinal Injury</td>
<td>179</td>
</tr>
<tr>
<td>First Aid for Complex Wounds</td>
<td>183</td>
</tr>
<tr>
<td>Technique 2 First Aid for Complex Wounds</td>
<td>184</td>
</tr>
<tr>
<td>Complex Wounds</td>
<td>185</td>
</tr>
<tr>
<td>Special Cases</td>
<td>189</td>
</tr>
<tr>
<td><strong>Appendices</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Appendix 1</strong></td>
<td></td>
</tr>
<tr>
<td>START Method of Triage</td>
<td>193</td>
</tr>
<tr>
<td>START Method of Triage</td>
<td>194</td>
</tr>
<tr>
<td><strong>Appendix 2</strong></td>
<td></td>
</tr>
<tr>
<td>Airway Obstruction and Cardiopulmonary Arrest: Child Aged 1 to 8</td>
<td>197</td>
</tr>
<tr>
<td>Airway Obstruction and Cardiopulmonary Arrest: Child Aged 1 to 8</td>
<td>198</td>
</tr>
<tr>
<td>Airway Obstruction</td>
<td>199</td>
</tr>
<tr>
<td>Cardiopulmonary Arrest</td>
<td>202</td>
</tr>
<tr>
<td><strong>Appendix 3</strong></td>
<td></td>
</tr>
<tr>
<td>Airway Obstruction and Cardiopulmonary Arrest: Infant Under 1 Year of Age</td>
<td>207</td>
</tr>
<tr>
<td>Airway Obstruction and Cardiopulmonary Arrest: Infant Under 1 Year of Age</td>
<td>208</td>
</tr>
<tr>
<td>Airway Obstruction</td>
<td>209</td>
</tr>
<tr>
<td>Cardiopulmonary Arrest</td>
<td>213</td>
</tr>
<tr>
<td><strong>Appendix 4</strong></td>
<td></td>
</tr>
<tr>
<td>Oxygen Therapy</td>
<td>217</td>
</tr>
<tr>
<td>Oxygen Therapy</td>
<td>218</td>
</tr>
<tr>
<td>Oxygen Equipment</td>
<td>220</td>
</tr>
</tbody>
</table>
Appendix 5
Hazardous Materials – WHMIS 223

Hazardous Materials – WHMIS 224

Relevant Legislation

Part 1
First Aid Kit and Room 231
First Aid Kit 233
First Aid Room 238

Part 2
Minimum Number of First Aiders and Register of Accidents, Incidents and First Aid 241
Minimum Number of First Aiders in the Workplace 243
Register of Accidents, Incidents and First Aid 245

Part 3
First-aid Minimum Standards Regulation 249

Bibliography 271
Introduction
OVERVIEW OF THE MANUAL

This manual is made available to first aiders in the workplace. It serves as both a basic training guide and a reference tool to support first aiders in their interventions.

First aiders in the workplace must be trained by an organization recognized by the CSST. This training, which is 16 hours long, teaches participants a well-structured, efficient intervention plan to follow in an emergency situation. It enables them to master the basic resuscitation techniques and to acquire the skills they need to give first aid to people in distress in the workplace.

This manual covers the first aid interventions that first aiders need to handle most emergency situations. However, clearly not all subjects can be treated exhaustively during the training session. For that reason, first aiders must:

• finish reading the manual after the training session;
• reread it from time to time in order to refresh their knowledge and ensure that they are applying the protocols properly;
• consult it when in doubt as to what to do in specific emergency situations;
• refer to it after giving first aid in order to validate their actions and improve their practices in future, if need be.

Certain subjects are covered very briefly in this manual and are not part of the basic 16-hour training. First aiders who are faced with situations in which they must administer adrenaline, handle oxygen, use spine immobilization equipment, or deal with cyanide poisoning, diving accidents or hazardous materials (WHMIS), for example, must take additional training.
PROPOSED APPROACH

This manual provides a two-fold approach that involves the application of intervention protocols and the recognition of "signs and symptoms."

The intervention protocols are outlined in the Practical Guide for First Aiders in the Workplace – Intervention Protocols. They provide a way of:

• structuring and standardizing the first aid intervention;
• supporting first aiders in their learning process;
• guiding them in their handling of casualties;
• ensuring continuity in care with other responders;
• facilitating the post-intervention assessment.

The "signs and symptoms" approach is based solely on the recognition of signs and symptoms presented by the casualty and not on the diagnosis or treatment of a disease or condition.

The content of this manual is presented in the same order as the intervention protocols, with each protocol forming a chapter. Each chapter includes:

• the intervention protocol;
• a brief description of the subject or problem in question;
• the signs and symptoms that allow the nature of a problem, where appropriate, to be determined;
• the specific first aid care required.

It should be noted that not all the signs and symptoms listed necessarily appear at the same time. Only one or more of them may be present, or they may appear gradually if the casualty's condition worsens.
CHAIN OF PREHOSPITAL INTERVENTION

In the workplace, first aiders are the first people called upon to provide immediate assistance to an injured person, regardless of the seriousness of the injury. Their intervention is therefore crucial. They must alert EMS as quickly as possible or have someone else do so, and give first aid immediately if the situation so permits. Since they have limited knowledge, time and resources, they must follow very strict emergency action principles.

First aiders are part of the chain of prehospital intervention; they are the first people to intervene.²

---

² Comité national sur la révision des services préhospitaliers d’urgence, Québec: MSSS, 2000, p. 20.
“The first person to intervene is the person who happens to be at the site of the incident and who discovers someone in distress. Considered the first link in the chain, these first intervenors set the chain in motion by starting the structured prehospital intervention process. They may give the initial care (e.g., perform CPR manoeuvres) required to stabilize the casualty before first responders and ambulance technicians arrive on the scene.”

The chain of prehospital intervention is designed to allow for several levels of intervention, and ultimately to minimize delays and ensure continuity in care. The role of first aiders is particularly important because they are the first link in the chain.

Employers and all workers must be aware of the importance of accident prevention in their workplace. First aiders are particularly sensitive to the need for preventive measures, given their training and experience. Prevention will always be the least expensive way of keeping the workplace safe and workers healthy.

---

3. Comité national sur la révision des services préhospitaliers d’urgence, p. 19. (free translation of the original French)
General Legal Obligations of First Aiders
Apart from the legal obligations, there are a number of ethical considerations underlying the conduct expected of first aiders. Every citizen must come to the assistance of a person in danger. This conduct is one of the cornerstones of life in society; it reflects the respect shown toward others and the value placed on life.

LEGAL OBLIGATIONS OF FIRST AIDERS IN THE WORKPLACE

Legal Obligation to Assist

The obligation to provide assistance is set forth in the Québec Charter of Human Rights and Freedoms. The Charter imposes a legal obligation on all citizens of Québec to come to the aid of anyone whose life is in danger. This obligation to assist also applies to first aiders in the workplace, regardless of where they are located in Québec. First aiders may fulfill this obligation by providing first aid or by alerting EMS, depending on the situation.

For example, if a first aider receives a call for help in the workplace, he must go to the victim’s assistance, provided his own safety is not in danger. He must help the victim by applying the techniques learned in the training sessions, or by calling for help if he feels unable to intervene.

First aiders demonstrate the expected conduct when they provide assistance that helps a person suffering from an injury or condition. When they receive a call for help, they must respond to the call and try to assist the victim.

Refusing to Provide Assistance

As mentioned above, first aiders in the workplace have an obligation to provide assistance to a co-worker in danger. It is difficult to imagine a first aider refusing to...
help someone in distress, especially a co-worker. If a first aider failed to go to someone’s assistance, he could be required to explain his lack of response before a civil or criminal court.

For example, a first aider may be faulted for his conduct if, in the event of a work-related accident,

• he decides not to intervene because the victim may be infected with HIV, even though he has standard safety precautions (gloves, glasses and a mask for resuscitation) at his disposal;
• he does not try to call for help.

Wrongful or Negligent Conduct of First Aiders and Legal Consequences

It is difficult to imagine a first aider who would not be concerned about the health and safety of a victim. In any legal analysis of intervention aimed at determining whether a first aider’s conduct was wrongful or negligent, it must be established that the breach of appropriate conduct occurred when the first aid was provided.

Expected Conduct of First Aiders in the Workplace

Only by comparing a first aider’s conduct with that of another first aider possessing the same training and experience is it possible to determine whether a first aider’s conduct was wrongful or negligent in a given situation. The training dispensed to first aiders is based on techniques approved by medical authorities and set forth in the intervention protocols used by first aiders in the workplace. If a first aider breaches these protocols without a valid reason, it may then be claimed that his conduct is not that expected of a first aider.
For example, a first aider decides to move someone who has had a fall and may have sustained a spinal injury, without immobilizing the person and without there being any emergency or danger. Yet the first aid intervention protocols indicate not to move a victim without first immobilizing him. In this example, moving the person without justification goes against the training provided and the intervention protocols. This is not the conduct expected of a first aider in the workplace, but rather a fault for which he may be held liable.

If it is shown that a first aider did not act in accordance with the training recognized by competent authorities and the intervention protocols, it may be claimed that his conduct was wrongful or negligent. If it can be proven that the harm suffered by the victim stems directly from the first aider’s conduct, the first aider may be held liable.

To understand clearly the application of these principles of civil liability, let’s look at the above-mentioned case of a first aider who moved the victim of a work-related accident with a suspected spinal injury, without first immobilizing him and who consequently committed a wrongful act. In this case, it must be proven that the spinal injury or aggravation thereof resulted from the fact that the first aider moved the victim without first immobilizing him.

Emergency Situation
In first aid, an emergency situation demands intervention. An emergency is, by definition, a sudden, unforeseeable situation. First aid intervention cannot be delayed when someone’s life or physical well-being is in danger. In the event of a work-related accident or medical condition, the
first aider must intervene quickly. The emergency nature of a situation may justify the first aider’s actions and consequently mitigate his liability.

If, for example, a first aider makes a mistake in applying the sequence of chest compressions, it would be difficult to hold him liable for harming a victim he is trying to resuscitate. The urgency of the situation and the first aider’s inexperience and nervousness will be factors that may justify an error made in applying the cardiopulmonary resuscitation sequence.

Rules Concerning the Liability of First Aiders in the Workplace

The above-mentioned obligations concerning liability also apply to the assistance provided by first aiders in the workplace, with some differences. Let’s take a look at the provisions of the First-aid Minimum Standards Regulation outlined below.5

Exoneration from Liability in Respect of a First Aider’s Intervention

The first aiders designated by the employer act as the employer’s representatives. When a work-related accident occurs, the worker may not sue his employer. As the employer’s representative, the first aider may not be sued for having provided assistance to a worker. This principle is set forth in section 442 of the Act respecting Industrial Accidents and Occupational Diseases.6

“e) No beneficiary may bring a civil liability action, by reason of an employment injury, against a worker or a mandatary of an employer

5. R.S.Q., c. A-3, r. 8.2
6. R.S.Q., c. A-3.001
governed by this Act for a fault committed in the performance of his duties, except in the case of a health professional responsible for an employment injury contemplated in section 31.

Register of Accidents, Incidents and First Aid
First aiders who give first aid to workers must fill out a report in that respect. They must provide their own family and given names, the family and given names of the injured workers, the dates, times and a description of the injuries or medical conditions, as well as the types of first aid given. This information is useful to both the employer and the workers.

Obligations Concerning Use of First Aid Supplies and Equipment
To fulfill their role, first aiders must have first aid kits at their disposal. In some work environments, they may have access to specialized supplies, such as oxygen equipment, a cardiac defibrillator, spine board, cervical collar or material not specified in the First-aid Minimum Standards Regulation. Since the employer makes supplies and equipment available to first aiders in the workplace, it is the employer’s responsibility to ensure that first aiders receive the additional training they need to use such supplies and equipment, that they know how they work and that they are aware of the dangers involved in their use.

Liability of the Employer Concerning First Aiders
The First-Aid Minimum Standards Regulation obliges the employer to ensure that trained first aiders are available at its establishment(s) at all times. It also requires the employer to equip its establishments with a sufficient number of first aid kits and to make sure that each has

---

7. R.S.Q., c. A-3, r. 8.2, s. 16
at least the minimum content. 8 It is the employer’s responsibility to verify the content of these kits and to ensure that the designated first aider has fast access to a kit and has received the necessary training.

Administration of Certain Medications in Emergencies

In general, employers must not make medications available to first aiders. However, upon medical recommendation, under special circumstances and after receiving additional training, some first aiders may have access to certain controlled medications (e.g., adrenaline for serious allergic reactions). First aiders must follow the employer’s instructions on the use of such medications.

First aiders who act with rigour, professionalism, in the interests of the victim and within the limits of their capabilities, run very little risk of being faulted for their efforts when they provide assistance to a victim in the workplace.

8. R.S.Q., c. A-3, r. 8.2, s. 3 and 4
Chapter 1

Intervention
Approach Used
Protocol 1
Intervention Approach Used

Protocol for assessing situation

Safe?

NO

Check for unconsciousness

If trauma involved, protect cervical spine

YES

Assess ABCs (emerg. med. condition or trauma)

ABCs Difficulty?

YES

Appropriate protocols

NO

Carry out secondary survey (emerg. med. condition or trauma)

Appropriate protocols

Reassess ABCs
Chapter 1

Intervention Approach Used

First aiders must follow the intervention sequence set forth in the intervention protocols.

Intervention Approach Used

1. Make sure the scene is safe and take appropriate precautions.
2. U Check for unconsciousness.
3. Make sure EMS have been notified.
4. Assess the ABCs (medical condition or trauma).
5. Control all problems found during the ABCs.
6. Carry out the secondary survey (look for signs and symptoms).
7. Use the appropriate protocols.
8. Reassess the ABCs.

INTERVENTION SEQUENCE

![Diagram showing the intervention sequence]
The protocols for assessing the situation and conducting the clinical survey form the basic template for first aiders’ intervention. Other protocols are then followed, depending on the signs and symptoms presented by the person in distress.

Assessing the Situation

By assessing the situation, first aiders are able to evaluate the environment and circumstances surrounding the event, and to determine whether an emergency medical condition or a trauma is involved.

Check for Unconsciousness

The casualty’s level of consciousness is assessed through verbal contact. If the person does not respond to the first aider’s voice, the first aider must then apply physical stimulus to the shoulders (trapezius muscles) and sternum to see whether the person reacts to pain.

If the casualty is conscious and alert, the first aider should introduce himself as a first aider, ask the person his name and start gathering information. It is important for the first aider to explain everything he is doing in order to reassure the casualty and enlist his cooperation.

If the casualty does not react, it means he is unconscious. It is essential at this point to alert EMS.

Contacting Emergency Medical Services (EMS)

First aiders must set the chain of prehospital intervention in motion as quickly as possible after assessing the situation and evaluating, if the situation so permits, the victim’s level of consciousness. They must make sure that there are individuals on site whose aid they can count on, if need be. They must alert the people in charge of safety and other first aiders, or ask a bystander to stay nearby to assist, if need be.
Clinical Survey

The clinical survey includes both the primary and secondary surveys.

The care given by first aiders varies depending on the nature of the problem involved. For this reason, the clinical survey protocol is divided into two parts: emergency medical conditions and trauma.

Primary Survey

The primary survey consists in assessing the person’s condition and taking the first steps to maintain the casualty’s respiratory and circulatory functions. Known as the ABCs (Airway-Breathing-Circulation) of the primary survey, these steps involve assessment and resuscitation.

Secondary Survey

The secondary survey involves doing a full assessment of the person’s condition and detecting any secondary injuries that are not immediately life-threatening. It entails looking for signs and symptoms by gathering information, checking the casualty’s vital signs and performing a complete physical examination in the event of a trauma.

Appropriate Protocol

By thoroughly assessing the casualty’s condition, the first aider is able to refer to the appropriate protocol or technique and to act effectively. The first aider must follow the appropriate intervention protocol during the primary survey if the casualty’s life is in danger, or after the secondary survey, if it is not.

Repeat the Primary Survey

The casualty’s condition must be continually reassessed. This means rechecking the vital functions (ABCs) regularly while waiting for EMS.
Verbal Report to EMS
First aiders must verbally inform the first responders and paramedics/ambulance technicians about the first aid they have given; this is to ensure continuity of care.

LEGEND USED IN THE INTERVENTION PROTOCOLS
The legend used in the protocols enables first aiders to see which steps to follow at a glance.

Colour Diagrams
The various diagrams and the direction of the connecting arrows show the first aider the chronological order in which the steps must be taken.
The colour and shape of the diagrams generally indicate the type of the information they contain.

Some diagrams contain illustrations. It is important to understand clearly what they mean.
Alert EMS

EMS must be contacted quickly after the situation is assessed and, if the situation so permits, after the casualty’s level of consciousness is evaluated.

The following circumstances require phoning immediately:

- the first aiders are in danger;
- several casualties are involved;
- the casualty’s life is in danger.

The following information must be conveyed to EMS by phone:

- name and address of the establishment (give a geographic reference point, such as the corner of streets X and Y, and indicate the access routes);
- name and telephone number of the person calling (EMS personnel will be able to call back if additional information is needed);
- specific location of the injured person or persons in the establishment;
- number of injured persons;
- brief description of the situation;
- circumstances surrounding the accident (describe briefly);
- problems that may slow down an evacuation, if one is required.

The first aider must let the person at the other end hang up first; this way, it will be clear that the latter has all the necessary information and that no additional details are required.

The first aider must make sure that the phone number of EMS is posted near the telephone, if the number is other than 911.
Monitor the casualty

The first aider must monitor the casualty constantly while waiting for EMS to arrive. This means checking the person’s vital functions, i.e., repeating the steps in the primary survey (the ABCs), regularly.

Attention! Dignity and hypothermia

Part of the casualty’s body must be exposed in the event of a trauma, pain, bleeding, deformity or breathing difficulties. This will enable the first aider to detect an open wound or a foreign body and to find any other clue that might indicate an internal injury.

The words “Attention! Dignity and hypothermia” serve as a reminder to respect the person’s dignity, a factor that must remain a constant concern in the first aider’s mind. They also serve as a reminder that certain precautions must be taken to protect the casualty from cold and hypothermia.

Recovery position

The recovery position is indicated in medical situations where the casualty presents, or has presented, a change in level of consciousness or problems of nausea and vomiting. It is used to prevent airway obstruction by the tongue, secretions, blood or vomit. It is usually recommended to facilitate blood circulation.

If a trauma is involved, the casualty must NOT be placed in the recovery position shown in the diagram, and the first aider must avoid moving him insofar as possible.

Expose chest*

The first aider must monitor the casualty constantly while waiting for EMS to arrive. This means checking the person’s vital functions, i.e., repeating the steps in the primary survey (the ABCs), regularly.
Wait for EMS to arrive
First responders, paramedics/ambulance technicians and other specialized personnel must have fast access to the casualty. If several means of access are available from outside the building, someone must be posted outside to point out the fastest route and to guide EMS personnel and others to where the casualty is located.

Administer oxygen, if available
It is essential to remember that administering oxygen requires additional training.

Attention! Safety first!
Safety is key. First aiders must ensure their own safety at all times, as well as that of the casualty and any other people on the premises. If first aiders or other responders are in any form of potential danger, they must ask for specialized resources to step in first.

Wear gloves and use a pocket mask
First aiders must take safety precautions and the necessary preventive measures in all their actions.
PROTECTION FOR FIRST AIDERS
Infectious Diseases Transmitted by Blood

In treating casualties, first aiders may be exposed to different micro-organisms. The risks of transmission of the following infectious diseases are discussed in this section: hepatitis B (VHB), hepatitis C (VHC) and human immunodeficiency virus (HIV).

The main portals through which these viruses enter the body are the skin (through cuts, needlepricks or scrapes) and the mucous membranes (eyes, lips, mouth, inside of the nose).

The hepatitis B, hepatitis C and HIV viruses can be transmitted by blood or body fluids (saliva, secretions, urine, stool) in which blood is visible.

Modes of Transmission
The main modes of transmission to which first aiders are exposed in the course of their work are as follows:

• significant contact with the blood of an infected person or with body fluids that are visibly tainted with blood, e.g., accidental pricking with a needle containing contaminated blood; being cut or scraped with an instrument on which there is contaminated blood;

• splattering of blood on a skin lesion (wound, dermatitis) or on mucous membranes (eyes, lips, mouth, inside of the nose);

• being bit by someone, with perforation of the skin.

In all their actions, first aiders must take safety precautions and preventive measures, such as washing their hands before and after wearing gloves, wearing disposable gloves, using pocket masks, and wearing protective eyewear. They must also be careful in handling needles and other contaminated objects, and disinfect or sterilize materials, work surfaces and sites where first aid has been given and that might be contaminated.
These precautions consist in using protective barriers and preventive measures that reduce the risk of significant exposure to blood and other body fluids and thus minimize the risk of transmission of infectious diseases that have serious consequences.

Fear of contracting an infection must not, however, prevent first aiders from helping a person in need. Instead, it should urge them to take appropriate precautions and preventive measures for the situation at hand.

**Safety Precautions and Preventive Measures**

**Washing Hands**

Regular hand washing is a good habit to get into to prevent the transmission of disease because it reduces the risk of infection at all times. First aiders must always wash their hands before and after giving first aid or otherwise assisting a casualty. Thorough hand washing for one minute (without scrubbing) using soap and running water, followed by nail cleaning, is usually all that is needed. It is essential that nails be kept short and well filed, and cuticles well maintained to avoid lesions. It is preferable not to wear any jewellery.

Even when gloves are worn, hands must be washed after giving first aid. Bacteria multiply very quickly on gloved hands owing to the humidity.

In situations where hand washing with soap and water is impossible, a 70% alcohol-based water-free disinfectant can be used as a temporary measure. However, as soon as the situation permits, first aiders must wash their hands with soap and water.

**Wearing Gloves**

Gloves serve as a shield barrier when handling anything likely to be contaminated with micro-organisms. Wearing gloves is a highly recommended practice when giving first aid, handling contaminated objects, or cleaning or disin-
fecting instruments, work surfaces and the site where first aid has been given. Gloves must be disposable, and be replaced as quickly as possible whenever they are torn or perforated.

**Using a Pocket Mask**

Using a pocket mask prevents direct contact with the casualty's mouth and nose during resuscitation. It is recommended that a mask with a one-way valve be used to ensure maximum protection. If the mask is reusable, it must be cleaned and disinfected after use, according to the manufacturer’s instructions.

**Disinfecting Supplies and Equipment, Contaminated Surfaces and Sites**

When treatment is finished, all disposable objects must be discarded in an airtight bag, which is then placed in a second closed bag. All sharp or cutting objects must be handled with care and stored in closed rigid containers. Reusable supplies and equipment must be cleaned and disinfected according to the manufacturer’s instructions. Work surfaces and sites where first aid has been given must be cleaned with soapy water or an antiseptic solution. A solution of bleach and water in proportions of 1 to 10 may also be used.

Blood-stained clothing can be washed with hot soapy water or dry-cleaned.

**Wearing Protective Gowns, Masks and Eyewear**

Protective gowns, masks and eyewear constitute other safety precautions or preventive measures that can be used in specific situations. Protective gowns and masks (paper) serve to protect both the first aider and the casualty from micro-organisms that can be transmitted from one person to another. Protective eyewear shields the first aider’s eyes from splatterings of blood and other body fluids.
First Aid in Case of Accidental Exposure of First Aider

When first aiders come into direct contact with the blood or visibly blood-tainted body fluids of an injured person, they are considered to be at risk of infection. Safety precautions are extremely important at such times. In these situations:

1. The first aider must be given first aid.
   
   When the skin is exposed (cut, pricked, scraped):
   
   • make the exposed site bleed immediately (without injuring the skin around the wound);
   • clean the exposed site as quickly as possible (with mild soap and water or a disinfectant and no water) without scrubbing;
   • disinfect the area as quickly as possible with a non-irritating solution and apply a dressing if there is a wound.

   When the mucous membranes are exposed (eyes, lips, mouth, inside of the nose):
   
   • thoroughly flush with water as quickly as possible.

2. Remove any offending object in a safe manner.

3. Record the contact information of the person who may be infected.

4. Take the first aider to the hospital as quickly as possible (within two hours of exposure).

5. Take along his vaccination card or health record booklet.

6. Tell casualty reception personnel that the first aider has suffered occupational exposure to blood.

7. Get a medical assessment.

   The form *Que faire lors d’une exposition au sang?* (DC 100-498) is available at CSST regional offices. It can be included in the first aid kit.
STRESS MANAGEMENT
IN EMERGENCY SITUATIONS

First aiders may experience a certain level of stress as a result of the assistance they provide. Stress is the body’s way of adapting to emergency or dramatic situations. It is a biological response to stimuli or threat, and is reflected in:

- an increase in heart rate;
- an increase in blood pressure;
- dilation of the bronchi and pupils;
- an increase in blood sugar.

A person under stress moves into survival mode in no time and is ready to defend himself or escape (fight or flight).

Stress is therefore the body’s normal reaction to physical and psychological agents. It can be seen in certain attitudes and behaviours on the part of victims and first aiders.

Possible Reactions of Victims

Victims may react to stressors in different ways, and first aiders must adjust to such reaction(s) which can include:

- **Denial** – The victim may deny the seriousness of the situation and refuse the first aider’s assistance. “Everything's fine. Nothing's wrong with me. I don’t need help.”

- **Resignation** – The victim may be resigned to dying, even if his life does not seem to be in danger. He doesn’t fight, and the first aider will have difficulty enlisting his cooperation in overcoming the situation. “I’m going to die. Nothing can be done. It’s not worth it.”

- **Aggressiveness** – The victim may be hostile and even put up opposition to the assistance he is given. He might yell, insult the first aider or try to hit him.
• *Fighting spirit* – The victim might be positive and cooperate with the first aider. This attitude is the most helpful and facilitates the first aider’s assistance.

### Possible Reactions of First Aiders

The first aider’s reaction time, thinking and efficiency are significantly affected in an emergency situation. The first aider’s emotional response under such circumstances may be expressed in one of the following ways:

- **Tunnel effect** – The first aider no longer perceives what is going on around him. His visual field and hearing decrease. He sees and hears only what is directly related to the source of his stress, i.e., the victim’s injury and cries.

- **Slowing of time** – When the first aider is providing assistance, minutes seem like hours, especially when he is waiting for reinforcements or help.

- **Physical manifestation** – The body is in a state of alert, which can be reflected in uncontrollable trembling or sudden nausea.

- **General disorganization** – The first aider wants to do everything at the same time. He forgets important steps; his memory fails him. This type of reaction is the most harmful because it often affects the sequence of intervention. For example, the first aider forgets to assess the danger, and tries to get his unconscious co-worker out of a septic tank without respiratory protection.

- **Denial** – The first aider denies the seriousness of the situation and the fact that he is needed. He fails to go to the scene of an accident, claiming that there is already help on site, even if he cannot be sure of it.

- **Resignation** – The first aider comes to the conclusion that nothing can be done, that it is too late.
• *Fighting spirit* – This is the attitude that enables the first aider to go to a victim’s assistance. The first aider says to himself, “I’m going. I can help the people who need it. I’m going to do everything I can.” The moment when the first aider decides whether or not to intervene is the most crucial. Once he has made the decision to help, he is usually able to control his stress.

The first aider must, however, always remember that caution is a priority. Providing help is not about being a hero.

**Stress Management**

Managing stress in an emergency situation can make a significant difference in the quality of the aid provided. Appropriate mental preparation and regular first aid simulation exercises can help the first aider react effectively. The negative impact of stress can be considerably reduced by understanding it and taking measures to try and overcome it. If the first aider is unable to manage his stress, panic can set in and prevent him from intervening adequately. He must:

1. make sure the first aid equipment is always ready and quickly accessible;
2. reread this manual from time to time;
3. mentally review the intervention procedure on the way to the scene of the emergency, and relax;
4. keep calm during initial contact with the victim or witnesses in a crisis situation; avoid letting himself be influenced by cries or seriousness of the injury or situation;
5. speak calmly, slowly, clearly and in a reassuring tone of voice; avoid speaking louder than the victim;
6. if the victim is agitated or aggressive, evaluate the
dangerousness of the victim’s behaviour (disruptive,
destructive, dangerous), calm him down by asking
simple questions about the situation; ask one question
at a time; avoid asking questions that could provoke
him; reformulate his answers; try to draw his attention
to the intervention under way;
7. mark off a safety perimeter around the victim and
the scene of the accident; curious onlookers and
unnecessary volunteers can contribute considerably
to increasing the level of stress;
8. if the victim is conscious, talk to him regularly
to reassure him and maintain eye contact with him,
if possible;
9. keep in constant touch with the other first aiders;
avoid focusing on one specific aspect of the situation;
10. after providing first aid, talk about the experience.
If the prolonged effects of stress or an intensely stressful
experience are underestimated, first aiders may develop
anxiety or problems such as post-traumatic stress.
Employers offer workers psychological assistance, which
first aiders can rely on to process their emotions and get
over events. First aiders can also obtain this type of assis-
tance through a health and social services centre or privately-
offered services.
Various other situations can create stress at work. If first
aiders witness physical or psychological abuse of an
employee or any other act that could endanger someone’s
well-being, they should advise that person to seek aid.
They can become front-line workers in such situations.
Chapter 2
Assessing the Situation
**PROTOCOL 2**

Assessing the Situation

1. Secure scene
2. Determine number of casualties and type of accident
3. Secure work spaces
4. Call in specialized resources, if need be
5. Take appropriate safety precautions
6. Assess nature of needs involved

**Scene secure?**

- Yes
- No
Chapter 2
Assessing the Situation

The first step taken by the first aider is to assess the situation. This step takes priority over all others and must always be done so as to ensure the safety of both the first aider and the casualty. To assess the situation, the first aider must follow a six-part plan:

- Secure the scene (potential dangers).
- Determine the number of casualties and type of accident.
- Secure the work spaces.
- Call in specialized resources, if need be.
- Take appropriate safety precautions.
- Assess the nature of the needs involved.

Secure the Scene (Potential Dangers)

Securing the scene must be a priority for the first aider in an emergency situation. He must determine whether the scene poses any threat to himself, the casualties or bystanders. If, for example, there is any risk of an explosion, a fire, cave-in, poisoning, electrocution, exposure to extreme temperatures, etc., the first aider must stay back and call in specialized resources to control or eliminate the problem. He must avoid confined or enclosed spaces (bottoms of wells, tanks, etc.), as well as any area where there is a risk of poisoning.

The first aider can step in to assist casualties only when he is certain that the scene is safe. When a controllable risk is present, he must control that risk prior to assisting
the casualties. When an uncontrollable risk is present, he must stay back and call in specialized resources or teams to control the situation. Only once this has been done can he safely assist casualties.

**Note**

All too often, the first aider becomes a victim himself before he can assist casualties. The first aider’s safety is a priority for the CSST.

**Determine the Number of Casualties and Type of Accident**

The first aider must take into account the number of casualties so he can plan his intervention effectively. The element of surprise is reduced when he knows what to expect. The first aider who has to assist several casualties must alert EMS immediately since he cannot attend to all the casualties on his own. He must also establish priorities in terms of first aid assistance.

A simple triage system enables the first aider to act effectively in emergency situations involving several casualties. It is known as the START method (Simple Triage And Rapid Treatment) and is outlined in Appendix 1.

In order to use this system, first aiders must receive additional training.

**If a trauma is involved**, the specific characteristics of the accident can guide first aiders in their treatment of the casualty. These characteristics will provide clues as to the possible types of injuries, and point to injuries that are sometimes barely apparent, if at all. First aiders must therefore try to determine the characteristics of the accident and to establish a connection with the types of traumas that may be involved. A fall or being struck by an object, for example, can involve
Secure the Work Spaces

Once the first aider is near the casualty, he must make sure the work space is safe.

The first aider will have to decide whether to secure the area himself — or call in specialized resources to do so — before he assists the casualty, or to move the casualty to a safer location.

The work space must be sufficiently large and stable, and present no risk of injury, falling, fire, explosion, electrocution or electrification, poisoning, cave-ins, sliding or attack.
Call in Specialized Resources

EMS must be alerted right away so that first responders and paramedics/ambulance technicians can be on the scene as quickly as possible.

Specialized resources, such as police, fire fighters, Hydro-Québec or other teams of specialists, must be contacted as soon as the first aider perceives or anticipates any danger.

The first aider must also alert the person in charge of safety and the other first aiders at the establishment as quickly as possible or, if need be, enlist the help of a co-worker to assist in his first aid initiatives.

Take Appropriate Safety Precautions

The first aider must always take the necessary precautions to protect himself from contact with blood, body fluids and other potentially harmful substances. This means wearing gloves, using a pocket mask when performing rescue breathing or taking any other available precaution.

Assess the Nature of the Needs Involved

The first aider must know the reason for providing first aid: Is he dealing with an emergency medical condition or a trauma? He must quickly gather all relevant information about the situation in order to plan what to do effectively.

If a medical condition is involved:

What type of condition is it?
What does the person feel (signs and symptoms)?

If a trauma is involved:

What happened (type of accident)?
Is the casualty seriously injured?

Notify EMS, if the Situation Poses any Danger
Chapter 3
Clinical Survey: Emergency Medical Condition or Trauma
Protocol for assessing situation

Safe?

NO

U Check for unconsciousness

If trauma involved

Protect cervical spine

YES

A Open airway (head tilt)

Jaw-thrust manoeuvre

B Check breathing (look – listen – feel)

Examine rib cage* (open wound – dressing closed on 3 sides)

C Check circulation

Check for and control heavy bleeding

ABCs Difficulty?

YES

Appropriate protocols and techniques

NO

Carry out secondary survey (emerg. med. condition or trauma)

Touch – look

Appropriate protocols and techniques

Reassess ABCs

* Attention! Dignity and hypothermia
Primary Survey

The primary survey allows the first aider to identify vital emergencies in which the casualty’s life may be in immediate danger and to establish first aid priorities. Each serious problem identified during the primary survey must receive immediate attention. This is the assessment-resuscitation phase.

A primary survey must be carried out each time an emergency medical condition or a trauma is detected.

Steps in the Primary Survey (the ABCs):

- **U** Check for unconsciousness.
- **A** Open the airway.
- **B** Check breathing.
- **C** Check circulation.

The first aider must always follow these steps in the order specified. The primary survey begins by approaching the casualty from the front so that the casualty can see him, and proceeding as follows:

**U** Check for Unconsciousness

The casualty’s level of consciousness is assessed through verbal contact. If the person does not respond to the first aider’s voice, the first aider must then apply physical stimulus to the shoulders (trapezius muscles) and sternum to see whether the person reacts to pain.
If the casualty is conscious and alert, the first aider should introduce himself as a first aider, ask the person his name and start gathering information. It is important for the first aider to explain everything he is doing in order to reassure the casualty and enlist his cooperation.

If the casualty does not react, it means he is unconscious. It is essential at this point to alert EMS.

**If a trauma is involved,** the first aider must ask the person not to move and must manually protect the cervical spine from moving.

### A Open the Airway

It is possible to check the casualty’s breathing only if his airway is open. If the casualty is conscious, the first aider must make sure that there is no fluid (secretions, blood) or objects in the person’s mouth that might obstruct the airway.

If the casualty is unconscious and is lying on his back, the main cause of obstruction in the upper airway is the tongue. The tongue sags to the back of the throat because of the lack of muscle tone in the lower jaw, and can thus cause obstruction.
If a trauma is involved, the airway must be opened by using the jaw-thrust manoeuvre (without head tilt) in a way that protects the person’s spinal column. The proper way of applying this technique is for the first aider to position himself at the casualty’s head, place one hand on each side of the lower jaw and lift it upward in a straight line without moving the head. It is absolutely essential to keep the head and neck aligned with the torso.

To open the airway, the first aider must tilt the casualty’s head back, press down on the forehead and tilt the chin up with the fingers of the other hand. He must then look inside the person’s mouth to make sure there is no foreign body or liquid that might interfere with or block the passage of air.
B Check Breathing

In this step, the first aider determines whether or not the person is breathing. He does so by looking at the casualty’s chest to see whether it rises, listening for the sound of air in the airway, and placing his cheek near the casualty’s mouth to feel for breath on exhalation (look, listen, feel).

If the person is breathing, the first aider must briefly assess the quality of the breathing by checking whether it seems normal or laboured in any way, and whether there are any noisy breathing sounds. If the person is not breathing, the first aider must perform rescue breathing.
Check Circulation

The first aider assesses the casualty’s circulation by checking signs of circulation, i.e.:

- breathing;
- skin colour;
- possible movements.

If the casualty’s skin is white or bluish and cold, the person may have a circulation problem. If the casualty has also lost consciousness and is in respiratory arrest, the first aider must perform cardiopulmonary resuscitation.

If a trauma is involved and the casualty is not breathing, the first aider must perform rescue breathing by using the jaw-thrust manoeuvre (without head tilt) while continually protecting the cervical spine.

If the person is having difficulty breathing or is experiencing pain in the chest as a result of a trauma, the first aider must examine the person’s rib cage and look for an injury or wound. A penetrating chest wound must be treated immediately by applying a dressing that is closed on three sides. See Technique 2, First Aid for Complex Wounds.

Any serious chest injury must be considered a threat to the casualty’s life, and the situation must be treated as an emergency.
Secondary Survey

The secondary survey involves gathering information, checking the vital signs and performing a complete physical examination in the event of a trauma. It is carried out after the primary survey and only when it is clear that the casualty’s condition does not require any ABC care. It enables the first aider to assess the person’s overall condition. In the secondary survey, the first aider must look for the signs and symptoms of the casualty’s ailment. In addition, he must ask the casualty to describe what he is feeling (pressure, tightness, weakness, pain or other) and check whether the person is wearing a Medic Alert bracelet or necklace warning of a known medical problem (allergy, diabetes, epilepsy or other).

By obtaining this information from the casualty, the first aider will be able to take appropriate and effective action.

Gather Information

Throughout his intervention, the first aider must try to gather any information that may be related to the casualty’s condition or injuries. The main information needed concerns the circumstances surrounding the event, the signs and symptoms, allergies and medications. By using the SAMPLE quick reminder provided on the opposite page, the first aider will be able to take all the important factors into account during this part of the survey.

If a trauma is involved, in addition to checking the casualty’s signs of circulation while protecting his cervical spine, the first aider must look for any signs of hemorrhaging or heavy bleeding. He must check to see if there is blood flowing profusely from a wound or if the casualty’s clothing is soaked in blood. Profuse bleeding must be stopped as quickly as possible.
SAMPLE Quick Reminder

S  Signs and Symptoms
What is the person feeling? How long has he been feeling these symptoms? What can be observed? Skin colour? Perspiration? Trembling? Other signs or symptoms?

A  Allergies
Does the person suffer from allergies to medications, food, animals or other substances? If so, which ones?

M  Medications
Does the person take any medications? If so, what for? Did he take them regularly over the past few days? Today?

P  Medical Past (History)
Does the person have any health problems (diabetes, epilepsy, heart, respiratory or renal problems), or has he had surgery recently that could aggravate or contribute to his present condition?

L  Last Meal
At what time did the person last eat?

E  Events Preceding the Emergency
What happened before the person felt sick or the accident occurred? Were there any unusual circumstances or triggering events?
Check the Vital Signs

This process normally involves checking the casualty’s blood pressure, heart rate (pulse) and respiration rate (breathing). In first aid provided in the workplace, only the quality of breathing must be assessed.

In an adult, the normal breathing rate ranges between 12 and 20 breaths per minute. In the event of a breathing problem, breathing can be fast or slow, shallow or deep, noisy or irregular.

If a trauma is involved, the first aider must always carry out a complete head-to-toe physical examination after ensuring that the casualty’s condition is stable during the primary survey. The purpose of this examination is to identify any other injury that is not immediately life-threatening.

The complete head-to-toe physical examination consists in palpating and visually examining, if need be, all the body structures. The first aider must be on the lookout for any pain, deformities or complex wounds. He must be sure to:

- examine and palpate the head, face and neck;
- examine and palpate the chest, looking for any breathing difficulty or pain (and apply the appropriate dressing in case of a penetrating wound);
- palpate the abdomen for any rigidity or sensitivity;
- check whether the pelvis, arms and legs are stable;
- check the back; this must be done when the casualty is moved onto a spine board, if an evacuation is necessary; if not, it is recommended that the first aider wait for specialized personnel.

During the secondary survey, the first aider may detect serious injuries and must therefore always look for signs of them.
Appropriate Intervention Protocol
The first aider must provide first aid by following the intervention protocol appropriate to the signs and symptoms he identifies when ensuring the casualty’s condition is stable during the primary survey and when performing the secondary survey.

Repeat Primary Survey Regularly
The first aider must repeat the primary survey (check the ABCs) regularly in order to note any change or deterioration in the casualty’s condition.

Report Verbally to EMS
In order to ensure continuity in the care provided to the casualty, the first aider must give a concise report to those who will be taking over. In certain situations, the information obtained must be kept confidential.

Information Provided in Verbal Report
• Name and age of the casualty
• Nature and description of the incident
• Results of the survey of the casualty’s condition
• First aid performed
• Pertinent points from the information gathered
• Pertinent points concerning the situation

Steps to Take in the Clinical Survey
1. Make sure the scene is safe and take appropriate precautions.
2. U Check for unconsciousness.
3. Make sure EMS have been notified.
4. A Open the airway.
5. B Check breathing.
6. **C** Check circulation.
7. Control all problems found during the ABCs.
8. Carry out the secondary survey (look for signs and symptoms).
9. Use the appropriate protocols and techniques.
10. Reassess the ABCs regularly.
Emergency Medical Conditions
Chapter 4

Change in Level of Consciousness
Protocol 4
Change in Level of Consciousness

Protocol for assessing situation

Safe?

YES

NO

Check for unconsciousness

If trauma involved, protect cervical spine

Continue with clinical survey

If trauma involved Protocol 3 (Trauma) Leave casualty in position found

ABCs Difficulty?

YES

Protocols 5-12

NO

Sudden weakness

Loss of consciousness

Lie casualty down and raise legs or sit casualty down with head between knees

Reassess ABCs
Chapter 4
Change in Level of Consciousness

Changes in a person’s level of consciousness can occur following different health problems, such as an injury, poisoning, illness or ailment. These problems can affect a person’s brain functioning, result in drowsiness or a similar state, and ultimately cause the person to lose consciousness.

When the first aider carries out the primary survey, he must always begin by checking the casualty’s responsiveness. The first aider checks the casualty’s level of consciousness first through voice contact. If the casualty does not respond to the first aider’s voice, he then applies pressure to the trapezius muscles and sternum to see whether the casualty reacts to pain. By assessing the casualty’s responsiveness, the first aider is able to determine whether the casualty is alert or suffering from a change in level of consciousness. The alert casualty is fully awake and reacts to what is going on. The casualty who has suffered a change in level of consciousness may seem sleepy, react to voice stimuli or to pain, or be unresponsive, i.e., not react to either voice stimuli or pain.

Sudden Weakness

Signs and Symptoms

• Drowsiness (possible)
• Pallor
• Weakness
• Dizziness
• Perspiration
• Unconsciousness

Losing consciousness or falling unconscious is often referred to as “fainting.” If the casualty is unconscious, the tongue and fluids (saliva, secretions, etc.) can obstruct his airway.

Signs and Symptoms

• Absence of reaction to voice stimuli
• Absence of reaction to pain
• Abnormal breathing noises (snoring, gurgling)
First Aid for Changes in Level of Consciousness

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
   - **Sudden weakness, no trauma:**
     - lie the casualty down and raise his legs;
     - or
     - sit the casualty down with his head between his knees.
   - **Loss of consciousness, casualty is breathing:**
     - place the casualty in the recovery position (if no trauma is involved);
     - the casualty should be in the most lateral position possible, with head downward to facilitate the drainage of fluids;
     - he should be kept immobile and the airway should be visible;
     - any pressure on the chest that interferes with breathing must be avoided (loosen clothing, if necessary).
6. Ensure that the room is well ventilated.
7. Cover the casualty, if possible.
8. Reassess the ABCs regularly.
A stroke can cause a change of level of consciousness and can occur without warning. The victim may present one or more of the following signs or symptoms:

**Signs and Symptoms**
- Severe headaches
- Visual disturbances
- Numbing of the face or a limb
- Difficulty speaking or comprehending
- Dizziness
- Paralysis
- Change in level of consciousness

**If a trauma is involved** and the casualty is breathing, leave the casualty in the position in which he was found. Avoid moving the person unless his life is in danger, and ask him not to move. If possible, place a support on each side of his head and body to prevent him from moving. Monitor his breathing constantly.

**Note**

Never give a casualty who has suffered a change in level of consciousness anything by mouth. Send the casualty for specialized medical care, even if he feels better.

**Stroke**

A stroke can cause a change of level of consciousness and can occur without warning. The victim may present one or more of the following signs or symptoms:
Chapter 5

Cardiopulmonary Arrest:

Adult
PROTOCOL 5
Cardiopulmonary Arrest: Adult

Protocol for assessing situation

Safe?

NO

YES

U Check for unconsciousness

If trauma involved, protect cervical spine

A

Emerg. med. condition

Trauma

2 rescue breaths

B

NO

NO

Protocol 12

CPR

Alternate
30 compressions/2 rescue breaths

Continue cycles of 30 compressions/2 rescue breaths (30:2)
until help or an AED arrives or until the casualty’s condition changes
The cardiopulmonary resuscitation sequence outlined below is in accordance with the guidelines issued by the Heart and Stroke Foundation of Québec. This sequence is the one taught in training for the general public.

RESPIRATORY ARREST
When a person is in respiratory arrest, his lungs are no longer receiving the oxygen needed to sustain life. The brain depends on the heart and lungs for its supply of oxygen-rich blood. If deprived of oxygen for as little as 4 to 6 minutes, the brain can suffer damage.

Signs and Symptoms
- Unconsciousness
- Greyish or bluish skin
- Absence of chest movement
- Absence of air exhalation through the mouth or nose

CARDIOPULMONARY ARREST
Respiratory arrest is often accompanied by cardiac arrest (heart attack). Similarly, cardiac arrest can occur and be quickly followed by respiratory arrest. Cardiopulmonary resuscitation (CPR) is an emergency measure used when the heart stops beating. It consists in alternating between rescue breathing and chest compressions in order to maintain blood circulation and the oxygen supply to the body until EMS arrive.

Signs and Symptoms
- Unconsciousness
- Absence of signs of circulation
First Aid for Cardiopulmonary Arrest

1. Make sure the scene is safe and take appropriate precautions.

2. Check for unconsciousness.

3. Make sure EMS have been notified and ask whether a defibrillator is available on site.

4. Open the airway: tilt the casualty’s head back, press down on the forehead with one hand and lift the chin with the fingers of the other hand.

5. Check breathing: look, listen and feel for breathing (for at least 5 seconds, but no more than 10).

Note
The chances of survival for victims of cardiopulmonary arrest are much greater if the first aider begins CPR immediately.
6. If the casualty’s breathing is adequate (about 12 breaths a minute):
   • place the casualty in the recovery position (if no trauma is involved).

7. If the casualty is not breathing:
   • begin CPR immediately; give 2 rescue breaths (1 second each); each breath must be adequate enough for you to see the casualty’s chest rise.

8. If the casualty does not respond, begin chest compressions:
   • Lay the person down on a hard, flat surface if this has not already been done.
   • Kneel down beside the person at chest level.
   • Locate the part of the sternum where pressure must be exerted:
     – Place your hands, one on top of the other, in the centre of the person’s chest between the nipples;
– Lean forward until your shoulders are directly over the sternum. Press firmly on the sternum to push it down 4 to 5 cm (1 1/2 to 2 inches). The compression movement must be performed by exerting vertical downward pressure (keeping your arms straight and your elbows locked).

– Keeping your hands in contact with the sternum, relax the compression so that the sternum can return to its original position.

9. Perform 30 successive chest compressions (at a rate of approximately 100 compressions per minute), then give 2 rescue breaths.

Perform compression and decompression movements of equal length, at a fast, steady pace, with no sudden jerking motions.

10. Continue cycles of 30 compressions and 2 rescue breaths (30:2) until help arrives, an automated external defibrillator is provided, or the casualty’s condition changes.

<table>
<thead>
<tr>
<th>Respiratory arrest</th>
<th>10 to 12 breaths/minute (about 1 breath every 5 or 6 seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiopulmonary arrest</td>
<td>2 breaths, then 30 compressions at a rate of 100/minute</td>
</tr>
</tbody>
</table>
Insufflations that are too powerful during rescue breathing can cause air to enter the stomach, which can create gastric distension and lead to regurgitation.

In case of hypothermia, the first aider must take 45 seconds to check for signs of circulation.

If the first aider has a pocket mask and gloves in his possession, he must use them.
Mouth-to-Mask Resuscitation

The pocket mask method is the one recommended in first aid.

1. Place the pocket mask over the casualty’s face so it covers the nose and mouth.

2. Open the airway: tilt the casualty’s head back, press on the forehead with one hand and lift the chin with the fingers of the other hand.

3. Place one hand on the upper part of the mask and the other hand on the lower part, with fingers hooked under the chin to keep the mask airtight.

4. Give a rescue breath and watch closely to see if the person’s chest rises.

Note

If oxygen equipment is available, connect it to the mask for mouth-to-mask rescue breathing.

If a trauma is involved, the airway must be opened using the jaw-thrust manoeuvre in order to protect the spine. In such a case, place the mask over the casualty’s face and hold it firmly in position by placing your thumbs on each side while holding onto the lower jaw with your index finger, middle finger and ring finger. Lift the jaw upward, keeping the head and neck aligned with the torso.
DEFIBRILLATION

First aiders in the workplace must be familiar with CPR techniques and, if possible, have fast access to an automated external defibrillator (AED) so they can effectively help victims of cardiac arrest while waiting for EMS to arrive.

Defibrillation consists in applying a shock or an electric current to the heart through the chest wall. It serves to restore the heart’s normal rhythm after cardiac arrest and is an essential part of emergency cardiac care.

The term “defibrillation” means “to stop fibrillation.” Fibrillation is present when the fibres of the cardiac muscle are contracting rapidly and in a disorderly fashion. A heart that is fibrillating is unable to pump blood efficiently. This electrical disorder can occur in the upper chambers (the atria) or the lower chambers (the ventricles) of the heart. If it occurs in the ventricles (ventricular fibrillation), it leads to cardiac arrest. The only way to prevent death is through early defibrillation.

The new guidelines for emergency cardiac care and resuscitation recommend that a victim of cardiac arrest be given CPR immediately and that defibrillation be applied within the first few minutes to reduce the risk of brain damage and to optimize the chances of survival.

Studies have shown that without defibrillation, the potential of effective resuscitation diminishes by 7% to 10% per minute. Only 2% to 5% of casualties survive for more than 12 minutes without this essential intervention.

Defibrillation performed with an AED at the onset of cardiac arrest is an effective way of decreasing the morbidity and mortality rates associated with cardiopulmonary arrest. For automated external defibrillation to be effective, access to AED equipment and the training of qualified first aiders must be part of a planned response program that works in collaboration with EMS.
To perform automated external defibrillation, the first aider must first take the necessary training.

Use of an AED in Case of Cardiopulmonary Arrest

If the first aider sees that the casualty is in cardiopulmonary arrest, he must use an AED immediately or perform CPR until he has access to one.

1. Switch on the AED and connect the electrodes.
2. Remove the casualty’s clothing from the chest area.
3. Prepare the casualty’s chest for the AED:
   • dry the chest, if need be;
   • shave the spots, if necessary, where the electrode pads are to be placed.
4. Position the electrode pads on the casualty’s chest:
   • place one pad under the left mid-auxiliary line and the other to the right of the sternum, below the clavicle.
5. If shock is advised, follow the instructions provided on the defibrillator and press the shock button.
6. Immediately resume CPR for 5 cycles, beginning with compressions.
7. Repeat the defibrillation-CPR sequence until EMS arrive.
Chapter 6

Convulsions
**Protocol 6**

**Convulsions**

**Protocol for assessing situation**

- **Safe?**
  - **NO**
  - **SAFE?**
  - **YES**
    - **U** Check for unconsciousness
      - If trauma involved, protect cervical spine
    - Continue with clinical survey

- **ABCs Difficulty?**
  - **YES**
    - Protocols 5-12
  - **NO**
    - During convulsion
      - Do not put anything in casualty’s mouth
      - Prevent casualty from hurting himself
      - Hold casualty’s head, without exerting resistance
    - After convulsion
      - If trauma involved
        - Protect cervical spine
        - Oxygen* (if available)
        - Leave casualty in position found
    - Cover casualty
    - Reassess ABCs

*If available
Convulsions are episodic involuntary movements involving one or more limbs. They may involve all or part of the body. A convulsion is a symptom, not a disease.

**Signs and Symptoms**

- Period of blackout
- Person falls and stiffens
- Loss of consciousness
- Involuntary contractions
- Cyanosis (bluish colour) of the lips
- Foaming at the mouth
- Recovery period (possible change in level of consciousness)

**First Aid for Convulsions**

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. During convulsion:
   - protect the casualty so that he does not hurt himself;
   - hold the casualty’s head, without exerting any resistance;
   - notify EMS if convulsion persists.
6. After convulsion:
   - reassess the ABCs;
   - place the casualty in the recovery position (if no trauma is involved);
   - cover the casualty.
7. Reassess the ABCs regularly.
If a trauma is involved, the first aider must leave the casualty in the position in which he was found. He must protect the casualty’s cervical spine by holding the person’s head in the position in which it was found (without applying traction). If he has oxygen at his disposal, he must administer it to the casualty.

**Note**

During convulsion:

- do not put anything in the casualty’s mouth;
- do not try to restrict the casualty's movements, unless the first aider’s or casualty’s safety is at risk;
- if possible, remove any dangerous objects that are nearby.
Chapter 7
Heat Stroke
Heat Stroke

Protocol for assessing situation

Safe?

YES

NO

Check for unconsciousness

If trauma involved, protect cervical spine

Continue with clinical survey

ABCs?

YES

Protocols 5-12

NO

Move casualty to cool location
Remove clothing*

Sponge down and ensure good ventilation

If casualty conscious, give small sips of water, if possible

If casualty unconscious
Give nothing by mouth
Place in recovery position if no trauma involved

Reassess ABCs

* Attention! Dignity
Heat exhaustion and heat stroke are caused by an increase in body temperature. They occur as a result of an imbalance in the generation and loss of heat, which is often caused by demanding physical work in a very hot and humid environment. These two health problems are serious and deserve careful attention from the first aider since death can occur quickly.

**Signs and Symptoms**

- Hot, dry skin (sweating has stopped)
- Change in level of consciousness (from agitation to unconsciousness)
- Convulsions
- Abdominal and muscle cramps

**First Aid for Heat Stroke**

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. Move the casualty to a cool location, if possible.
7. Remove his clothing.
8. Refresh the casualty by sponging down his entire body in order to lower his temperature.
9. Make sure there is good ventilation.
10. If the casualty is conscious, give him small sips of water.
11. If the person vomits or loses consciousness, place him in the recovery position (if no trauma is involved).
12. Reassess the ABCs regularly.
Chapter 8

Respiratory Difficulty
Respiratory Difficulty

Protocol 8

Protocol for assessing situation

Safe? NO

Safe? YES

Check for unconsciousness

If trauma involved, protect cervical spine

Continue with clinical survey

ABCs Difficulty? YES

Protocols 5-12

ABCs Difficulty? NO

Protocols 9-14

Chest pain? YES

Dressing closed on 3 sides, if needed

Chest pain? NO

Protocols 9-14

Oxygen**

Place casualty in comfortable position

Help casualty take medication as prescribed

Reassess ABCs

* Attention! Dignity and hypothermia  ** If available
A person may experience respiratory difficulty for different reasons, which can include:

- a lung disease;
- a cardiovascular disease;
- an allergy;
- an airway obstruction;
- a trauma.

The first aider must therefore be careful when assessing the casualty’s condition and looking for signs and symptoms to ensure that he gives the appropriate first aid.

The normal breathing rate in an adult is between 12 and 20 breaths per minute. Respiration that is slower than 10 breaths per minute or faster than 24 breaths per minute is a sign of respiratory distress and requires medical assessment by specialized personnel.

**Signs and Symptoms**

- Respiratory difficulty expressed verbally by casualty
- Fast, slow, shallow, deep or irregular breathing
- Noisy breathing (audible noises, rattling, wheezing)
- Cough, sputum
- Use of accessory muscles for breathing
- Hoarse voice
- Possible chest pain
- Cyanosis (bluish colour)
- Agitation

**First Aid for Respiratory Difficulty**

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. If respiratory difficulty occurs along with:
   - trauma, see Protocol 3, Clinical Survey (Trauma);
   - chest pain, see Protocol 9, Chest Pain;
   - airway obstruction, see Protocol 12, Airway Obstruction;
   - allergic reaction, see Protocol 14, Allergic Reaction.
7. Administer oxygen (if available).
8. Place the casualty in a comfortable position.
9. If the casualty takes prescribed medication for this problem, help him take the dose indicated on the container.
10. Reassess the ABCs regularly.
Protocol 9
Chest Pain

Protocol for assessing situation

Safe?
NO
YES

U Check for unconsciousness
If trauma involved, protect cervical spine

Continue with clinical survey

ABCs Difficulty?
YES Protocols 5-12
NO

Stop all activity
Oxygen*

Loosen clothing
Place casualty in comfortable position

Persistent pain?
NO
YES

Help casualty take nitroglycerin as prescribed

Reassess ABCs

* If available
Chapter 9
Chest Pain

Chest pain is manifested as discomfort in the chest area between the jaw and navel, including the back and arms.

The most frequently occurring chest pain is cardiac in nature. This type of pain must never be taken lightly or confused with a health problem that could be regarded as less serious.

Signs and Symptoms
- Pain manifested in different ways: a feeling of heaviness, pressure, tightness, burning, sharp stabbing pain, or oppressiveness
- Radiation into the jaw, shoulders, arms or back
- Sudden or gradual onset
- Nausea, vomiting
- Pallor
- Heavy perspiration (diaphoresis)
- Difficulty breathing (dyspnea)
- Generalized weakness
- Tension and anxiety

First Aid for Chest Pain
1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. Have the casualty stop all activity and avoid any exertion.
7. Administer oxygen (if available).
8. Loosen any clothing that might interfere with breathing.
9. Place the casualty in a comfortable position.
10. Help the casualty to take his nitroglycerin as prescribed.
11. Reassess the ABCs regularly.

Note

Nitroglycerin comes in several forms: tablets under the tongue, spray, ointment and patch.
Allow the person to take only the medication prescribed by his physician.
Never give anything by mouth to someone who is unconscious.
Chest pain can cause cardiopulmonary arrest.
**Protocol 10**

**Hypothermia**

1. **Protocol for assessing situation**
   - Safe? (YES or NO)
   - If NO, call for help.
   - If YES, continue with clinical survey.

2. **Check for unconsciousness**
   - If trauma involved, protect cervical spine.
   - Continue with clinical survey.

3. **Hypothermia Difficulty?**
   - Yes, go to Protocols 5-12.
   - No, check signs of circulation for 45 seconds.

4. **Check signs of circulation for 45 seconds**
   - Gently move casualty to warm environment.
   - Gently remove damp or wet clothing.
   - Cover casualty and warm head, neck and torso first.

5. **If casualty conscious**
   - Give warm non-alcoholic beverage.

6. **If casualty unconscious**
   - Give nothing by mouth.
   - Place in recovery position if no trauma involved.

7. **Reassess ABCs**
**Chapter 10**

Hypothermia

Hypothermia is the result of a drop in body temperature to less than 35°C. This drop can be caused by exposure to a cold environment for a somewhat lengthy period of time. Hypothermia occurs when the body, reacting to cold, loses more heat than it produces.

**Signs and Symptoms**

- Shivering
- Trembling
- Possible frostbite
- Confusion, drowsiness
- Slow breathing
- Change in level of consciousness, or unconsciousness

**First Aid for Hypothermia**

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs (check signs of circulation for 45 seconds).
5. Look for signs and symptoms.
6. Gently move the casualty to a warm environment, if possible (sudden movement could cause a change in heart rate).
7. Gently remove damp or wet clothing.
8. Cover the casualty and warm up his head, neck and torso first.
   **If the casualty is conscious:**
   - give him a warm non-alcoholic beverage.
If the casualty is unconscious:
- place him in the recovery position (if no trauma is involved).

9. Reassess the ABCs regularly.

**Note**
Avoid alcoholic beverages because alcohol causes a further drop in body temperature and promotes the loss of heat through the skin.
Ask the person not to smoke, as nicotine slows down blood circulation.
Chapter 11

Occupational Poisoning
**PROTOCOL 11**

**Occupational Poisoning**

---

**Protocol for assessing situation**

- Identify toxic substance and type of contact made
- Obtain information: MSDS
  - Poison control centre: 1 800 463-5060
- Make sure casualty decontaminated
- Avoid all contact with product
- Confirm that scene is safe

---

**Before giving first aid**

- Oxygen*
- Specific care as directed

---

**Cyanide poisoning**

- Specific additional training
- Safety
- Decontamination
- Oxygen* (bag-valve-mask only)
- Antidote protocol

---

**Continue with clinical survey**

**ABCs Difficulty?**

- Yes
  - Protocols 5-12

- No
  - Oxygen*

---

**Reassess ABCs**

*If available*
Chapter 11
Occupational Poisoning

Thousands of toxic substances in a solid, liquid or gaseous state are used in various work environments. When one of these substances enters the body, it can cause poisoning.

A toxic product can enter the body in different ways: through skin absorption (direct contact with the skin or mucous membranes), inhalation (airway), ingestion (digestive tract), or injection (body tissues or blood).

Note
For more information on hazardous materials used in the workplace, see Appendix 5, Hazardous Materials – WHMIS.

Poisoning through Skin Absorption
Poisoning through skin (cutaneous) absorption can occur when the skin comes into contact with toxic substances. This type of poisoning can happen when handling the substance with bare hands, through clothing contamination or through contact with a cut, scrape or other type of skin lesion. Herbicides, insecticides, and a number of solvents present in glue, paint, lacquer and varnish can also cause poisoning through skin absorption.

Note
If someone’s skin comes into contact with a toxic product, the first aider must first make sure that the first aid intervention does not pose any risk; he must then decontaminate the surfaces involved in order to prevent poisoning.
Poisoning through Inhalation

Vapours, fumes, aerosols and toxic gases can have a direct effect on the body if inhaled. In the most extreme cases, they can cause death.

Poisoning through Ingestion

This type of poisoning can be caused by contaminated objects that come into contact with the mouth (pencils, cigarettes, chewing gum, hands, etc.). It can also be caused by contaminated food, excessive consumption of alcohol, medication or drugs, or any other toxic substance ingested deliberately or accidentally.

In the workplace, poisoning through ingestion generally occurs in a gradual manner. However, in exceptional circumstances, a person may ingest a toxic substance that can cause acute poisoning.

Note

If the casualty is unconscious, breath odour or traces left on the lips or in the mouth are signs that can indicate poisoning through ingestion.
Poisoning through Injection

Poisoning through injection is a relatively rare occurrence in the workplace, but it can occur in certain sectors that require the handling of needles, syringes and auto-injectors (e.g., in laboratories).

Signs and Symptoms

The effects of a toxic product can appear slowly or quickly. The first aider must therefore pay close attention to the signs and symptoms presented by the casualty.

The clinical signs of poisoning vary greatly with the product, type of contact and amount of time elapsed since the contact. Toxic substances can affect several biological systems and cause different signs and symptoms.

- Impact on the nervous system can be reflected in:
  - headaches (cephalagia), dizziness;
  - a change in level of consciousness (confusion, agitation, aggressiveness, hallucination, loss of consciousness);
  - convulsions.

- Impact on the respiratory system can be reflected in:
  - coughing, sneezing;
  - difficulty breathing;
  - fast or slow breathing;
  - a bluish skin colour;
  - respiratory arrest.

- Impact on the cardiovascular system can be reflected in:
  - an irregular, fast or slow pulse;
  - chest pain;
  - cardiac arrest.

- Impact on the digestive system can be reflected in:
  - nausea;
  - vomiting;
  - diarrhea;
  - abdominal pain.
Impact on the skin can be reflected in:
- redness;
- burns.

**First Aid for Occupational Poisoning**

1. Make sure the scene is safe and take appropriate precautions.
2. Make sure EMS have been notified.
3. Before giving first aid:
   - identify the toxic substance and the type of contact made;
   - refer to the Material Safety Data Sheet (MSDS), if available, or the product label, or call the poison control centre to obtain all relevant information concerning the contaminant;
   - brief EMS personnel as soon as they arrive and give them the MSDS;
   - make sure that the casualty is decontaminated, if necessary;
   - avoid all contact with the product; wear appropriate protection equipment, if need be;
   - confirm that the scene is safe, or wait for such confirmation from specialized personnel.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. Administer oxygen (if available).
7. Give appropriate first aid based on the information obtained.
8. Reassess the ABCs regularly.
INFORMATION ON CYANIDE POISONING

First aiders who work in enterprises using cyanide or its by-products must receive additional training. This training must cover the dangers associated with the use of these products and the first aid that can be given in case of poisoning.

EMERGENCY MEDICAL CONDITIONS

Note

The first aider must be particularly careful when assessing a situation of occupational poisoning. He must make sure that all risks of contamination have been controlled before he steps in.

Material Safety Data Sheets are usually available to workers at their workplace; if not, product labels may provide the necessary information.

The poison control centre can be reached at 1 800 463-5060. Under no circumstances should the casualty be made to vomit, unless otherwise indicated by the MSDS or the poison control centre.

If the casualty goes into cardiopulmonary arrest after inhaling a product, the first aider must not use the mouth-to-mouth or mouth-to-nose method. He must assist the person’s breathing using a bag-valve-mask, if available, or a pocket mask with a one-way valve. In all such situations, the first aider must avoid inhaling the gases exhaled by the casualty. Cyanide poisoning requires specific first aid treatment (see Information on Cyanide Poisoning below).

Even if the casualty appears to be out of danger, he must always be sent for specialized medical care.

INFORMATION ON CYANIDE POISONING

First aiders who work in enterprises using cyanide or its by-products must receive additional training. This training must cover the dangers associated with the use of these products and the first aid that can be given in case of poisoning.
The main enterprises utilizing or producing chemical products (such as pesticides, chlorinated products, nitrogen products, plastics and solvents) as well as enterprises in the mining sector and the metallurgical industry (iron and steel tempering, welding, electroplating) use products containing cyanide. The by-products of the combustion of these substances are also extremely toxic.

Cyanide poisoning is one of the most dangerous types of poisoning and can cause death within minutes of exposure. Cyanide and its by-products used in different industrial processes can enter the body through inhalation, ingestion, or absorption through the skin or eyes. It is absorbed very quickly, hence its high level of toxicity. Cyanide compromises the ability of the body’s cells to use oxygen.

**Signs and Symptoms**

- Weakness
- Headaches (cephalgia)
- Confusion
- Dizziness
- Nausea, vomiting
- Difficulty breathing
- Convulsions

The scene must be safe before any first aid is given, as the first aider must not risk being contaminated himself.

The casualty must be decontaminated as quickly as possible. His clothing must be removed and any powder must be brushed off and rinsed thoroughly.

The administration of oxygen remains the best treatment for this type of poisoning, until an antidote can be given.
If the casualty goes into cardiopulmonary arrest, the first aider must not perform mouth-to-mouth or mouth-to-mask resuscitation; the use of a bag-valve-mask is the only method indicated in this case. The bag-valve-mask must be equipped with tubing that delivers a 100% concentration of oxygen.

Antidotes are available to counteract cyanide poisoning. However, first aiders in the workplace are not authorized to administer this type of medication. Employers must ensure that they have an antidote management protocol in place and must inform their workers about the protocol.

Note
Cyanide is an extremely dangerous contaminant. To assist a casualty who has been poisoned with this substance, the first aider must receive additional training.
Chapter 12

Airway Obstruction:

Adult
Protocol for assessing situation

Safe?

NO

YES

Check for unconsciousness

If trauma involved, protect cervical spine

Conscious casualty

Partial

Making noises

Ask to cough

Persistent cough?

YES

Foreign body expelled?

YES

Send for specialized care

NO

Repeat manoeuvres until foreign body expelled or until casualty loses consciousness

Total

Making no noise

Abdominal thrusts (chest compressions if pregnant or overweight)

Reassess ABCs
Airway Obstruction: Unconscious Adult

Protocol for assessing situation:

- **Safe?**
  - **NO**
    - Protocol 5
  - **YES**
    - **U** Check for unconsciousness
      - If trauma involved, protect cervical spine
      - **Safe?**
        - **NO**
        - **YES**
          - Unconscious casualty
            - Lay casualty on back
              - **A**
                - Emerg. med. condition
                - Trauma
                  - **B**
                    - Look in mouth and clear if need be
                    - **2 rescue breaths**
                      - **NO**
                        - **YES**
                          - **Protocol 5**
                    - **YES**
                      - **30 chest compressions**
        - **NO**
          - **YES**
            - **Protocol 5**
            - Reassess ABCs

EMERGENCY MEDICAL CONDITIONS
Chapter 12
Airway Obstruction: Adult

The cardiopulmonary resuscitation sequence outlined below is in accordance with the guidelines issued by the Heart and Stroke Foundation of Québec. This sequence is the one taught in training for the general public.

“Airway obstruction” means that the tongue or a foreign body is blocking a person’s airway and preventing air from reaching his lungs. The obstruction may be partial or total. An airway obstruction can occur in a conscious or an unconscious casualty. In conscious casualties, such obstruction is known as “choking.”

PARTIAL OBSTRUCTION (Conscious Casualty)

Signs and Symptoms
- Cough, abnormal breathing noises
- Difficulty breathing and speaking
- Panic

First Aid for Partial Obstruction (Conscious Casualty)
1. Ask the casualty to cough to dislodge and expel the foreign body.
2. Stay with the casualty.

Note
Do not give the person anything to eat or drink.

TOTAL OBSTRUCTION (Conscious Casualty)

Signs and Symptoms
- Unable to speak or cough
- Greyish or bluish colour of the face
- Panic
First Aid for Total Obstruction (Conscious Casualty)

1. Make sure the scene is safe and take appropriate precautions.
2. Ask the casualty if he can speak or cough.
3. If the person is unable to do either, perform abdominal thrusts.
   - Stand behind the person, place one foot between his legs for greater stability and wrap your arms around his waist, being careful not to press on the ribs.
   - Locate the proper place for performing the thrusts, i.e., above the navel, but well below the lower part of the sternum.

Note

If a casualty clutches his throat, this is a standard indication that his airway is obstructed and that he needs help.
• Make a fist, thumb inward, and place it against the casualty’s abdomen.

• Grasp your fist with your other hand.

• Press hard on the person’s abdomen with a quick inward upward thrust, using a “J” movement.

4. Repeat this manoeuvre until the foreign body is expelled or the casualty loses consciousness.

**Note**

Each abdominal thrust must be performed separately, using a distinct movement, in order to expel the foreign body. Even if the foreign body is expelled, the person must always be sent for specialized medical care, since he may have sustained internal injuries as a result of the abdominal thrusts.
Pregnant or Overweight Casualty

1. Make sure the scene is safe and take appropriate precautions.

2. Ask the person if he or she can speak or cough.

3. If the person is unable to do either, perform chest compressions.
   - Stand behind the person, putting your arms around his or her chest, just under the armpits.
   - Make a fist with one hand — thumb inward — and place it against the person’s chest; fold your other hand over your fist, while maintaining contact with the middle of the sternum.
   - Give several thrusts, directing the movement toward you.

4. Continue the chest compressions until the foreign body is expelled or the casualty loses consciousness.
TOTAL OBSTRUCTION (Unconscious Casualty)

Signs and Symptoms

- Unconsciousness
- Greyish or bluish colour
- Absence of breathing

First Aid for Airway Obstruction (Unconscious Casualty)

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Open the airway: tilt the casualty’s head back, place one hand on the forehead and lift the chin with the fingers of the other hand. Look in the person’s mouth and remove any visible foreign body.
5. **Check breathing:** look, listen and feel for breathing (at least 5 seconds, but no more than 10).

6. If the person is not breathing:
   - give 2 rescue breaths (1 second each).
   *If the air does not enter the lungs on the first try:*
   - reposition the person’s head and insufflate again.
   *If the air still does not enter the lungs, there is an obstruction:*
   - perform 30 chest compressions.

7. Lift the person’s chin and tongue, then check whether a foreign body is visible in the mouth. If so, run your finger along the inside of the cheeks to the back of the mouth and try to remove the object.
8. Repeat airway clearing manoeuvres until the foreign body is expelled and air is entering the person's lungs, or until EMS arrive.

If the foreign body is expelled:
• check the person's breathing.

If the person is breathing:
• place in the recovery position (if no trauma is involved).

If the person is not breathing:
• begin CPR.

If a trauma is involved, the airway must be opened using the jaw-thrust manoeuvre in order to protect the spine. To perform this technique, the first aider must position himself at the casualty's head, place one hand on each side of the lower jaw and lift it upward in a straight line without moving the head. It is essential that the head and neck be kept aligned with the torso.
Chapter 13

Diabetic Emergency
**Protocol 13**

**Diabetic Emergency**

1. **Protocol for assessing situation**
   - Safe? NO → If trauma involved, protect cervical spine
   - Safe? YES → U Check for unconsciousness

2. **Check for unconsciousness**
   - YES → Protocols 5-12
   - NO → If casualty conscious, give:
     - sweet juice
     - fruit
     - chocolate

3. **If casualty unconscious**
   - Give nothing by mouth
   - Place in recovery position
   - If no trauma involved → Send for specialized care

4. **Reassess ABCs**
   - Improvement? YES → Send for specialized care
   - Improvement? NO → Reassess ABCs
Chapter 13
Diabetic Emergency

Diabetes is a disease caused by the insufficient secretion of insulin by the pancreas or by the inadequate use of insulin by the body cells. Insulin is a hormone that controls sugar levels in the blood.

The most common disorder in people who are diabetic is hypoglycemia (drop in blood sugar). This problem can arise mainly after physical exertion, an error in insulin dose or a lack of food.

Any fluctuation in sugar levels can cause signs and symptoms in a diabetic. The brain is very sensitive to this type of fluctuation.

Signs and Symptoms
- Clammy, pale skin
- Confusion
- Profuse sweating
- Hunger and great thirst
- Nausea, vomiting
- Nervousness, anxiety, trembling
- Change in level of consciousness (from agitation to unconsciousness)
- Convulsions

First Aid for a Diabetic Emergency
1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. If the casualty is conscious:
   - help him drink sweet juice or eat fruit or chocolate.
7. If the casualty is unconscious:
   • notify EMS;
   • place him in the recovery position (if no trauma is involved);
   • do not give him anything by mouth.

8. Reassess the ABCs regularly.

Note
Giving sugar to a conscious person who is hypoglycemic (low blood sugar) usually prevents the symptoms from progressing, and will not aggravate the condition of a person who is hyperglycemic (high blood sugar). The first aider should therefore not hesitate to give sugar. Any diabetic casualty experiencing a problem should be sent for specialized medical care.
Chapter 14
Allergic Reaction
Protocol 14
Allergic Reaction

Protocol for assessing situation

Safe?

NO

YES

Check for unconsciousness
If trauma involved, protect cervical spine

Continue with clinical survey

ABCs Difficulty?

YES

Protocols 5-12

NO

Localized reaction
Mild generalized reaction
Severe generalized reaction

Remove stinger if visible (insect sting)
Remove stinger if visible (insect sting)
Check whether casualty carrying adrenaline

Apply ice or cold compress

Check whether casualty carrying adrenaline

Oxygen*

Place casualty in comfortable position

Reassess ABCs

* If available

First aider requires specific additional training to inject the medication
An allergy is the body’s exaggerated sensitivity to certain substances that are harmless for the majority of people. When someone comes into contact with a substance to which he is allergic, he reacts. This reaction may take on different forms: sneezing, runny nose (hay fever), conjunctivitis, asthma or skin rashes (redness, hives, eczema).

Other more serious, sometimes even fatal, reactions such as anaphylactic shock (difficulty breathing, change in level of consciousness, pallor, rapid pulse, drop in blood pressure, etc.) can occur.

**Possible Sources of Allergies**
- Food (peanuts, milk, shellfish, mustard, eggs, etc.)
- Insect bites or stings (bees, wasps, etc.)
- Medications (penicillin, vaccines, etc.)
- Chemical substances (cleaning products, dyes, etc.)
- Biological substances (pollen, plants, animal hair, etc.)

**Signs and Symptoms**

The signs and symptoms of allergies differ, depending on whether the victim’s reaction is localized or generalized. The signs and symptoms of a generalized reaction may appear within a few minutes (sometimes less than 5 minutes) or within a few hours, but usually appear within 30 minutes.

**Localized Reaction** (to an insect bite or sting)
- Pain, redness, itchiness and swelling around the site of the bite or sting

**Note**

This type of reaction may lead to a generalized reaction.
Mild Generalized Reaction

- Redness or swelling of the skin on the body
- Itchiness (hives)
- Puffiness around the eyes, on the face or lips (excluding the inside of the mouth, the tongue and the throat)

It is important to distinguish the symptoms of localized and mild generalized reactions from those of severe generalized allergic reactions.

Severe Generalized Reaction

- Swelling of the tongue or throat (sensation of a constricted throat, the victim clutches at his throat)
- Difficulty breathing (coughing and wheezing, difficulty speaking, panic, redness in the face)

Note

A severe generalized reaction can rapidly deteriorate into a state of anaphylactic shock, which is manifested in a change in level of consciousness (person loses consciousness), pallor, fast and barely perceptible pulse, and a drop in blood pressure. A severe generalized reaction can lead to cardiopulmonary arrest.

The signs and symptoms can appear very quickly (within 1 to 2 minutes), but usually appear within 15 to 30 minutes.

The signs and symptoms do not appear in any particular order.
First Aid for an Allergic Reaction

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. Determine the severity of the reaction (localized, mild generalized, severe generalized).

   **Localized reaction:**
   - if the cause is an insect sting and the stinger is visible, remove it by scratching; do not squeeze with the nails;
   - apply ice or a cold compress at the site of contact in order to slow down the reaction;
   - monitor the person’s condition.

   **Mild generalized reaction:**
   - if the cause is an insect sting, follow the same steps as for a localized reaction;
   - monitor the person’s condition very closely;
   - if the person is carrying adrenaline, ask him to keep it within reach.

   **Severe generalized reaction:**
   - check whether the casualty is carrying adrenaline;
   - if so and if he is conscious, suggest that he inject the medication.

7. Administer oxygen (if available).
8. Place the casualty in a comfortable position.
9. Reassess the ABCs regularly.
All victims of allergic reactions should be sent for specialized medical care.

First aiders must avoid applying mud or earth to an insect sting.

The administration of adrenaline is a radical emergency measure; it requires medical attention and follow-up. It is therefore essential that the casualty be sent for specialized medical care.

Note

To administer adrenaline, first aiders must receive prior additional training and must use an auto-injector only.
Chapter 15

Eye Injuries
**Protocol 15**

**Eye Injuries**

**Protocol for Assessing Situation**

- Casualty must avoid rubbing eyes
- Eye dressings must be non-pressure type
- Both eyes should be covered
- Never try to remove foreign body

**Safe?**

**YES**

- Continue with clinical survey

**NO**

- Check for unconsciousness
  - If trauma involved, protect cervical spine

**U**

**ABCs Difficulty?**

- Protocols 5-12

**Protocols 5-12**

- Penetrating foreign body and eyeball out of socket
  - Leave foreign body in place
  - Cover eye with damp gauze pads
  - Cover with cardboard cup and secure

- Non-penetrating foreign body and other lesions
  - Close eye and cover with dry dressing

- Burns
  - Chemical
    - Thoroughly flush with water until EMS arrive
  - Radiation
    - Close eye and cover with dry dressing
    - Identify:
      - type of laser
      - distance
      - exposure time

**Reassess ABCs**
Eye injuries are considered to be serious traumas. The eyes are extremely fragile and sensitive organs. In the workplace, the eyes can sustain different types of injuries involving foreign bodies, lesions or burns.

First aiders must follow certain basic principles in order to avoid aggravating eye injuries. They must never put anything in the eye or apply any pressure or a pressure dressing. They must never try to remove a foreign body lodged in the eye or the eyeball; such attempts could aggravate the injury or even cause the casualty to lose the eye. Chemical burns require thorough flushing with water as quickly as possible and continuously until EMS arrive.

Any eye injury must be given very close attention and requires specialized care.

**PENETRATING FOREIGN BODY AND EYEBALL OUT OF SOCKET**

A foreign body penetrating the eye can include pieces of glass, splinters of wood, metal or other materials that become lodged in or adhere to the eyeball.

Some serious accidents can also cause an avulsion of the eye (the eye comes out of its socket).

**First Aid for a Penetrating Foreign Body and Eyeball Out of Socket**

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Leave the foreign body in place if it is penetrating the eye.
6. Gently place damp gauze pads around the foreign body, without applying any pressure, in order to prevent the eye from losing its fluid.
7. Place a cardboard cup over the eye to protect it and to immobilize the foreign body, if need be (being careful not to apply any pressure to the object).

8. Cover the uninjured eye with a dry dressing to prevent it from moving, as any movement would cause the injured eye to move and could aggravate the injury.

Penetrating foreign body:
• place the casualty in a semi-sitting position (if there is no risk of spinal injury).

Eyeball out of socket:
• lie the casualty down.

9. Reassess the ABCs regularly.

OTHER TYPES OF LESIONS, NON-PENETRATING FOREIGN BODY

Other types of lesions can include abrasions, tears, lacerations, and eye or eyelid irritations.

They can also include non-penetrating foreign bodies, such as wood, metal or glass particles or other materials that do not adhere to or penetrate the cornea.
Signs and Symptoms

- Irritation
- Pain
- Sensation of something in the eye
- Tearing
- Blurred vision

First Aid for a Lesion or Non-Penetrating Foreign Body

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Gently close the eyelid and cover it with a dry dressing, without applying any pressure.
6. Prevent the person from rubbing his eyes, as this could aggravate the injury.
7. Cover the uninjured eye with a dry dressing to prevent it from moving.
8. Reassess the ABCs regularly.

BURNS

Chemical Burns

A chemical burn is generally caused by a chemical product entering the eye.

First Aid for Chemical Burns

1. Make sure the scene is safe and take appropriate precautions.
2. Confirm that the scene is safe or wait for confirmation from specialized personnel.
3. Check for unconsciousness.
4. Make sure EMS have been notified.
5. Control all problems found during the ABCs.
6. Thoroughly flush the eye with water until EMS arrive:

- check whether the casualty is wearing contact lenses; if so, ask him to remove them;
- flush the injured eye under an eyewash fountain, under a tap or by pouring water over it;
- avoid contaminating the other eye during flushing by turning the casualty’s head so that the injured eye is on the bottom;
- hold the eyelids apart with your fingers so as to keep the eye open;
- thoroughly flush the entire surface of the eye and ask the casualty to turn his eye constantly;
- refer to the Material Safety Data Sheet, if available, check the product label or call the poison control centre to obtain all relevant information about the contaminant; inform EMS when they arrive and give them the MSDS.

7. Reassess the ABCs.
Radiation Burns

The ultraviolet and infrared rays emitted during certain welding operations or other activities that involve laser beams can cause permanent burns. Workers subject to this type of exposure should always protect their eyes by wearing goggles or using appropriate screens.

Signs and Symptoms

- Burning sensation
- Sensation of having grains of sand in the eyes
- Tearing, tingling
- Pain, often quite sharp
- Sensitivity to light

Note

The signs and symptoms may not appear until later on.
First Aid for Radiation Burns
1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Close both eyes and cover them with a dry non-pressure dressing that is opaque to prevent light from filtering through.
6. Prevent the casualty from rubbing his eyes, as this could aggravate the injury and irritation of the cornea.
7. Inform EMS of the characteristics of the laser beam used, the distance between the machine and the casualty, and the exposure time.
8. Reassess the ABCs regularly.
Chapter 16

Burns
PROTOCOL 16
Burns

Protocol for assessing situation

Safe?

NO

Special caution required! Call and wait for specialized resources (if necessary)

YES

Check for unconsciousness

If trauma involved, protect cervical spine

Continue with clinical survey

ABCs Difficulty?

YES

Protocols 5-12

NO

Thermal

Stop burn from progressing

Cool off burned area

Remove jewellery and clothing (unless stuck to skin)

Apply dry dressing

Cover casualty

Chemical

Avoid contamination

Solid: brush off powder and rinse

Liquid: flush for 30 minutes

Refer to MSDS or call poison control centre**

Electrical

Look for entry and exit points of electrical current

Apply dry dressing

Inhalation

Move casualty to well-ventilated area

Oxygen*

Place casualty in comfortable position

Refer to MSDS or call poison control centre**

Special caution required!

Call and wait for specialized resources (if necessary)

Reassess ABCs

*If available **Poison control centre: 1 800 463-5060
First aiders in the workplace may have to administer care to people suffering from different types of burns. There are four main types of burns — thermal, chemical, electrical and inhalation.

Assessment of Burns
First aiders must take three criteria into account in assessing the severity of a burn: the degree of the burn (depth), the extent of the burn, and the area of the body affected.

Degree of Burn (Depth)
First-degree burns affect only the surface layer of the skin. They cause redness and pain.
Second-degree burns are deeper and are characterized by redness, acute pain, and above all, blisters.
Third-degree burns affect the deeper layers of the skin and can reach as far as the subcutaneous tissues, muscles, blood vessels, and even bones in some cases. The skin is often charred and the sensory receptors impaired. If extensive, these burns can quickly lead to a state of shock, which is caused by a loss of body fluid when the skin has been completely destroyed. A person with third-degree burns may feel little or no pain, or great pain, depending on how badly the pain receptors have been impaired. Apart from a state of shock, infection remains the most frequent complication of this type of burn.

Extent of Burn
The larger the area burned, the more serious the burn.

Area Affected
• Face and neck:
  Burns to these areas can cause obstruction due to edema of the airway.
• Airway:
  Airway burns are suspected in the event of facial
  burns, soot or blisters around the mouth and nose,
  blackish sputum, swallowing difficulty, coughing,
  rattling, wheezing and breathing difficulty. These
  symptoms may appear within minutes or hours
  of the accident.

• Hands, feet and joints:
  These burns lead to decreased functional ability
  of the limbs affected.

• Genital organs:
  Burns to these areas pose a more serious risk
  of infection.

Signs and Symptoms
• Dry skin
• Pain
• Redness
• Edema (swelling)
• Blisters
• Skin that is white, waxy, charred or purplish red

THERMAL BURNS
Thermal burns are caused by flames, steam, hot water or
hot objects.

First Aid for Thermal Burns
1. Make sure the scene is safe and take appropriate
   precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. Cool off the burned area. If possible, immerse it in cold water or cover it with cold damp compresses for at least 30 minutes in the case of a small burn area (i.e., a limb), or until EMS arrive. In cases where a large area of the body has been burned (i.e., more than one limb), limit the cooling time to 10 minutes to prevent hypothermia.

7. Remove all jewellery and clothing, unless they are stuck to the skin.

8. Cover the wound with a dry dressing (if the burn area is small, it can be covered with damp compresses).

9. Cover the casualty.

10. Reassess the ABCs regularly.

Note

Never burst the blisters (as this increases the risk of infection). Never apply any oily substances (ointments or the like).

CHEMICAL BURNS

Chemical burns are caused by acidic, basic or caustic substances. These substances may come in gaseous, liquid or solid form.

First Aid for Chemical Burns

1. Make sure the scene is safe and take appropriate precautions.

2. Confirm that the scene is safe or wait for confirmation from specialized personnel.

3. Check for unconsciousness.

4. Make sure EMS have been notified.

5. Take the necessary precautions to avoid contaminating anyone else or other unaffected areas of the person's body.
6. Control all problems found during the ABCs.
7. Look for signs and symptoms.
8. Refer to the Material Safety Data Sheet, if available, check the product label or call the poison control centre to obtain all relevant information about the contaminant; inform EMS when they arrive and give them the MSDS.
9. If the product is a powder, brush off the excess before rinsing.
10. Flush the contaminated area thoroughly for 30 minutes, unless otherwise indicated.
11. Remove any contaminated clothing and jewellery (protect the person's face and be very careful not to get any of the toxic substance on the unaffected parts of the person's body).
12. Apply dry dressings as needed (if the burn area is small, it can be covered with damp compresses).
13. Cover the casualty.
14. Reassess the ABCs regularly.

**Note**

The MSDS is usually available to workers in the workplace; if not, the product label may provide the necessary information.

The poison control centre can be reached at 1 800 463-5060.

A neutralizing solution should never be applied to a chemical burn, unless otherwise directed by a qualified person, the MSDS or the poison control centre.

An emergency shower must be readily accessible and located in an uncluttered well-marked area. It must be easy to operate, i.e., equipped with a chain-operated faucet, and maintained in good working order. The water pressure and flow must be sufficient to ensure thorough rinsing. The water temperature must be lukewarm.
Electrical burns are caused by an electrical current or lightning. Electrical burns, even those whose external signs appear minor, can cause extremely serious internal injuries and serious heart rate problems. Casualties can also be thrown or sustain violent muscular jolts under the impact of the current. Even if the only visible signs of injury are the entry and exit points of the electrical current, the first aider must constantly monitor the casualty, for there is a high risk of complications. For that reason, all casualties who have suffered electrical burns must be taken by ambulance to a medical centre for medical evaluation.

First Aid for Electrical Burns
1. Make sure the scene is safe and take appropriate precautions.
2. **U** Check for unconsciousness.
3. Make sure EMS have been notified.
4. If a trauma is involved:
   • ask the casualty not to move;
   • hold the person’s head in the position in which it was found (without applying traction).
5. Control all problems found during the ABCs.
7. Look for the entry and exit points of the electrical current.

8. Cover the wounds with dry dressings (if the burn area is small, it may be covered with damp compresses).

9. Reassess the ABCs regularly.

Note

If the accident was caused by a broken power line (overhead wire, underground cable) or by an accidentally charged object:

- do not touch anyone who is connected to the power line or any other charged object; there is no sure way to determine whether all danger has subsided;
- immediately call the police, fire department or customer service department at Hydro-Québec, which will send an emergency team; continue monitoring the source of the current to prevent other accidents;
- prohibit access to the site;
- do not try to move the power line(s) even using wooden objects; wood can act as an electricity conductor because of the dampness it contains or because of the sweat on the hands of the person who is holding it.

INHALATION BURNS

Inhalation burns affect the mucous membranes of the airway and are caused by steam, extremely hot air or chemical products.

First Aid for Inhalation Burns

1. Make sure the scene is safe and take appropriate precautions.

2. Confirm that the scene is safe or wait for confirmation from specialized personnel (if a chemical product is involved).
3. **Check for unconsciousness.**
4. Make sure EMS have been notified.
5. Make sure that the casualty is moved or transported to a safe well-ventilated area.
6. Control all problems found during the ABCs.
7. Look for signs and symptoms.
8. Refer to the MSDS, if available, check the product label or call the poison control centre to obtain all relevant information concerning the contaminant; inform EMS when they arrive and give them the MSDS (if a chemical product is involved).
9. Administer oxygen (if available).
10. Place the casualty in a comfortable position.
11. Reassess the ABCs regularly.

**Note**

The MSDS is usually available to workers in the workplace; if not, the product label may provide the necessary information.

The poison control centre can be reached at 1 800 463-5060.
Chapter 17

Shock
**PROTOCOL 17**

**Shock**

Protocol for assessing situation

Safe?

Yes

Safe?

No

Check for unconsciousness

If trauma involved, protect cervical spine

Continue with clinical survey

Approach (trauma)

ABCs Difficulty?

Yes

Protocols 5-12

No

Leave casualty in position found, protecting cervical spine and offering reassurance

Loosen clothing

Oxygen*

Cover casualty
Give nothing to eat or drink

Reassess ABCs

*If available
Chapter 17
Shock

Shock is the result of an insufficient supply of oxygen and nutrients to the body’s cells. It can occur in the event of a serious problem causing a significant loss of blood, damage to the heart, a spinal injury, vasodilatation or severe dehydration.

In cases where shock is caused by a considerable loss of blood, first aiders must look for signs and symptoms of internal bleeding, if possible, and control external bleeding effectively. They must pay close attention to the signs and symptoms of shock and quickly inform EMS of any problem detected or suspected.

**Signs and Symptoms**
- Anxiety, weakness, drowsiness
- Cold, clammy, pale skin
- Weak, rapid pulse
- Fast breathing
- Nausea, vomiting
- Great thirst
- Change in level of consciousness

**Note**
The signs and symptoms of shock do not always appear immediately after the accident. Sometimes they appear later on.

**First Aid for Shock**
1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. Leave the casualty in the position in which he was found, protecting the cervical spine and providing reassurance.

7. Loosen the casualty’s clothing.

8. Administer oxygen (if available).

9. Cover the casualty.

10. Reassess the ABCs regularly.

**Note**

A shock casualty must not be given anything to eat or drink. If he must be relocated, his body must be moved as a single unit, with the head and neck aligned with the torso. The recovery position is not indicated in this case because of the risk of spinal injury.
Chapter 18

Frostbite
PROTOCOL 18
Frostbite

Protocol for assessing situation

Safe? NO

U Check for unconsciousness
If trauma involved, protect cervical spine

Continue with clinical survey

ABCs Difficulty? YES
Protocols 5-12

Hypothermia? YES Protocol 10

NO

Remove all damp or wet clothing
Gradually warm up affected area
Cover with dry dressing
If casualty conscious, give warm non-alcoholic beverage
Cover casualty

Do not rub or massage affected area
Never remove frost if frostbite by liquid gas

Reassess ABCs
Chapter 18
Frostbite

Frostbite is a localized skin injury caused by cold. It occurs most often on the face and the extremities (hands and feet). The severity of this type of injury depends on the length of exposure to the cold, and the presence of other cooling factors, such as the wind velocity (wind chill factor) and humidity levels. Frostbite can also be caused by handling liquid gas (oxygen, nitrogen, propane, etc.). The severity of injury varies depending on how much area of the skin is affected and the length of contact. This type of burn is most often serious and is comparable to a third-degree burn.

Signs and Symptoms
- Gradual numbness
- Gradual loss of feeling
- Cold, white, waxy skin
- Redness around the frostbitten areas
- Blisters may be present
- Induration (affected area feels hard to the touch)

First Aid for Frostbite
1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs (in the event of hypothermia, check the victim’s signs of circulation for 45 seconds and move him gently, with no jolting, to a warm location).
5. Look for signs and symptoms.
6. Gently remove all damp or wet clothing.
7. Apply a dry dressing on the frozen area in order to protect the surface of the skin.
8. Cover the victim.
9. Let the affected areas warm up gradually, without putting them near a direct heat source.

10. Give the person a warm non-alcoholic beverage, if he is conscious.

11. Reassess the ABCs regularly.

**Note**

Do not rub or massage the affected area; do not remove frost if the frostbite was caused by liquid gas.

Do not give the victim an alcoholic beverage, as alcohol lowers the body temperature and promotes heat loss through the skin.

Ask the person not to smoke, as nicotine causes a decrease in blood circulation.
**Protocol 19**

**Bleeding**

1. **Protocol for assessing situation**
   - **Safe?**
     - **NO**
     - **YES**
2. **Check for unconsciousness**
   - If trauma involved, protect cervical spine
3. **Continue with clinical survey**
4. **ABCs Difficulty?**
   - **YES**
     - Protocols 5-12
   - **NO**
5. **Complex wounds?**
   - **YES**
     - Technique 2
     - Carry out steps to control bleeding
       - apply direct pressure
       - elevate limb
       - apply pressure dressing
6. **Persistent bleeding?**
   - **YES**
     - Apply second pressure dressing
   - **NO**
7. **Signs and symptoms of shock?**
   - **YES**
     - Protocol 17
   - **NO**
8. **Oxygen**
   - *If available*
9. **Reassess ABCs**

---

*CSST_SecourAN_123-170-F_CSST_SecourAN_123-170 10-12-13 14:10 Page152*
Chapter 19
Bleeding

A hemorrhage is profuse bleeding caused by a ruptured blood vessel. It may be internal or external and may lead to shock as a result of a decrease in blood volume.

INTERNAL BLEEDING

Internal bleeding is difficult to detect because it cannot be seen. It may be due to a rupture of blood vessels or an injury to tissues or organs caused by a fracture, a violent shock or a major compression. To determine whether a casualty is suffering from internal bleeding, the first aider must look for the following signs and symptoms:

Signs and Symptoms

- Signs and symptoms of shock
- Difficulty breathing
- Vomiting of blood
- Presence of blood in the urine or stool
- Hardening of the abdomen; localized or diffuse pain, pain upon touch; bluish skin

Internal bleeding may require emergency surgery. The first aider must notify EMS as quickly as possible when he suspects this type of problem, and must treat the person as a shock casualty.

First Aid for Internal Bleeding

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. Keep the casualty in the position in which he was found, protecting the cervical spine and providing reassurance.
7. Loosen the casualty’s clothing.
8. Administer oxygen (if available).
9. Cover the casualty.
10. Reassess the ABCs regularly.

Note
Do not give the casualty anything to eat or drink.

EXTERNAL BLEEDING
External bleeding is visible since the blood flows from a wound onto the surface of the body. Any profuse or continuous external bleeding must be stopped quickly, as it can rapidly cause the victim to go into shock.

Steps to Control Bleeding
1. Locate and Assess the Wound
Determine the exact location of the injury. Check the extent and depth of the wound, as well as the amount of blood that has been lost.
Check whether a limb has been severed, whether there is an open wound to the chest or abdomen (evisceration) or a wound penetrated by a foreign body. These types of wounds require specific treatment. See Technique 2, First Aid for Complex Wounds.

2. Apply Direct Pressure
Wearing a glove and holding a gauze pad, apply direct pressure on the wound as quickly as possible in order to compress the blood vessel that is bleeding.
3. **Elevation and Rest**

Have the person sit or lie down. Raise the injured limb to slow down the blood circulation toward the wound. However, do not move the limb if there is any visible deformity.

4. **Pressure Dressing**

Apply gauze pads on the wound (if necessary, use a clean, absorbent piece of fabric) and secure them, while applying pressure using a bandage dressing or a triangular bandage. Be sure not to apply the bandage too tightly, otherwise circulation could be hindered. If the limb is cold or numb, or if the skin takes on a white or bluish colour under the bandage, then the bandage is too tight and should be loosened.

It is essential to check circulation (colour, heat, feelings of numbness before and after applying the pressure bandage) to make sure that neither the injury nor the bandage is hindering circulation.

If the wound continues bleeding, apply a second pressure bandage over the first one. Never remove the first bandage, as the blood clot that is forming could be dislodged.
5. **Indirect Pressure**

Indirect pressure consists in pressing on the artery that is feeding the wound. This pressure must be applied between the heart and the wound, as close as possible to the wound. To apply this technique, simply locate the artery in question and press. Maintain the pressure for at least 10 minutes, and longer if necessary, in order to allow a blood clot to form.

---

**First Aid for External Bleeding**

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Control all serious bleeding during the C stage.
7. Locate and assess the wound.
8. In the case of a severed limb, an open wound to the chest or abdomen or a wound penetrated by a foreign body, refer to Technique 2, First Aid for Complex Wounds.
9. Carry out the steps to control bleeding:
   - apply direct pressure on the wound;
   - elevate the injured limb, if possible;
   - apply a pressure dressing;
   - apply a second pressure dressing, if the bleeding continues;
   - apply indirect pressure, if the bleeding continues.
10. Check for signs and symptoms of shock and refer to Protocol 17, Shock, if necessary.

11. Administer oxygen (if available).

12. Reassess the ABCs regularly.

**Note**

If only one first aider is at the scene, he must control all serious bleeding before calling for help. He must have the casualty sit or lie down as soon as he starts to provide first aid. He must check the casualty's circulation — colour, heat, feelings of numbness — before and after applying the pressure bandage.

**Nosebleed**

Nosebleeds can have different causes. The most common are:

- high blood pressure;
- inhalation of an irritating substance;
- an external or internal trauma.

**Specific First Aid Interventions**

1. Take safety precautions.

2. Have the person sit down with head tilted slightly forward.

3. Loosen the person’s clothing at the neck and ask her to breathe through the mouth.

4. Pinch her nostrils together tightly just below the bony part (or ask the person to do so).
5. Maintain pressure for at least 10 minutes, or longer if necessary, in order to allow a blood clot to form.

6. Once bleeding has stopped, advise the person not to blow her nose because that could dislodge the blood clots forming.

7. Send her for specialized medical care if the bleeding persists.

If a trauma is involved, with or without signs of a fracture, the first aider must not apply pressure on the nose as that could complicate the injury. In this case, free drainage is recommended, i.e., letting the nose bleed freely so as not to obstruct the airway, and soaking up the blood with gauze pads without applying any pressure.

**Note**

A skull fracture can cause a nosebleed or bleeding from the ears.
Chapter 20

Head and Spinal Injuries
PROTOCOL 20
Head and Spinal Injuries

If casualty conscious, ask him not to move
Protocol for assessing situation

Safe?

YES

U Check for unconsciousness
Approach (trauma)

NO

Continue with clinical survey

Hold head in position found (without traction, for entire intervention)
ABCs?

YES

Protocols 5-12

NO

Difficulty?

YES

Dry non-pressure dressing

Bleeding from head?

NO

Stabilize casualty in position found or immobilize casualty on spine board if he must be moved

Technique 1

Specific additional training

Reassess ABCs
Chapter 20
Head and Spinal Injuries

HEAD INJURIES
Head injuries are usually serious. The signs and symptoms are not always easy to detect and may appear some time after the accident. In addition to looking for signs and symptoms, the first aider must take the characteristics of the accident into account to determine whether a head or spinal injury could be involved. Since head and facial injuries are often accompanied by a spinal injury, the first aider must treat them as if a spinal injury were involved.

Signs and Symptoms
- Pain in the head
- Confusion, agitation, memory loss
- Change in level of consciousness
- Pupils of unequal size
- Deformity in the upper part of the skull (cranium), open scalp wound
- Oozing of blood or clear liquid from the nose or ears
- Nausea, vomiting
- Paralysis of or numbness in one or more limbs

These signs and symptoms may not appear at the beginning of the intervention, but may appear gradually and then progress. Casualties suffering from this type of injury require constant monitoring on the part of the first aider.

SPINAL INJURIES
The crushing or the partial or total severing of the spinal cord, due to a fracture or the displacement of one or more vertebrae, usually results in a decrease or loss of feeling in and motor control over the body parts located below the injury. Paralysis does not always occur at the time of injury; it can be caused by improper handling or by a movement made by the casualty.
The first aider must always be very careful and take the necessary precautions when he suspects that the casualty has sustained a spinal injury. He must always suspect that a spinal injury has occurred when the casualty has suffered trauma and one or more of the following signs are present:

- traumatic injury (fall, accident, etc.);
- injury above the collarbone, or to the head, face or neck;
- change in level of consciousness;
- decrease in feeling and motor control;
- the casualty says he feels pain in the spinal column or upon palpation.

The first aider must, at all times, support the casualty’s cervical spine and move his body as a single unit. He must not relocate the casualty unless required to do so by urgent circumstances. In such a case, he must first completely immobilize the casualty on a spine board to limit movements that could aggravate the person’s condition. See Technique 1, Immobilizing a Casualty on a Spine Board.

**Signs and Symptoms**

- Pain at the injury site
- Edema (swelling) and deformity at the injury site
- Numbness in one or more limbs
- Decrease in or absence of movement in one or more limbs
- Decrease in or absence of feeling in one or more limbs

**Note**

Sometimes the casualty does not show any signs or symptoms of trauma when first aid is provided. Only the characteristics of the accident enable the first aider to suspect a spinal injury.
First Aid for Head and Spinal Injuries
1. Make sure the scene is safe and take appropriate precautions.
2. U Check for unconsciousness.
3. Make sure EMS have been notified.
4. Ask the casualty not to move.
5. Hold the casualty’s head in the position in which it was found (without applying traction).
6. Control all problems found during the ABCs:
   • If there is a problem detected during the ABCs, lie the casualty on the ground on his back; turn or move him as a single unit, being sure to protect his cervical spine at all times, using the appropriate techniques for trauma cases.
7. If there is serious bleeding from the head, apply a non-pressure dressing.
8. Look for signs and symptoms.
9. If the casualty has to be moved, immobilize him first on a spine board, using the appropriate technique. See Technique 1, Immobilizing a Casualty on a Spine Board.
10. Cover the casualty.
11. Reassess the ABCs regularly.

Note
Do not apply direct pressure or a pressure dressing to a head wound.
Chapter 21

Trauma to the Extremities
PROTOCOL 21
Trauma to the Extremities

Protocol for assessing situation

Safe? NO

U Check for unconsciousness

Approach (trauma)

Continue with clinical survey

ABCs Difficulty? YES

Protocols 5-12

NO

Head or spinal injury? YES

Protocol 20

NO

Check colour, heat and numbness before immobilization

Open wound? YES

Dry non-pressure dressing

NO

Immovilize limb in position found (do not apply any traction or try to reposition limb)

Check colour, heat and numbness after immobilization

Reassess ABCs
Traumas to the extremities occur frequently in the workplace. There are different types of such traumas, in particular, closed and open. Closed traumas are usually caused by a fracture or a displacement of the bone with no apparent injury on the surface of the skin. Open traumas occur when a fragment of the bone breaks through the surrounding tissues and surface of the skin; the bone can thus be seen.

**Signs and Symptoms**
- Pain
- Deformity at the injury site
- Decreased mobility, sensitivity and muscle strength
- Variation in the colour and temperature of the limb
- Presence or absence of an open wound
- Edema (swelling or puffiness of the limb)
- Numbness of the limb

When these signs and symptoms are present, the injury should always be treated as a fracture or displacement. All traumas to the extremities must be treated with care, as improper handling can have serious consequences. A fracture can cause injuries to the blood vessels and nerves. An open wound can also become infected.

The first aider must follow certain basic principles when stabilizing the injury. It is recommended that the injured limb be stabilized in the position in which it was found to prevent any movement that could aggravate the injury. The first aider must not apply traction or try to reposition the limb. If the casualty must be moved, the injured limb must be completely immobilized beforehand so as to reduce pain and again, to avoid aggravating the injury.
The colour, heat and feelings of numbness in the extremities must be verified before and after immobilization. The bandages or straps used to secure the splint must never be tied over the injury site or a joint, as this could hinder circulation, increase pain and aggravate the injury. The joints above and below the injury must also be immobilized. An open wound must be protected with a dry non-pressure dressing.

First Aid for Trauma to the Extremities

1. Make sure the scene is safe and take appropriate precautions.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Control all problems found during the ABCs.
5. Look for signs and symptoms.
6. Place the casualty in a comfortable position while limiting movement of the injured limb (if no spinal injury is suspected).
7. In the case of an open wound, protect it with a dry non-pressure dressing.
8. Immobilize the limb using the appropriate material; do not apply any traction or try to reposition the limb:
   - keep the limb in the position in which it was found, supporting it above and below the fracture.
   
   If the joint has also been injured:
   - immobilize the limb in the position in which it was found, without trying to reposition it;
   - use a splint that supports the limb and keeps it in the same position; a blanket, pillows, triangular bandages, and splints made of stiff cardboard, wood or metal may be used;
   - use fabric to pad the inner part of the splint;
• immobilize the joint above and below the injury;
• place the splint straps above and below the fracture;
• keep the limb immobilized by using triangular bandages or another part of the body.

9. Remove any jewellery or clothing from the injured limb, only if this can be done easily.

10. Reassess the ABCs regularly.

Note

If a spinal injury is suspected, see Protocol 20, Head and Spinal Injuries.

The colour, heat and feelings of numbness below the fracture must be verified before and after immobilization.

It is recommended that ice be used to reduce pain and swelling (edema) at the injury site; however, the following conditions must be observed:

• Never put ice directly on the skin.
• Never apply ice for more than 20 minutes.
• Never put ice on an open wound.

Certain precautions must be taken when using pneumatic splints. These splints are sensitive to changes in temperature and atmospheric pressure. They expand in the heat and contract in the cold. Changes in ambient conditions can cause blood circulation problems in the injured limb.
Rescue Carries and Immobilizing a Casualty on a Spine Board
TECHNIQUE 1

Immobilizing a Casualty on a Spine Board

Use of this technique requires specific additional training

Hold casualty’s head in neutral position
Do not apply traction

Measure and put on cervical collar
Hold head in neutral position until immobilized on spine board

Transfer casualty onto spine board in single motion
Turn casualty as single unit

Criss-cross two straps over casualty’s chest

Attach one strap over pelvis

Secure head using proper material
Avoid using sandbags

Attach feet with strap in figure 8 formation
Do not apply traction
MOVING A CASUALTY WITH NO RISK OF HAVING A SPINAL INJURY

The first aider may decide to move a casualty for reasons such as the scene is inaccessible to EMS or an emergency evacuation is necessary as a result of a potential danger in the work space. The first aider must be particularly careful at such times, as a poorly executed move can aggravate the casualty’s condition.

To move a casualty, the first aider may use one of several techniques:

- assisted walking;
- pick-a-back carry;
- two-person seat carry;
- extremity carry.

Assisted Walking

This technique should be used only if the casualty’s injuries are minor and for short distances. To apply this technique:

1. stand on the casualty’s injured side, unless the injury is to the arm or shoulder;
2. have the casualty put her arm around your neck and rest her hand on your shoulder;
3. hold onto the casualty’s wrist that is resting on your shoulder;
4. walk slowly and carefully.

If the casualty has sustained a trauma, the first aider must always suspect a spinal injury and the above-mentioned rescue carries must not be used. Trauma victims with a risk of having spinal injuries must be transferred onto a spine board in a single motion (the body being treated as one unit) and must be immobilized on the board before being moved.
Two-Person Seat Carry

This technique can be used to transport a person with minor injuries over a short distance. It requires two first aiders. To apply this technique:

1. cross hands in the manner shown (four-handed seat) to form a solid support;

Pick-a-Back Carry

This technique should be used only if the casualty’s injuries are minor and for short distances. It requires physical strength on the part of the first aider. To apply this technique:

1. ask the injured person to stand up behind you (you turn your back to the casualty);
2. bend your knees slightly to lower yourself to the casualty’s shoulder level, and pull the casualty’s arms over your shoulders so you can grasp his wrists;
3. lean forward and lift the person high enough so that his feet are off the ground.
2. ask the casualty to sit down and to put her arms around the bearers’ shoulders.

**Note**
This technique can be modified if the casualty is unable to use his arms. The first aiders can make a ring out of a knotted triangular bandage or a belt, stand opposite each other and both hold onto the ring to make a seat for the casualty. Each first aider places his free arm on the other’s shoulder to form a backrest.
Extremity Carry

This technique can be used when the casualty has minor injuries or must be moved down a staircase or in a confined space. It requires two first aiders. To apply this technique:

1. have the casualty sit down on a chair;

2. one first aider stands behind the seated casualty and puts his arms under the person’s armpits and grasps his wrists;

3. the second first aider grasps the casualty under the knees;

4. the first aiders lift the casualty and carry him slowly.
MOVING A CASUALTY WITH A RISK OF HAVING A SPINAL INJURY

To immobilize a casualty on a spine board or any other immobilization equipment, the first aider must receive prior additional training.

The first aider must immobilize casualties with head or spinal injuries in situations where they must be moved for reasons such as the site is inaccessible to EMS or the work space is not safe.

The first aider must generally keep the casualty’s head in the position in which it was found. In Technique 1, Immobilizing a Casualty on a Spine Board, the casualty’s head must be kept in a neutral position.

Moving and transporting an injured person requires extreme caution. The application of techniques and coordination of the team must be flawless, otherwise the casualty’s confirmed or suspected injuries could be aggravated.

Technique 1
Immobilizing a Casualty on a Spine Board

1. Hold the casualty’s head in a neutral position (without applying traction). This means keeping the head and neck aligned with the torso.

2. Place the casualty on his back, measure and put on a cervical collar. The cervical collar must be put on as soon as possible and at all times before moving the casualty, unless extremely urgent circumstances dictate otherwise.
3. Protect the casualty’s cervical spine manually at all times, until the casualty’s head has been secured on the immobilization equipment.

4. Move the casualty onto the spine board in a single motion; to do so:
   • turn the casualty toward you in one motion, keeping the head aligned with the body;
   • place the long board alongside the casualty, keeping it completely flat on the ground or at a 45-degree angle;
   • gently place the casualty on the board and reposition him if necessary.

5. Strap the person onto the board:
   • secure the casualty’s chest by placing two straps over it in an “X” formation;
   • secure the pelvis using one strap;
   • secure the head using appropriate material or a blanket rolled up on each side for support; hold the casualty’s head in place by placing a strap over the forehead and another under the chin; avoid using sandbags for support as they would exert pressure on the casualty’s head during transportation;
   • secure the casualty’s feet with a strap in a figure 8 formation, without applying any traction.
To transport an immobilized casualty in complete safety, the first aider must be assisted by three other people. The bearers should position themselves at the ends of the board; the first aider should stay at the person’s head and direct the intervention. If only two other people are available, they must position themselves on either side of the board in order to make sure it remains stable.

Note

If, when aligning the casualty’s head and torso in this technique, the first aider notices any

- resistance (spasm),
- the appearance of or an increase in pain,
- the appearance of or an increase in numbness or tingling,
- any deterioration in breathing,

he must immediately stop the manoeuvre and wait for EMS to arrive.

A cervical collar alone does not guarantee that the spine is 100% stable. It is therefore important for the first aider to protect the casualty’s cervical spine manually at all times until the casualty’s head has been secured on the immobilization equipment.

A video entitled First Aid in the Workplace, which can be obtained from Les Publications du Québec, illustrates the technique for immobilizing a casualty on a spine board.

Other types of equipment, such as immobilizing mattresses, are now being used by EMS. The utilization of such equipment also requires additional training on the part of the first aider.
First Aid for Complex Wounds
TECHNIQUE 2
First Aid for Complex Wounds

1. Locate and look at wound
2. Severed limb
   - Control bleeding
   - Protocol 19
   - Retrieve severed limb
   - Cover with moistened dressing (NaCl)
   - Place in airtight plastic bag
   - Place in second bag with ice and cold water
   - Record exact time of accident
3. Chest wound
   - Expose chest*
   - Place in semi-sitting position with knees bent
   - Oxygen**
4. Abdominal wound
   - Protruding viscera
   - Do not try to put organs back in place
   - Apply sterile moistened compresses or cover with plastic film (open wound without protruding viscera: apply dry dressing)
   - Cover casualty in position that facilitates breathing
   - Oxygen**
5. Wound penetrated by foreign body
   - Leave foreign body in place
   - Stabilize foreign body by placing dry dressing around it
   - Cover casualty
   - Oxygen**

* Attention! Dignity and hypothermia
** If available

If spinal injury suspected, leave casualty on back
 Avoid moving
Various types of wounds can occur in the workplace. Open chest wounds and profuse bleeding pose an immediate threat to a person’s life. As a result, these wounds must be treated during the primary survey.

More minor wounds must be treated after the secondary survey has been carried out.

All wounds must be covered with dressings and bandages to prevent the injury from being aggravated, to control any bleeding and to prevent infection. Some wounds — such as wounds resulting from a severed limb, wounds to the chest or abdomen and wounds penetrated by a foreign body — require special treatment.

**COMPLEX WOUNDS**

**Technique 2**

**First Aid for Complex Wounds**

**Partially or Fully Severed Limb**

The severing of a limb can cause severe bleeding. The treatment given the severed limb is crucial, because in many cases limbs can be saved and reattached through microsurgery.

1. If the casualty is bleeding profusely, refer to Protocol 19, Bleeding.
2. Retrieve the severed limb, if possible.
3. Cover the severed limb with a dressing moistened with a physiological saline solution (NaCl 0.9%).
4. Place it in an airtight plastic bag. Place this bag inside a second bag containing ice and cold water.
5. Record the exact time of the accident.
6. Give EMS the severed limb as soon as they arrive, specifying the time elapsed since the severing occurred.
Chest Wound

A chest wound is considered serious and requires immediate attention. The first aider must look mainly for a penetrating wound. With this type of wound, air usually escapes with each breath (presence of air and blood bubbles) and can cause great breathing difficulty. In this case, the action taken by the first aider will have a major impact on the casualty’s condition.

1. Quickly apply an occlusive dressing (transparent plastic film dressing), secure it with adhesive tape on three sides, leaving the lowest side open. The plastic film must cover the entire wound.
2. Administer oxygen (if available).
3. Cover the casualty.
4. Place the casualty in a position that helps him to breathe, i.e., in a sitting position, or in the recovery position on the same side as the injury (unless a spinal injury is suspected).

Note

The casualty’s chest must be exposed if a trauma is involved or if the casualty experiences pain or difficulty breathing as a result of the injury. By exposing the chest, the first aider is able to determine whether there is an open wound and to apply an occlusive dressing closed on three sides as quickly as possible. This type of dressing acts as a valve, preventing air from entering the wound on inhalation and from compressing the lung and other chest structures. It also allows the air to escape on exhalation.

If the casualty may have sustained a spinal injury, he must be kept in the position in which he was found.

**Abdominal Wound**
An abdominal wound with protruding viscera (evisceration) is a very serious injury, often accompanied by internal bleeding and considerable loss of heat (risk of hypothermia).

**Protruding Viscera**
1. Protect the organs by covering them completely with sterile compresses moistened with a physiological saline solution (NaCl 0.9%). Do not try to put them back in place.
2. Cover the moistened compresses with a thick, dry dressing to prevent contamination and loss of body heat.
3. Administer oxygen (if available).
4. Cover the casualty.
5. Place the casualty on his or her back, or in a semi-sitting position with knees bent (unless he may have sustained a spinal injury).
Wound Penetrated by a Foreign Body

1. Leave the foreign body in place. (Do not try to remove it, as this increases the risk of bleeding and internal injury.)

2. Apply sterile gauze pads around the foreign body to control any bleeding.

3. Cushion the foreign body with dressings to prevent it from moving.

4. Secure these dressings using rolls of gauze or a triangular bandage.

5. Administer oxygen (if available).

6. Cover the casualty.


Note

The casualty’s abdomen must be exposed if a trauma is involved and the casualty experiences pain or discomfort in the abdominal area or is bleeding. This will enable the first aider to determine whether there is an open wound or any other sign of internal bleeding.

If the casualty may have sustained a spinal injury, he must be kept in the position in which he was found.

The moistened compresses may be replaced with a plastic film, which is then covered with a dry dressing.

In the case of an open wound with no protruding viscera, the wound must be covered with a dry dressing.
SPECIAL CASES

Facial Wound
Facial wounds can interfere with breathing because of blood oozing in the airway. Depending on the type of accident involved, the first aider may suspect a spinal injury. He must therefore be very cautious, and must treat the wound while keeping the airway open and protecting the cervical spine.

Neck Wound
The rupture of a major blood vessel in the neck causes serious bleeding that can lead to death within seconds. In this situation, the first aider must quickly put on gloves, apply pressure locally where the blood vessel has ruptured, and maintain the pressure until EMS arrive.

Wound involving Limb Deformity
The first aider must first treat the wound, and then try to immobilize the limb. If the wound is situated at the site of the deformity, the first aider must apply a non-pressure bandage to avoid aggravating the underlying injury. The limb must be immobilized with a splint in the position in which it was found.

Penetrating Wound Caused by Very High Pressure Liquid
A penetrating wound caused by a very high pressure liquid can result in significant internal injury and consequently requires specific medical care. The first aider must deal with such a case according to the type of wound and the appropriate protocol. Regardless of the size of the wound,
he must send the casualty for specialized medical attention without delay. He must inform the team taking over the casualty's care about the nature of the trauma.

**Minor Wound**

The seriousness of a wound depends on its size, depth, location and the amount of bleeding it causes. The first aider must treat a minor wound in the following manner:

1. Take appropriate precautions.
2. Wash the wound and surrounding area with running water and mild soap, if possible, and remove any dirt around the wound.
3. If the wound cannot be washed, or if there is still some encrusted dirt, clean the wound gently using gauze pads.
4. Complete the cleaning process by dabbing with an antiseptic swab.
5. When the wound is clean, apply an adhesive dressing or a gauze pad, secured on all four sides by adhesive tape, to protect the wound.
6. If in doubt, have the wound examined by specialized personnel (to determine whether stitches and a tetanus shot are needed, whether there is a possibility of infection).

**Note**

Any injury that damages the skin may be contaminated by tetanus bacillus. This bacillus is present everywhere in dust and soil and on the ground, and can cause tetanus, a serious and sometimes fatal illness. Vaccination provides protection against this disease.

In the case of a wound that is particularly dirty, soiled or grimy, send the person for specialized care (at a health and social services centre, medical clinic or hospital).
Appendix 1

START
Method of Triage
APPENDIX 1
START Method of Triage

Use of this method requires specific additional training

WHEN TO USE
Exceptional and extremely serious situations
(high number of casualties)
(Insufficient number of first aiders)

OBJECTIVES
Assess all casualties as quickly as possible
Establish first aid priorities

PROCEDURE
Casualties put in order of priority, using colour code

Casualties not breathing and little chance of survival
Casualties live in danger but chances of surviving
Casualties unable to walk but can tolerate minimal delay before treatment
Casualties able to walk and can tolerate longer wait before treatment

START
Simple Triage And Rapid Treatment
Appendix 1
START Method of Triage

To use the START method of triage, first aiders must receive prior additional training.

The START method of triage (Simple Triage And Rapid Treatment) allows for effective intervention in situations involving high numbers of casualties that exceed normal response capabilities. Such situations are the exception and are extremely serious. They imply that there are not enough first aiders at the scene for the number of injured people requiring assistance.

The START method makes it possible to identify quickly, using a colour code, the casualties who have the best chances of survival and to establish first aid priorities for those who need emergency care.

The START method enables the first aider to

• assess the condition of all casualties as quickly as possible;
• separate out those who require immediate attention from those for whom treatment can be delayed;
• save the lives of injured people who can be helped by basic first aid;
• give the most first aid to the largest possible number of casualties within a short period of time;
• avoid wasting time, thanks to the use of triage tags.
Triage tags are different colours, i.e., black, red, yellow and green; each colour has a specific meaning.

**Black**

Assigned to casualties who are not breathing or who have little chance of survival.

**Red**

Assigned to casualties whose lives are in danger, but who have chances of surviving if they receive immediate medical care.

**Yellow**

Assigned to casualties who are unable to walk, but who can tolerate a minimal delay before being evacuated, without their lives being endangered.

**Green**

Assigned to casualties who are able to walk and get around, and who can tolerate a longer wait before treatment.
Appendix 2

Airway
Obstruction and
Cardiopulmonary
Arrest:
Child Aged 1 to 8
APPENDIX 2

Airway Obstruction and Cardiopulmonary Arrest: Child Aged 1 to 8

Protocol for assessing situation

Safe?

NO

U Check for unconsciousness

If trauma involved, protect cervical spine

YES

Conscious child

Partial

Making noises

Ask to cough

Persistent cough?

YES

Send for specialized care

Total

Making no noise

Abdominal thrusts

Foreign body expelled?

YES

Repeat manoeuvres until foreign body expelled or until child loses consciousness

Unconscious child

Total

Emerg. med. condition

A or Trauma

30 chest compressions

2 rescue breaths

NO

B YES

Alternate 30 compressions/2 rescue breaths

Look in mouth and clear if necessary

CPR

Continue cycles of 30 compressions/2 rescue breaths (30:2) until help or an AED arrives or until child’s condition changes

Safe?

CSST_SecourAN_191-228-F_CSST_SecourAN_191-228 10-12-13 14:11 Page198
Appendix 2
Airway Obstruction and Cardiopulmonary Arrest:
Child Aged 1 to 8

The cardiopulmonary resuscitation sequence outlined below is in accordance with the guidelines issued by the Heart and Stroke Foundation of Québec. This sequence is the one taught in training for the general public.

A child has better chances of surviving respiratory arrest if his heart does not stop beating. It is therefore crucial to recognize the signs of a respiratory problem and to give first aid immediately.

AIRWAY OBSTRUCTION
The techniques used to open the airway must be adapted to the child’s size.

Partial Obstruction (Conscious Child)
Signs and Symptoms
- Cough, abnormal breathing noises
- Difficulty breathing and speaking
- Panic

Note
Do not give the casualty anything to eat or drink.

First Aid for Partial Obstruction (Conscious Child)
1. Ask the child (if possible) to cough to expel the foreign body.
2. Always remain by the child’s side.

Total Obstruction (Conscious Child)
Signs and Symptoms
- Unable to speak or cough
- Greyish or bluish colour of the face
- Panic
First Aid for Total Obstruction (Conscious Child)

1. Make sure the scene is safe.
2. Ask the child (if possible) if he can cough or speak.
3. If the answer is no, perform abdominal thrusts:
   • stand or kneel behind the child and put your arms around his waist;
   • make a fist, thumb inward, and place it against the child’s stomach above the navel;
   • grasp your fist with your other hand;
   • press your hands into the child’s abdomen with an upward thrust in the form of a “J”;
4. Repeat these manoeuvres until the foreign body is expelled or until the child loses consciousness.

Note
Each abdominal thrust must be applied separately, using a distinct movement to expel the foreign body.
Even if the foreign body is expelled, the child must be sent for specialized care, as he may have sustained internal injury as a result of the abdominal thrusts.

Total Obstruction (Unconscious Child)
Signs and Symptoms
• Unconsciousness
• Greyish or bluish colour
• Absence of breathing
First Aid for Total Obstruction (Unconscious Child)

1. Make sure the scene is safe.
2. **U** Check for unconsciousness.
3. Make sure EMS have been notified.
4. **A** Open the airway: tilt the child’s head back and lift the chin without hyperextending it. Look in the child’s mouth and remove any visible foreign body.
5. **B** Check breathing: look, listen and feel for breathing (for at least 5 seconds, but no more than 10).

6. If the child is not breathing:
   - give 2 rescue breaths (1 second each).

   *If the air does not enter the lungs on the first try:*
   - reposition the head and give 2 more rescue breaths.
If the air still does not enter:
- perform 30 chest compressions.

7. Lift the child’s chin and tongue, then check inside the mouth to see if a foreign body is visible. If so, run your finger along the inside of the cheeks to the back of the mouth and try to remove the object.

8. Repeat the airway clearing manoeuvres until the foreign body is expelled and air is entering the lungs or until EMS arrive.
   - If the foreign body is expelled:
     - check the child’s breathing.
   - If the child is breathing:
     - place the child in the recovery position (if no trauma is involved).
   - If the child is not breathing:
     - begin CPR.

CARDIOPULMONARY ARREST
As with the techniques used to clear a child’s airway, CPR manoeuvres must also be adapted to the child’s size.

Signs and Symptoms
- Unconsciousness
- Absence of signs of circulation
First Aid for Cardiopulmonary Arrest in a Child

1. Make sure the scene is safe.
2. U Check for unconsciousness.
3. Make sure EMS have been notified.
4. A Open the airway: tilt the child’s head back and lift the chin.
5. B Check breathing: look, listen and feel for breathing (for at least 5 seconds, but no more than 10).

6. If the child is not breathing:
   • give 2 rescue breaths (1 second each); each breath must be adequate enough for you to see the child’s chest rise.

7. Begin chest compressions after giving the 2 rescue breaths:
• lay the child down on a hard, flat surface if this has not already been done;
• kneel down beside the child’s chest;
• place the palm of your hand in the centre of the child’s chest between the nipples;
• position your shoulders directly over the child’s sternum and push straight down to a depth of \(\frac{1}{3}\) to \(\frac{1}{2}\) the thickness of the chest;
• keeping your hand on the sternum, relax the compression so that the sternum can return to its original position.

8. Perform 30 chest compressions (at a rate of 100 compressions per minute), then give 2 rescue breaths.

Perform compression movements of equal length at a fast, steady pace, with no sudden jerking motions.

9. Continue the cycles of 30 compressions and 2 rescue breaths (30:2) until help arrives, an automated external defibrillator (AED) is provided, or the child’s condition changes.

**Note**

The first aider can use one or two hands to perform chest compressions, depending on the size of the child’s chest.

If the first aider observes a change in the child’s level of consciousness, he must stop the CPR manoeuvres and reassess the child’s condition.

If the first aider has a pocket mask and gloves in his possession, he must use them.
If a trauma is involved, the airway must be cleared using the jaw-thrust manoeuvre in order to protect the spine. To perform this manoeuvre, the first aider must position himself at the child’s head, place one hand on each side of the lower jaw and lift it upward in a straight line without moving the head. It is essential to keep the head and neck aligned with the torso.
Appendix 3

Airway Obstruction and Cardiopulmonary Arrest: Infant Under 1 Year of Age
Airway Obstruction and Cardiopulmonary Arrest: Infant Under 1 Year of Age

Protocol for assessing situation

Safe?

YES

NO

Check for unconsciousness

If trauma involved, protect cervical spine

Conscious infant

Making no noise

Alternate

Foreign body expelled?

NO

YES

Send for specialized care

Unconscious infant

30 chest compressions

30 chest compressions

A

Look in mouth and clear if necessary

2 rescue breaths

B

YES

NO

CPR

Alternate

30 compressions/2 rescue breaths

Continue cycles of 30 compressions/2 rescue breaths (30:2) until help arrives or until infant’s condition changes

Foreign body expelled?
Appendix 3
Airway Obstruction and Cardiopulmonary Arrest:
Infant Under 1 Year of Age

The cardiopulmonary resuscitation sequence outlined below is in accordance with the guidelines issued by the Heart and Stroke Foundation of Québec. This sequence is the one taught in training for the general public.

AIRWAY OBSTRUCTION
An infant’s airway can be obstructed by food or small objects. If this happens, it is important to clear the airway using techniques adapted to the infant’s size.

Airway Obstruction (Conscious Infant)
Signs and Symptoms
• High-pitched breathing noise
• Weak cries
• Unable to make sounds or cough
• Bluish or greyish colour of the face

First Aid for Total Obstruction (Conscious Infant)
1. Make sure the scene is safe.
2. Hit the infant on the back up to 5 times, then perform 5 chest compressions.
   To hit the infant on the back
   • Place one arm between the infant’s legs and rest its face in your hand face down. Support the head while holding firmly onto the infant’s jaw.
   • Rest the forearm you are using to support the infant on your thigh. The infant’s head must be lower than its torso.
• Hit the infant 5 times on the back, between the scapulas, with the palm of the free hand. Each blow must be strong enough to dislodge the foreign body.

Chest compressions
• Turn the infant onto its back, treating head and body as a single unit and supporting the head. Hold the head lower than the torso.
• Put two fingers on the sternum, at a distance of approximately one fingerwidth below the imaginary horizontal line running between the nipples.
• Perform about 5 quick chest compressions, each time trying to dislodge the foreign body.

• Repeat the back hits and chest compressions until the foreign body is expelled or until the infant loses consciousness.

**Note**
Even if the foreign body is expelled, the infant must be sent for specialized medical care, as it may have sustained internal injury as a result of the chest compressions.
Total Obstruction (Unconscious Infant)

First Aid for Total Obstruction (Unconscious Infant)

1. Make sure the scene is safe.
2. Check for unconsciousness.
3. Make sure EMS have been notified.
4. Open the airway: tilt the infant’s head back and lift the chin, without hyperextending it. Look in the infant’s mouth and remove any visible foreign body.

5. Check breathing: look, listen and feel for breathing (for at least 5 seconds, but no more than 10).

6. If the infant is not breathing:
   - give 2 mouth-to-mouth-and-nose rescue breaths (1 second each).
If the air does not enter the lungs on the first try:
• reposition the head and insufflate again.

If air still does not enter, there is an obstruction:
• perform 30 chest compressions.

7. Lift the infant’s chin and tongue, then check inside the mouth to see if any foreign body is visible. If so, run your finger along the inside of the cheeks to the back of the mouth and try to remove the object.

8. Repeat the airway clearing manoeuvres until the foreign body is expelled and air is entering the lungs or until EMS arrive.

If the foreign body is expelled:
• check the infant’s breathing.

If the infant is breathing:
• place the infant in the recovery position (if no trauma is involved).

If the infant is not breathing:
• begin CPR.
CAR迪OPULMONARY ARREST
As with the techniques used to clear an infant’s airway, CPR manoeuvres must also be adapted to the infant’s size.

Signs and Symptoms
- Unconsciousness
- Absence of signs of circulation

First Aid for Cardiopulmonary Arrest in an Infant
1. Make sure the scene is safe.
2. U Check for unconsciousness.
3. Make sure EMS have been notified.
4. A Open the airway: tilt the infant’s head back and lift the chin, without hyperextending it.

5. B Check the infant’s breathing: look, listen and feel for breathing (for at least 5 seconds, but no more than 10).
6. If the infant is not breathing:
   • give 2 rescue breaths (1 second each); each breath must be adequate enough for you to see the infant’s chest rise.

7. Begin chest compressions after the 2 breaths.
   • Lay the infant down on a hard, flat surface if this has not already been done.
   • Stand beside the infant at chest level so that you can reach the mouth with no difficulty.
   • Use one hand to support the infant’s head. Place two fingers on the sternum, just below the imaginary horizontal line running between the two nipples. Perform chest compressions by pressing down to a depth of \( \frac{1}{3} \) to \( \frac{1}{2} \) the thickness of the chest.

8. Perform 30 chest compressions (at a rate of 100 compressions per minute), then give 2 rescue breaths (1 second each).

9. Repeat the cycles of 30 compressions and 2 rescue breaths (30:2) until help arrives or until the infant’s condition changes.
Note

If there is any change in the infant’s level of consciousness, CPR must be stopped and the infant’s condition reassessed.

If the first aider has a pocket mask and gloves in his possession, he must use them.
Appendix 4

Oxygen Therapy
Oxygen Therapy

The use of oxygen therapy requires specific additional training (annual basis)

Inform casualty that he is going to be given oxygen through a mask

Open cylinder and place it in safe position

Use high-concentration mask

Fill oxygen cylinder before placing mask over casualty’s face

Adjust mask and ask casualty to breathe normally

When EMS arrive, remove mask and close cylinder

Clean equipment
Check amount of oxygen remaining
Discard mask
Store safely

Safety precautions
Move away from heat sources
Do not use oil to lubricate regulator
Avoid jolts
Store safely, etc.

Flow of 15 litres per minute or more

Watch closely for signs of breathing and circulation

Have equipment recalibrated once a year
Pursuant to the First-aid Minimum Standards Regulation (A-3, r. 8.2), certain work establishments are stocked with the equipment required to administer oxygen therapy.

The right to administer oxygen in first aid requires additional training on the part of first aiders. This training must include at least the following points: when oxygen use is indicated, the technique for administering it, as well as the maintenance, safe storage and handling of the equipment.

Oxygen is vital to the human body. The brain, heart and lungs are the organs that are most sensitive to a lack of oxygen and can continue functioning normally for only a few minutes if severely deprived. In first aid, oxygen is considered to be a medication and must be used as such.

Benefits of Oxygen Therapy in First Aid
Oxygen therapy consists in giving a casualty additional oxygen in order to ensure better oxygenation of the cells. For the usual needs of cells, a normal supply of oxygen is sufficient. However, when cells are subjected to stress as a result of a trauma, such as a burn, heart attack, poisoning or exposure to toxic substances, additional oxygen is required. Oxygen prevents a casualty’s condition from worsening and, in some cases, saves lives. It also serves to reassure the casualty, while he is waiting for EMS to arrive.

Conditions Requiring an Immediate Oxygen Supplement
- Casualty’s level of consciousness has changed
- Casualty has breathing difficulty
- Casualty has inhaled a toxic substance
- Casualty is experiencing chest pain
- Casualty has the signs and symptoms of stroke
- Casualty is presenting a trauma or profuse bleeding
Equipment Required

- Type D or E oxygen cylinder
- Regulator that can support an oxygen flow of 15 litres a minute or more
- Mask with a high-concentration oxygen reservoir
- Carrying case for transportation purposes
- Pocket mask with oxygen inlet

Note

To facilitate continuity between the treatments begun at an establishment and those administered by EMS, the equipment used must have the same characteristics.

OXYGEN EQUIPMENT

High-Concentration Oxygen Mask

This type of mask is used in first aid administered in the workplace. It delivers a higher concentration of oxygen to casualties breathing on their own.

The mask is equipped with a reservoir, in the form of a bag which, once inflated, stores 100% pure oxygen. To provide the highest possible concentration of oxygen, the reservoir (bag) must be filled before the mask is placed over the casualty’s face. The flow must be high enough so that the reservoir never completely empties when the oxygen is inhaled.

Administration of oxygen using a high-concentration oxygen mask (casualty is breathing on his own)

- Use a mask with a high-concentration oxygen reservoir.
- Set the flowmeter to a minimum of 15 litres a minute.
- Wait for the reservoir (bag) to fill up with oxygen.
• Tell the casualty that he will be given oxygen and slowly bring the mask up to his face.
• Place the mask over his face, covering his nose and mouth.
• Instruct the casualty to breathe slowly and deeply.
• Adjust the flow according to the casualty’s inspiratory volume. The flow of oxygen must be high enough so that the reservoir (bag) does not completely empty each time oxygen is inhaled.
• Place the elastic strap around the casualty’s head when he feels comfortable with the mask.
• Tighten the metal strip over the casualty’s nose to ensure the mask is more airtight.
• Place the casualty in the recovery position (unless a trauma is involved) if he is conscious and monitor him continuously.
• Reassess the casualty’s condition regularly.

Pocket Mask
A pocket mask enables the first aider to ventilate a casualty in cardiopulmonary arrest. The model of mask with an oxygen inlet can be fit with tubing connected to oxygen equipment. A pocket mask offers the following advantages:
• it adequately protects the first aider;
• it can be used with or without oxygen;
• it can stay over the face of a casualty who is breathing on his own; it must, however, be connected to an oxygen cylinder with a flow of at least 15 litres a minute.

Breathing assistance (unconscious casualty)
• Assist the casualty’s breathing by performing CPR.
• Fit the tubing onto the pocket mask and connect it to the oxygen equipment.
• Set the flowmeter regulator to maximum.
• Give enough oxygen so that you can see the casualty's chest rise.
• Perform CPR according to Heart and Stroke Foundation of Québec standards.

Oxygen, even a high concentration, is not dangerous for the casualty when it is administered over a relatively short time, as is the case in first aid.

**Safety Precautions**

Oxygen is a combustible substance that feeds fires. In first aid, it is used in the form of compressed gas. Certain precautions must therefore be taken when it is being handled, used and stored.

Never smoke near an oxygen cylinder.

Never use grease or oil to lubricate the components of the regulator or flowmeter.

An oxygen cylinder must never be exposed to temperatures higher than 50°C. It must be stored in a cool well-ventilated area.

The reduction valve and flowmeter must be closed when the cylinder is not in use.

When being moved or transported, the oxygen cylinder must be securely fastened or stored in a carrying case specifically designed for that purpose.

The oxygen cylinder must be checked periodically to ensure it can withstand the high pressures required.
Appendix 5

Hazardous Materials – WHMIS
APPENDIX 5
Hazardous Materials – WHMIS

A : Compressed gas
B1 : Flammable gas
B2 : Flammable liquids
B3 : Combustible liquids
B4 : Flammable solids
B5 : Flammable aerosols
B6 : Reactive flammable materials
C : Oxidizing material
D1A : Very toxic material causing immediate and serious effects
D1B : Toxic material causing immediate and serious effects
D2A : Very toxic material causing other effects
D2B : Toxic material causing other effects
D3 : Biohazardous infectious material
E : Corrosive material
F : Dangerously reactive material

WHMIS
Workplace Hazardous Materials Information System
A hazardous material is defined as any material that, by virtue of its properties, poses a danger to health, property or the environment. It may come in different forms: solid, liquid or gaseous.

Hazardous materials have inherent hazardous properties. When they cause an accident, they can burn, explode, corrode, emit radioactive rays, react with other substances, produce gases or other toxic materials, lead to health and safety problems or cause property damage. Given the dangers they represent, the different levels of government control these products through laws and regulations that apply to their handling, storage, production, use, elimination and transportation.

Through the Act respecting Occupational Health and Safety, in 1988, Québec legislators gave mandatory status to a Workplace Hazardous Materials Information System (WHMIS). This system stems from a pan-Canadian communication network and is intended essentially to protect workers’ health and safety by facilitating access to information on the hazardous materials used in the workplace.

WHMIS provides a system for dividing hazardous materials into six categories, visually represented by eight pictograms (see opposite page). Each category is defined according to the dangers it represents. A product that falls into one or more of these categories is a “controlled” product and, according to CSST terminology, constitutes a hazardous material.

Any substance that falls into one or more of these categories is defined as a controlled product.

The effectiveness of WHMIS depends on three factors:

• Product labelling in the workplace
• Material Safety Data Sheet (MSDS)
• Informing and training workers
Product Labelling in the Workplace

Product labelling in the workplace is the primary source of information provided. A label must be affixed to any controlled product container and must meet certain requirements. It must have a broken-line border that contrasts with the container colour and provide instructions in both French and English. It must include the following information:

- the name of the product;
- the appropriate pictogram;
- the hazards associated with the product;
- preventive measures;
- first aid measures;
- reference to the Material Safety Data Sheet;
- the name of the supplier.

Material Safety Data Sheet (MSDS)

The MSDS must be readily available and accessible to all workers. It must be written in French and updated every three years or as soon as new information becomes available. It must include the following nine categories of information:

- information on the product;
- hazardous ingredients;
- physical data;
- fire and explosion risks;
- reactivity data;
- toxicological properties;
- prevention measures;
- first aid measures;
- information on the preparation of the MSDS.
Informing and Training Workers

The employer is obliged to ensure that its workers are efficiently informed and trained. The content of the training program must include mainly the information on the hazards associated with each of the products used in the workplace; techniques for safe product handling, storage, use and elimination; the nature and meaning of the information on the label and the MSDS; personal protective equipment; the appropriate safety measures; and the measures to be taken in case of emergency. Workers who use controlled products in their work must participate in the information and training program.

It is also essential for first aiders to be extremely cautious around hazardous materials in order to avoid any danger to themselves when assisting a casualty.

Note

Additional information on the products used in the workplace can be obtained from the CSST’s Service du répertoire toxicologique. This service provides information on chemical and biological products such as:

- the health and safety risks;
- a product’s physical characteristics;
- the toxic effects (specific effects);
- safety precautions;
- the regulations applicable in Québec;
- WHMIS.

To reach the Service du répertoire toxicologique:

Telephone: 514 906-3080, or toll-free 1 888 330-6374;
Email: reptox@csst.qc.ca
Web site: www.reptox.csst.qc.ca
Relevant Legislation
Part 1

First Aid Kit and Room
The First-aid Minimum Standards Regulation defines the main components that must be in place to ensure delivery of first aid:

- at an establishment;
- on a construction site;
- in a vehicle used for transporting workers or used by workers in their work.

The Regulation, which is reproduced in Part 3 of this section, describes the mandatory content of the first aid kit and the equipment required in cases where a first aid room is made available to first aiders (establishments with 100 workers or more).

Each of the items required in the first aid kit or room is described in the following pages. Optional material or equipment may be supplied in addition to these items in order to facilitate the first aider’s task.

**FIRST AID KIT**

Each establishment or construction site must have an adequate number of first aid kits.

The kits must be readily accessible, placed as near as possible to the work sites, transportable, and available at all times. On a construction site, the number of kits is determined according to the time required to access them. The approximate access time for all workers is five minutes.

**Note**

Each kit must be kept clean, fully equipped and in good condition.

The expiry date of the contents must be checked regularly and the material must be replaced as needed.

Any partially used sterile material must be discarded.
Material Included in the Kit

CSST-Approved First Aid Manual

This manual must be kept in the first aid kit. It is also used to train first aiders in the workplace and to update their knowledge.

Bandage Scissors

Metal scissors with a rounded tip used to cut gauze strips or adhesive tape.

![Bandage Scissors Image]

Note

Disinfect with alcohol (or with another disinfectant solution) before and after use. Thoroughly wash and dry before storing. Make sure the scissors are sturdy and of good quality.

Splinter Forceps

Pointed forceps used to remove small foreign bodies such as splinters.

![Splinter Forceps Image]

Note

Disinfect with alcohol (or with another disinfectant solution) before and after use. Thoroughly wash and dry before storing. Make sure that the forceps are sturdy and of good quality.
Safety Pins of Assorted Sizes (12)
Useful for fastening triangular bandages, gauze bandages, etc.

Sterile Bandages (25) (individually wrapped)
Useful for protecting a wound.

**Note**
- Avoid touching the surface of the gauze so as to prevent contamination.
- Avoid fastening the bandage too tightly when applying it to an extremity.
- Discard any bandage that is not in an airtight wrapper or that has been damaged by water or moisture.

Sterile Gauze Squares (25) 101.6 mm x 101.6 mm (4 in. x 4 in.) (individually wrapped)
Useful for covering larger wounds or applying pressure to an area that is bleeding.

**Note**
- Open the envelope where indicated and remove the gauze by holding onto one corner so as not to contaminate the square.
- Always avoid touching the gauze surface that covers the wound.
Rolls of Sterile Gauze Bandage (4) 50 mm x 9 m (2 in. x 30 ft.) (individually wrapped)

Rolls of Sterile Gauze Bandage (4) 101.6 mm X 9 m (4 in. x 30 ft.) (individually wrapped)

Strips of sterile gauze or cotton bandage used to hold sterile gauze squares in place.

Note
Always apply from the bottom of the injury to the top.

Triangular Bandages (6)
Pieces of triangular fabric that can serve many purposes:
• immobilize a limb;

• stabilize a limb;
• affix a bandage compress (pressure dressing) (first apply a sterile dressing directly over the wound).

Sterile Bandage Compresses (Pressure Dressings) (4)
101.6 mm x 101.6 mm (4 in. x 4 in.)
(individually wrapped)
Bandages consisting of several layers of sterile gauze, filled with cotton batting and fastened using strips of gauze. Used to apply fast, effective pressure in case of profuse bleeding.

**Note**
- When opening, be careful not to touch the gauze; apply directly over the wound.
- Wrap the gauze strip firmly around the injured limb so as to reduce or stop bleeding.
- Make sure that the bandages and compresses applied directly over the wound are sterile.

Roll of Adhesive Tape (1)
Adhesive tape (diachylon) used to fasten bandages or protective dressings.

**Note**
- Avoid using in case of allergies (an antiallergic tape is available on the market).
- Never apply directly on the face.
Alcohol Swabs (25)
Small swabs impregnated with an antiseptic solution and packaged in sealed envelopes.

**Recommendation**

It is strongly recommended that a pocket mask, disposable gloves and antiseptic soap be added to the first aid kit. The kit must not contain any medication. First aiders in the workplace are not authorized to give medication in any form whatsoever, unless they have received additional training to administer oxygen or adrenaline.

**FIRST AID ROOM**

A room must be made available to first aiders when the establishment or construction site has more than 100 workers.

This room must be free, easily accessible at all times during working hours, clean, well maintained, well lit, ventilated, adequately heated and supplied with water (Division IV, section 11 of the Regulation).

**Equipment Available in the First Aid Room**

- Standard stretcher (or folding pole stretcher)
- Table and chairs (two)
- Soap and nail brush
- Paper towels
- First aid kit
Optional Supplies for First Aiders

Occupational health nurses working at health and social services centres visit establishments to inform employers and other concerned parties about all aspects of the laws and regulations pertaining to first aid and emergency services.

They recommend that the following items, among others, be provided in order to better meet the needs of various workplaces:

- Antiseptic soap
- Alcohol swabs
- Eye dressings
- Instant cold compresses
- Disposable cloths
- Basin (wash pan)
- Plastic bags and crushed ice
- Woollen blanket (natural fibre)
- Wheelchair
- Thermometer
- Disposable gloves
- Pocket mask
- Oxygen cylinder
- Sterile burn sheet
- Splints
- Spine board

To administer oxygen or use a spine board, first aiders must receive prior additional training.
First Aid-Related Equipment and Facilities

First aiders must also know where to find and how to use common equipment and facilities such as:

- Telephones
- Circuit breakers
- Emergency showers
- Fire extinguishers
- Emergency exits, etc.

Note

The emergency showers must be checked regularly.

Those in charge of the establishment must ensure that all extinguishers are refilled, as needed.

In accordance with the Regulation respecting Occupational Health and Safety (section 37), portable fire extinguishers must:

- be ULC (Underwriters’ Laboratories of Canada) approved;
- offer protection appropriate for the nature of the danger;
- be refilled after use;
- bear the name of the person responsible for maintenance and the date of the last check.
Part 2

Minimum Number of First Aiders and Register of Accidents, Incidents and First Aid
Part 2
Minimum Number of First Aiders and Register of Accidents, Incidents and First Aid

MINIMUM NUMBER OF FIRST AIDERS IN THE WORKPLACE

Employers of establishments or enterprises and principal contractors on construction sites must ensure that a minimum number of first aiders are available at all times during working hours.

<table>
<thead>
<tr>
<th>Number of workers assigned to a given shift</th>
<th>Minimum number of first aiders required for this shift</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 or less</td>
<td>1 first aider</td>
</tr>
<tr>
<td>51 to 150</td>
<td>2 first aiders</td>
</tr>
<tr>
<td>151 and over</td>
<td>Starting with this number, add 1 first aider for every additional 100 workers or fraction thereof assigned to the shift.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of workers assigned to a given shift</th>
<th>Minimum number of first aiders required for this shift</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 to 50</td>
<td>1 first aider</td>
</tr>
<tr>
<td>51 to 150</td>
<td>2 first aiders</td>
</tr>
<tr>
<td>151 and over</td>
<td>Starting with this number, add 1 first aider for every additional 100 workers or fraction thereof assigned to the shift.</td>
</tr>
</tbody>
</table>
The work locations, jobs, family names and given names of the first aiders working at the establishment or on the construction site must be indicated on a poster displayed in a readily visible location accessible to all workers.

On a construction site, first aiders must identify themselves by wearing a hardhat bearing a cross.

**Note**

Health care establishments (in the social affairs network), where qualified personnel can give first aid, are not subject to this regulation.
REGISTER OF ACCIDENTS, INCIDENTS AND FIRST AID

The first aid register is an information tool that can be useful to both the employer and the worker who has sustained an injury, contracted an occupational disease or experienced an ailment. It provides an indication of the enterprise’s performance record in terms of occupational health and safety. It enables the employer to organize the delivery of first aid in an efficient manner and to orient the enterprise’s prevention efforts. It also serves as a reference tool for workers in the event that their work-related wounds or repetitive injuries worsen.

Employer’s Obligations

Section 280 of the Act respecting Industrial Accidents and Occupational Diseases stipulates that the employer “shall enter in a register the work accidents that happen in his establishment that do not make the employee unable to carry on his employment beyond the day his employment injury became apparent: he shall present the register to the worker for his signature confirming that he suffered the accident and the date of its occurrence.”

As a means of helping prevent accidents, it is also strongly recommended that any incidents be recorded in the register.

Section 78 (7) of the Act respecting Occupational Health and Safety specifies that the health and safety committee must keep registers of work accidents and of the incidents that could have caused them.
First Aider’s Obligations

Under section 15 of the First-aid Minimum Standards Regulation, a first aider who gives a worker first aid must fill in the register. All the events concerning the injuries or ailments, however minor, must be entered, along with details of the first aid given.

The following information must be included: the family name and given name of the first aider, the date, time, and description of the accident or incident, a description of the injury or ailment, and the type of first aid given.

The register must be signed by the first aider and the person assisted.

It must be kept in a readily visible location that is easily accessible, preferably near the first aid kit.
<table>
<thead>
<tr>
<th>Date and time of accident or incident</th>
<th>Location of accident or incident and occupation or job of person assisted</th>
<th>Circumstances of the accident or incident</th>
<th>Injury or ailment</th>
<th>First aid and transportation details</th>
<th>Absence/ temporary work assignment</th>
<th>Signatures</th>
</tr>
</thead>
<tbody>
<tr>
<td>D M Y</td>
<td>Specify where or at which workstation the accident or incident occurred. Describe the occupation or job of the person involved.</td>
<td>Describe how the accident or incident occurred and indicate the cause. Describe the task being performed at the time of the accident or incident.</td>
<td>Describe the injury or ailment, specifying the part of the body involved.</td>
<td>Describe the first aid given (e.g., cleaning with soap and water) and enter the mode of transportation used (e.g., ambulance, automobile).</td>
<td>Enter the number of days that the person assisted was off work and/or on temporary work assignment.</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D M Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D M Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part 3

First-aid Minimum Standards Regulation
Part 3
First-aid Minimum Standards Regulation

[A-3, r.8.2]

Last amendment: 1 March 1988
Updated to 30 October 2001

First-aid Minimum Standards Regulation

Québec
Presentation
This publication contains the text of a regulation adopted after the 1981 official consolidation of the regulations. It has been first published in the *Gazette officielle du Québec, Part 2*.

This text integrates the amendments, if any, that have been adopted between the date of the first publication and the date indicated on the cover page of this edition. These amendments are listed opposite.

The date of coming into force of the regulation and its amendments is indicated between parentheses after the reference.

Be advised that this publication has no official sanction. The only official text is the one published in the *Gazette officielle*.

Original enactment and subsequent amendments:
Order in Council 1922-84, 22 August 1984 (1984), G.O., 3383 (cf 84-09-22);
Order in Council 688-85, 3 April 1985 (1985), G.O., 1509 (cf 85-05-11);
First-aid Minimum Standards Regulation

Workmen’s Compensation Act (R.S.Q., c. A-3, ss. 53 par. 10 and 124 par. z)

An Act respecting Occupational Health and Safety (R.S.Q., c. S-2.1, ss. 173 and 223)

DIVISION I
INTERPRETATION AND SCOPE

1. In this Regulation, unless the context indicates otherwise, the following words and expressions mean:

(a) “construction site”: means a place where foundation, erection, maintenance, renovation, repair, alteration or demolition work is carried out in respect of a building or of civil engineering works, on and at the site itself, including the preparatory work of land clearing or earth moving and any other work determined by regulation, and the lodging, eating or recreational facilities put at the disposal of the construction workers by the employer;

(b) “Commission”: means the Commission de la santé et de la sécurité du travail established pursuant to section 137 of the Act respecting occupational health and safety (R.S.Q., c. S-2.1);

(c) “establishment”: means all the installations and equipment grouped on one site and organized under the authority of one person or of related persons in view of producing or distributing goods or services, except a construction site; this work includes, in particular, a school, a construction firm and the lodging, eating or recreational facilities put at the disposal of workers by the employer, excepting, however, private lodging facilities;

(d) “nurse”: means a nurse within the meaning of the Nurses Act (R.S.Q., c. I-8);

(e) “principal contractor”: means the owner or any other person who, on a construction site, is responsible for the carrying out of all the work;

(f) “first-aider”: means the holder of a valid first aid certificate granted by an organization recognized by the Commission and whose work does not adversely affect his ability to administer first-aid promptly and efficiently;

(g) “kit”: means first aid kit consisting of a portable box divided into compartments to store first aid articles required by this Regulation and on which are affixed a red cross and the words “first aid” in conspicuous characters.

O.C. 1922-84, s. 1.

2. Subject to Division IX, this Regulation applies to any establishments, except for institutions of the Social Affairs network, within the meaning of the Act respecting health services.
and social services (R.S.Q., c. S-5), where qualified medical personnel or nurses can give the necessary first aid to workers of the establishment in case of occupational injury, and to any construction site where at least 10 workers are working simultaneously at any given time.

O.C. 1922-84, s. 2; S.Q., 1992, c. 21, s. 375.

**DIVISION II FIRST-AIDERS AND KITS IN AN ESTABLISHMENT**

3. The employer of an establishment must make sure that at least one first-aider is present at all times during working hours where there are 50 or less workers on a shift and another first-aider for every additional 100 workers or fraction thereof assigned to the shift.

Notwithstanding the first paragraph, the employer in an establishment in the “Forestry” sector covered by paragraph B of Schedule 1 must see that at least one worker in 5 is a first-aider.

O.C. 1922-84, s. 3; O.C. 688-85, s. 1; O.C. 1798-87, s. 1

4. An adequate number of first-aid kits must be provided by an employer in his establishment.

The kits must be placed as near as possible from the work premises, be easy to reach and available at all times.

The minimum content of the first-aid kit is the following:

(a) a first-aid manual approved by the Commission;

(b) the following instruments:
   - 1 pair bandage scissors,
   - 1 pair splinter forceps,
   - 12 safety pins (assorted sizes);

(c) the following dressings (or equivalent sizes):
   - 25 sterile bandages (25 mm × 75 mm) individually wrapped,
   - 25 sterile gauze squares (101.6 mm × 101.6 mm) individually wrapped,
   - 4 rolls sterile gauze bandage (50 mm × 9 m) individually wrapped,
   - 4 rolls sterile gauze bandage (101.6 mm × 9 m) individually wrapped,
   - 6 triangular bandages,
   - 4 sterile bandage compresses (101.6 mm × 101.6 mm) individually wrapped,
   - 1 roll adhesive tape (25 mm × 9 m);

(d) antiseptics:
   - 25 alcohol swabs individually wrapped.

O.C. 1922-84, s. 4.

5. A vehicle used by an employer in the operation of his establishment and intended solely for the transportation or use of workers employed by them must be provided with a first-aid kit if it travels in areas where no first-aid kit is accessible under section 4.

The minimum content of the kit is that prescribed in section 4 where the vehicle can carry more than
5 workers and where the workers are more than 30 minutes from a medical service.

The minimum content of the kit in vehicles not covered by the second paragraph is the following:

(a) a first-aid manual approved by the Commission;
(b) the following instruments:
   - 1 pair bandage scissors,
   - 12 safety pins (assorted sizes);
(c) the following dressings (or equivalent sizes):
   - 5 sterile adhesive bandages (25 mm × 75 mm) individually wrapped,
   - 5 sterile gauze squares (101.6 mm × 101.6 mm) individually wrapped,
   - 1 roll sterile gauze bandage (50 mm × 9 m),
   - 1 roll sterile gauze bandage (101.6 mm × 9 m),
   - 2 sterile bandage compresses (101.6 mm × 101.6 mm) individually wrapped,
   - 2 triangular bandages,
   - 1 roll adhesive tape (25 mm × 9 m);
(d) antiseptics:
   - 5 alcohol swabs individually wrapped.

DIVISION III
FIRST-AIDERS AND KITS
ON A CONSTRUCTION SITE

7. The general contractor on a construction site must make sure that at least one first-aider is present at all times during working hours where there are between 10 and 50 workers on a shift and another first-aider for every additional 100 workers or fraction thereof assigned to the shift.

8. An adequate number of first-aid kits must be provided by a principal contractor on his construction site.

   The kits must be available at all times.

   A construction site is equipped with an adequate number of first-aid kits when the time required to have access to them is approximately 5 minutes for all workers.

   The minimum content of the first-aid kit is the one prescribed in section 4.

9. A vehicle used by a principal contractor in the operation of his construction site and intended solely for the transportation or use of workers employed by him must be provided with a first-aid kit if it travels in areas where no first-aid kit is accessible under section 8.

   The minimum content of the kit is that prescribed in section 4 where the vehicle can carry more than 5 workers and where the workers are more than 30 minutes from a medical service.
The minimum content of the kit in vehicles not covered by the second paragraph is that prescribed in section 5.
O.C. 1922-84, s. 9; O.C. 1798-87, s. 3.

10. The principal contractor on a construction site must ensure that all kits are kept clean, complete and in good order.
O.C. 1922-84, s. 10.

DIVISION IV
FIRST-AID ROOM

11. The employer in an establishment having more than 100 workers and the principal contractor on a construction site having more than 100 workers must provide a room where the first-aider can administer first-aid; it must be available and easily accessible at all times during working hours, kept clean and in good order, ventilated, lighted, adequately heated and provided with water.

This room must contain in particular:

(a) a stretcher;
(b) one table and two chairs;
(c) soap and a nail brush;
(d) paper towels;
(e) at the minimum, the content of the kit prescribed in section 4.

This section does not apply to an employer whose establishment is provided with a first-aid room equipped as required under sub-paragraph b of paragraph 1 of section 21, nor to the principal contractor whose construction site is provided with such a room.
O.C. 1922-84, s. 11.

DIVISION V
COMMUNICATION WITH EMERGENCY SERVICES

12. The employer must provide his establishment and the principal contractor his construction site with a communications system available for immediate communication with emergency services.

The procedure for communicating with emergency services must be clearly stated near this system.
O.C. 1922-84, s. 12.

DIVISION VI
SIGNS

13. Adequate signs must indicate how to find easily and rapidly the first-aid kits and the communications system prescribed in this Regulation as well as any other first-aid equipment.
O.C. 1922-84, s. 13.

14. The work location, the job, the family name and given name of the first-aider or first-aiders working in the establishment must be printed on a sign placed in a conspicuous place accessible to all workers. On a construction site, the first-aider or first-aiders must wear a safety hat bearing a cross.
O.C. 1922-84, s. 14.

DIVISION VII
REGISTER

15. A first-aider giving first-aid to a worker must fill a report containing his family name and given name as well as those of the injured
worker, and the time and description of the injury or sickness as well as the type of first-aid given.

The report must be handed to the employer in an establishment or to the principal contractor on a construction site and kept by both in a register reserved for that purpose.

O.C. 1922-84, s. 15.

16. Any information respecting a worker contained in the register prescribed in section 15 must be available to that worker.

O.C. 1922-84, s. 16.

17. The preceding provisions do not have any effect on the obligations of the injured worker and of the employer in case of accident, respecting the notice of accident and medical help which must be provided, in conformity with the Act.

O.C. 1922-84, s. 17.

DIVISION VIII
FINANCING

18. The employer in an establishment or the principal contractor on a construction site shall pay for the costs related to the setting up and maintenance of first-aid services including the appliances and articles prescribed in Divisions II to VII.

O.C. 1922-84, s. 18.

19. A person who is assigned as a first-aider by the employer in an establishment or by the principal contractor on a construction site and who does not have a valid first-aid certificate granted by an organization recognized by the Commission may take the necessary time off from work to obtain or renew this certificate, without any loss in salary.

The travelling expenses of the person assigned as a first-aider are paid by the employer or the principal contractor provided the first-aid training or refresher course is given not more than 40 kilometres from the establishment or the construction site where this person works.

O.C. 1922-84, s. 19.

DIVISION IX
NURSES AND FIRST-AID ROOM

20. For the purposes of this Division, establishments and construction sites are classified as follows:

(1) any establishment covered by Schedule I, where:
   (a) at least 100 workers are working; or
   (b) more than 20 workers are working and where it is not possible to reach within 30 minutes by road and under normal conditions an ambulance service, a hospital, a local community service center, a medical clinic or poly-clinic or other emergency medical services, including the health services of an establishment or construction site;

(2) any establishment in the “Forestry” sector covered by paragraph B of Schedule 1 where not more than 20 workers are working;

(3) any construction site where at least 25 workers are working simultaneously at any given time.
and where it is not possible to reach, within 30 minutes by road and under normal conditions, a hospital, a local community service center, a medical clinic or polyclinic or other emergency medical services, including the health services of an establishment or construction site;

(4) any other establishment or construction site.
O.C. 1922-84, s. 20; O.C. 1798-87, s. 4.

20.1 (1) In an establishment in the “Forestry” sector covered by paragraph B of Schedule 1 where 21 to 100 workers are working, a first-aid road vehicle or aircraft complying with the Minimum Standards for First-aid Vehicles described in Schedule 2, and staffed by 2 first-aid vehicle attendants or by one such attendant and one nurse shall be deemed to be an ambulance service within the meaning of subparagraph b of paragraph 1 of section 20 if the employer establishes with the nearest hospital, local community service center, medical clinic or polyclinic, the following agreed procedures:

(a) an agreed procedure whereby a doctor may be notified after evaluation of the injured person’s condition by the first-aid vehicle attendant or nurse, the doctor then being required to meet the vehicle; and

(b) a communications procedure between the first-aid vehicle and the hospital, local community service center, medical clinic or polyclinic;

(2) Notwithstanding subsection 1, in an establishment in the “Forestry” sector covered by paragraph B of Schedule 1 where more than 50 workers are working and which is located more than 1 hour by road and under normal conditions from a hospital, a local community service center, a medical clinic or polyclinic or other emergency medical services, a first-aid road vehicle or aircraft complying with the Minimum Standards for First-aid Vehicles described in Schedule 2, and staffed by 2 first-aid vehicle attendants, one of whom must be a nurse, shall be deemed to be an ambulance service within the meaning of subparagraph b of paragraph 1 of section 20 where the employer establishes with the nearest hospital, local community service center or medical clinic or polyclinic, the following agreed procedures:

(a) an agreed procedure whereby a doctor may be notified after evaluation of the injured person’s condition by a first-aid vehicle attendant, the doctor then being required to meet the vehicle; and

(b) a communications procedure between the first-aid vehicle and the hospital, local community service center or medical clinic or polyclinic.
O.C. 1798-87, s. 5.

20.2. In order to hold the position of first-aid vehicle attendant, a person must hold a job which does not interfere in any way with his ability to act quickly and effectively and must have taken
and passed the required training course the program of which is described in Schedule 3.
O.C. 1798-87, s. 5.

21. (1) The employer in an establishment covered by paragraph 1 of section 20 or the principal contractor on a construction site covered by paragraph 3 of section 20 must:

(a) maintain on the premises at his own expense a full-time nurse during the regular working hours of the day shift and, where more than 20 workers are working simultaneously outside of the regular working hours of the day shift, maintain the services of a nurse on the premises or on call;

(b) install at his own expense a first-aid room which must be available and easy to reach at any time, kept clean and in good order, adequately heated and provided with toilet facilities and running water. The room must be provided with the instruments, stocks and equipment required for the examination and emergency treatment of injured or sick workers, as well as with the supplies and furniture necessary for the staff to give first-aid and perform other duties.

The room must contain in particular the following elements:

**Equipment:**

Equipment for ventilation maintenance including the 3 following basic pieces:

1. oro-pharyngial airways (Guedel);
2. Positive pressure oxygen delivery equipment capable of supplying oxygen for medical purposes at a constant output of not less than 6 litres per minute for a minimum of 25 minutes at ambient temperatures from -20 to 40 degrees Celsius, the volume being determined at a temperature of 20 degrees Celsius and 101 kilopascals of pressure. The equipment must include a device allowing the oxygen to be administered to the patient in such a way that the mixture inhaled will have an oxygen concentration of not less than 50 percent in volume measured at a respiratory intake of 0.25 litres per second.

The oxygen delivery equipment must comply with the standards of the Canadian Standards Association (C.S.A.);
3. suction equipment.

1. stretcher
2. examining table
3. instrument sterilizer or the equivalent
4. bed with mattress and pillows
5. complete first-aid kit, suited to needs
6. cabinet for medical instruments and supplies
7. woolen blankets
8. waste receptacle with pedal-actuated lid
9. sink with running water (hot and cold) including an adaptor for eye wash
10. magnifying lamp
11. back board or the equivalent
12. small refrigerator
13. table
2 chairs

**Instruments:**
- 1 stethoscope
- 1 otoscope
- 1 sphygmomanometer
- 1 flashlight
- 1 emergency splints kit
- adjustable crutches
- 1 pair bandage scissors
- 1 pair suture scissors
- 3 stainless-steel utility bowls
- 1 foot bath basin
- 1 one-liter container
- 1 eye bath
- 2 thermometers
- 1 ice bag
- 1 pair thumb dressing forceps
- 1 pair splinter forceps
- 1 pair tissue forceps
- 2 pair hermostatic forceps
- 1 pair shears

**Medical supplies:**
- adhesive dressings, various sizes
- bandage compresses
- eye dressing packets
- gauze pads, various sizes
- triangular bandages
- tubular dressings, various sizes
- elastic bandage, various sizes
- dermoplast spray
- sterile gauze roller bandage, various sizes
- butterfly bandages
- rolls of adhesive tape, various widths (regular and hypoallergenic)
- rolls of absorbent cotton splints, various sizes
- cotton balls
- cotton swabs
- tongue depressors
- safety pins
- tourniquets
- denatured ethyl alcohol
- surgical brushes
- disposable syringes and needles, various sizes

**Miscellaneous:**
- soap
- antiseptic solutions
- paper towels
- eye-wash solutions
- disposable vinyl gloves
- first-aid manual

Any medication or other stocks needed for the specific needs of the establishment or construction site.

(2) The employer in an establishment covered by paragraph 2 of section 20 must establish, with the nearest ambulance service, an agreed procedure for the evacuation and transport of injured persons. A copy of such procedure and of each renewal thereof must be forwarded to the Commission by the employer immediately after it has been signed.

(3) The employer in an establishment or the principal contractor on a construction site covered
by paragraph 4 of section 20 may make available first-aid services prescribed in subsections 1 and 2.
O.C. 1922-84, s. 21; O.C. 1798-87, s. 6.

21.1. The qualifications of the first-aid vehicle attendants covered by sections 20.1 and 20.2 must be verified periodically by the employer of the establishment in question in accordance with the “Training Program for First-Aid Vehicle Attendants” prescribed by section 20.2.
O.C. 1798-87, s. 7.

22. Nurses giving first-aid to a worker must fill a report containing his family name and given name, as well as those of the injured worker, the date, time and description of the injury or sickness as well as the type of first-aid given.

The report must be handed to the employer in an establishment or to the principal contractor on a construction site and kept by both in a register reserved for such purpose.
O.C. 1922-84, s. 22.

23. Any information concerning a worker contained in the register prescribed in section 22 must be available to such worker.
O.C. 1922-84, s. 23.

24. The sections 22 and 23 have no effect on the obligations of the injured worker and of the employer in case of occupational injury respecting the notice of accident and medical help which must be provided in conformity with the Act.
O.C. 1922-84, s. 24.

DIVISION X
TRANSITIONAL AND FINAL PROVISIONS

25. The employer is deemed to have complied with the requirements of section 3, and the principal contractor is deemed to have complied with the requirements of section 7 if he assigns an adequate number of persons as first-aiders and if he ensures that they enroll in an organization recognized by the Commission to obtain a first-aid certificate.
O.C. 1922-84, s. 25.

O.C. 1922-84, s. 26.

27. Omitted.
O.C. 1922-84, s. 27.

SCHEDULE 1
(ss. 3, 20 and 20.1)

A) Construction industry and public works:

1. General contractors:
This category includes general construction firms that are primarily engaged in the construction of buildings, highways or heavy construction such as marine installations, dams, and hydro-electric plants; it excludes establishments that do some construction work but are primarily engaged in another activity such as utility operation, manufacturing, or mining.
(a) Construction:
General construction firms that are primarily engaged in the construction, alteration and repair of buildings including houses, farm buildings, public buildings, industrial and commercial buildings. This category includes general construction firms primarily engaged in speculative building.

(b) Highway, bridge and street construction:
General construction firms that are primarily engaged in the construction and repair of highways, interchanges, streets, bridges, overpasses and airports. This category excludes general construction firms and their construction sites that are primarily engaged in highway or street maintenance, such as tarring, sprinkling, filling potholes and snow removal.

(c) Other construction:
General construction firms that are primarily engaged in the construction of such projects as waterworks, gas mains, sewers, hydro-electric plants, transmission lines, telephone lines, power lines, dams, dikes, harbours and canals (including dredging), docks and piers, other marine construction, radio towers, railways and related works and other construction projects not classified elsewhere.

2. Special trade contractors:
This category includes special-trade construction firms. Special-trade contractors perform only part of the work covered by a contract taken by a general contractor. In all instances, a sub-contractor working on part of a project is classified in this category as is jobbing trade work performed directly for owners. Special-trade contractors are often engaged in repair and maintenance work, done at site, on buildings of all types. However, this category excludes maintenance or repair work done by maintenance staffs employed full time by the establishments on whose premises the work is being done, as well as special-trade construction firms primarily engaged in some other activity such as the fabrication of structural steel parts but which also erect the steel on the sites. Special-trade construction firms classified in this category include those engaged in bricklaying, carpentry, cement work, electrical work, lathing, plastering, stucco work, painting, decorating, plumbing, heating, air conditioning installations, roofing, terrazzo work, steel erection, excavating, flooring, glazing, insulation of buildings, weather stripping, demolition of buildings, water well drilling, sheet metal work, carpet laying, tiling, marble and stone work.

B) Forestry:
(1) Logging establishments
Establishments primarily engaged in felling and bucking, bunching, yarding, forwarding, decking and loading roundwood, in recovering lost logs including sinkers, in transporting wood with specialized logging trucks and in driving, booming, sorting, rafting and towing wood (if not licensed as public carriers) and barking mills engaged in producing barked or rossed pulpwood.
(2) Forestry services

Private or public establishments primarily engaged in patrolling forests in order to inspect them for the purposes of fire prevention, to fight fires, and to undertake reseeding, reforestation and other forestry services.

C) Mines, quarries and oil wells:

1. Metal mines:
   (a) Placer gold mines: Establishments primarily engaged in mining gold by placer, hydraulic or other methods, including establishments primarily engaged in dressing and beneficiating the ore and in producing bullion at the site of the mine.
   (b) Gold quartz mines: Establishments primarily engaged in operating lode mines for gold, including establishments primarily engaged in dressing and beneficiating the ore and in producing bullion at the site of the mine.
   (c) Uranium mines: Establishments primarily engaged in mining uranium or radium ores and in dressing and beneficiating such ores.
   (d) Iron mines: Establishments primarily engaged in mining iron ore and in dressing and beneficiating such ores.
   (e) Miscellaneous metal mines: Establishments primarily engaged in mining metal ores not elsewhere classified and in dressing and beneficiating such ores, including the following types of mines: silver, copper-gold-silver, nickel-copper, silver-cobalt, silver-lead-zinc, molybdenite, chromite, manganese, mercury, tungsten, titanium, cerium, rare earths, columbium, tantalum, antimony, magnesium and beryllium.

2. Mineral fuels:
   (a) Coal mines: Establishments primarily engaged in mining coal, whether anthracite, bituminous or lignite, including establishments which break, wash, grade or prepare coal for use as a fuel, whether operated by a coal-mining enterprise or on a contractual basis.
   (b) Crude petroleum and natural gas industry: Establishments primarily engaged in the production of petroleum or natural gas from wells or from surface shales or sands, including establishments primarily engaged in recovering the naphtha content of natural gas. The products of these establishments are pentane and heavier liquids, and liquefied petroleum gases such as butane, propane and butane-propane mixtures; in some cases, elemental sulphur is recovered as a by-product. This category excludes establishments primarily engaged in manufacturing coal gas, when not combined with a blast furnace or chemical plant, and establishments primarily engaged in distributing manufactured or natural gas to consumers through a system of mains.

3. Non-metal mines (except coal mines):
   (a) Asbestos mines: Establishments primarily engaged in mining and milling asbestos fibre.
(b) Peat extraction: Establishments primarily engaged in recovering and processing peat.

(c) Gypsum mines: Establishments primarily engaged in mining gypsum; this category excludes establishments primarily engaged in manufacturing gypsum products and which also mine gypsum.

(d) Miscellaneous non-metal mines: Establishments primarily engaged in mining and milling non-metallic minerals not classified elsewhere, including mines such as the following: soapstone and talc, barite, diatomite, mica, ochre and iron oxide, feldspar, nepheline syenite, quartz, silica, fluor spar, salt, potash, sodium sulphate, lithia, magnesite, brucite, gem stones, pumice, volcanic dust, whiting, pozzolana, kyanite, natro-alunite, sodium carbonate, magnesium sulphate, actinolite, serpentine, strontium, graphite, phosphate, pyrite.

4. Quarries and sand pits:
   (a) Stone quarries: Establishments primarily engaged in quarrying and crushing igneous rocks (such as granite) or sedimental rocks (such as limestone, marble, shale, slate and sandstone), excluding establishments primarily engaged in cutting, shaping or finishing stone.

(b) Sand pits or gravel-pits: Establishments primarily engaged in extracting, crushing and screening sand and gravel from sand pits or gravel-pits.

5. Services incidental to mining:
   (a) Contract drilling for petroleum: Establishments primarily engaged in the contractual drilling of wells for petroleum or gas, including establishments that specialize in “spudding in” or “drilling in” and in assembling, repairing and dismantling drilling rigs and derricks.

   (b) Other contract drilling: Establishments primarily engaged in contractual diamond drilling.

   (c) Miscellaneous services incidental to mining: Establishments primarily engaged in providing services necessary to the operation of petroleum and gas fields, such as running, cutting and pulling casings, tubes and rods; cementing wells; shooting wells; perforating well casings; acidizing and chemically treating wells; cleaning out, bailing and swabbing wells, and drilling water intake wells. This category also includes establishments primarily engaged in providing services incidental to the operation of metal and non-metal mining, such as opening up including the removal of overburden and the sinking of shafts, as well as old style prospecting, but excludes geophysics surveys, gravimetric surveys and seismographic surveys.

   O.C. 1922-84, Sch. 1; O.C. 1798-87, s. 8.
SCHEDULE 2
(s. 20.1)
MINIMUM STANDARDS FOR FIRST-AID VEHICLES

A first-aid vehicle must:

(a) If it is a road vehicle, be equipped with the medical supplies and rescue equipment listed below and be used only to provide emergency aid. In addition, the employer must have the first-aid vehicle recognized by the Société de l’assurance automobile du Québec as an emergency vehicle pursuant to the regulation made under paragraph 1 of section 618 of the Highway Safety Code (R.S.Q., c. C-24.2). Such recognition will ensure that said vehicle is equipped with flashing red lights and a siren and that the driver, when on duty, is exempt from normal rules for yielding the right of way, obligatory stops, parking and speed limit;

(b) If it is an aircraft, the cockpit must allow for the use of the medical supplies listed below and for the safe transport of an injured worker, in particular by permitting him to be transported by stretcher.

Minimum Standards for a Road Vehicle

Beginning 1 March 1988, all new vehicles must meet or exceed the following requirements:

(1) The vehicle must be of the ½ ton mini-van stock type.

All of the requirements listed in the Highway Safety Code apply to the vehicle.

(2) The vehicle must have a load capacity of at least 8.4 m³ before conversion.

(3) Doors located at the rear and on the right side must be of the “swing” type with a hold-open mechanism. All doors must be openable from inside at all times and from outside when not locked.

(4) The vehicle must have the best 3-speed automatic transmission offered by the manufacturer. It must have an efficient auxiliary or supplementary oil-cooling system.

(5) The vehicle must have the most efficient braking system offered by the manufacturer and it must be power assisted.

(6) The steering must be power assisted.

(7) The driver compartment must have bucket-type seats with high backrests.

(8) The battery system must be divided into a principal system, for ordinary use, and a secondary system. The latter must be connected so as to charge without discharging and must be capable of starting the motor if the principal system fails. All batteries referred to in this section are to be located outside the compartment reserved for persons transported and outside the driver compartment. All batteries must be of the heavy-duty type and be the most powerful available within the manufacturer’s options. They must also be of the sealed or maintenance-free type.

(9) The alternator must produce a charge of at least 100 amperes at
full power and 60 amperes when idling. The entire electrical system must correspond to the power of the required alternator.

(10) A flashing or rotating red warning light visible for 360° must be installed pursuant to the Highway Safety Code. If the ambulance compartment is higher than the driver compartment, blocking visibility of the light from the rear, additional red warning lights visible for 360° must be placed on the rear corners of the vehicle.

Two flashing red lights, 100 mm in diameter, must be placed equidistant from the centre of the grill in front of the hood, at the same height as the regular headlights. They must be capable of flashing alternately with the headlights, when required.

(11) The vehicle must be equipped with 3 adjustable floodlights for loading and unloading, producing not less than 800 candels on each side and at the rear. They must be located:

— one at the rear of the vehicle so as to light the work area near the rear doors, operating when the doors are open or when the vehicle is in reverse;
— one on the right side, operating when the right side door is to be opened; and
— one on the left side.

(12) The cab and the ambulance compartment must be “yellow for priority vehicle”.

(13) The words “Véhicule de premiers soins” must appear 4 times in reflective “primary blue” on a reflective white background; once on the rear, once on each side, and once on the front, inverted and of the same size as on the rear.

(14) A special sound warning device for ambulances must be installed outside the cab. It must be operated by means of a switch with a warning light controlled by the driver.

(15) The vehicle must be equipped with a sound warning device which sounds when the vehicle is backing up.

(16) The vehicle must be equipped with an independently controlled heating system for the rear compartment.

(17) The vehicle must be equipped with halogen headlights and 2 fog lights.

(18) The vehicle must be equipped with a 2-way radio adapted to the needs of the area in which it will be used. In addition, it must be equipped with a noise-suppression system to permit perfect reception.

(19) The tires must be radial and of the highest quality available in terms of total maximum weight.

The spare tire must be of the same type. Temporary spare tires are prohibited.

The vehicle must be equipped with a jack and the tools necessary to change a tire.

(20) Beginning 1 March 1988, all vehicles must contain the following medical equipment and supplies:
### MEDICAL EQUIPMENT

#### I. STANDARD

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulated stretcher</td>
<td>1</td>
</tr>
<tr>
<td>Folding pole stretcher</td>
<td>1</td>
</tr>
<tr>
<td>Backboard (long)</td>
<td>2</td>
</tr>
<tr>
<td>Cervical collars 2 x, 2 m, 2 l</td>
<td>1</td>
</tr>
<tr>
<td>Multi-purpose waxed cardboard splints</td>
<td>6</td>
</tr>
<tr>
<td>Sand bags (2 kg)</td>
<td>6</td>
</tr>
<tr>
<td>Woolen blankets</td>
<td>6</td>
</tr>
<tr>
<td>Sheets</td>
<td>5</td>
</tr>
<tr>
<td>Plastic-coated pillows and cases for backboards</td>
<td>2</td>
</tr>
<tr>
<td>Patient restraints for backboards</td>
<td></td>
</tr>
<tr>
<td>Disposable gloves</td>
<td>1 box</td>
</tr>
<tr>
<td>Urinal</td>
<td>1</td>
</tr>
<tr>
<td>Basin (Bed pan)</td>
<td>1</td>
</tr>
<tr>
<td>Triangular bandages</td>
<td>12</td>
</tr>
<tr>
<td>I.V. solution</td>
<td></td>
</tr>
<tr>
<td>Ringer’s lactate 1,000 cc</td>
<td>5</td>
</tr>
<tr>
<td>5% Dextrose 500 cc</td>
<td>5</td>
</tr>
<tr>
<td>I.V. administration set</td>
<td>4</td>
</tr>
<tr>
<td>Tourniquets</td>
<td>3</td>
</tr>
<tr>
<td>I.V. infusion catheter needles (assorted sizes)</td>
<td>20</td>
</tr>
<tr>
<td>Butterfly-type needles (assorted sizes)</td>
<td>20</td>
</tr>
<tr>
<td>Alcohol swabs</td>
<td>1 box</td>
</tr>
<tr>
<td>Electric suction</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td>1</td>
</tr>
<tr>
<td>Portable</td>
<td>1</td>
</tr>
<tr>
<td>Suction catheters (14-16-18)</td>
<td>6</td>
</tr>
<tr>
<td>Rigid suction tube</td>
<td>1</td>
</tr>
<tr>
<td>All-purpose scissors</td>
<td>1</td>
</tr>
<tr>
<td>Pressure bandages</td>
<td>6</td>
</tr>
<tr>
<td>Elastic bandages 10 cm</td>
<td>6</td>
</tr>
<tr>
<td>Gauze 10 x 10 cm</td>
<td>50</td>
</tr>
<tr>
<td>Adhesive tape (non-allergic)</td>
<td>2.5 cm</td>
</tr>
<tr>
<td>Teflon burn-sheet</td>
<td>1</td>
</tr>
<tr>
<td>Disposable under-pads</td>
<td>10</td>
</tr>
<tr>
<td>Iodine wipes</td>
<td>1 box</td>
</tr>
<tr>
<td>Plastic bags</td>
<td>10</td>
</tr>
<tr>
<td>Embroidery hoop</td>
<td>1</td>
</tr>
<tr>
<td>Combine pads 12.7 x</td>
<td>20.3 cm</td>
</tr>
<tr>
<td>Packets of sugar</td>
<td>25</td>
</tr>
<tr>
<td>Electrical suction</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td>1</td>
</tr>
<tr>
<td>Portable</td>
<td>1</td>
</tr>
<tr>
<td>Suction catheters (14-16-18)</td>
<td>6</td>
</tr>
<tr>
<td>Gauze 10 x 10 cm</td>
<td>50</td>
</tr>
<tr>
<td>Adhesive tape (non-allergic)</td>
<td>2.5 cm</td>
</tr>
</tbody>
</table>

#### II. LIFE SUPPORT KIT

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stethoscope</td>
<td>1</td>
</tr>
<tr>
<td>Sphygmomanometer</td>
<td>1</td>
</tr>
<tr>
<td>Set of oropharyngeal cannulae</td>
<td>1</td>
</tr>
<tr>
<td>Medical pack sack</td>
<td>1</td>
</tr>
<tr>
<td>All-purpose scissors</td>
<td>1</td>
</tr>
<tr>
<td>Compresses 10 x 10 cm</td>
<td>30</td>
</tr>
<tr>
<td>Combine pads 12.7 x</td>
<td>20.3 cm</td>
</tr>
<tr>
<td>Adhesive tape</td>
<td></td>
</tr>
<tr>
<td>2.5 cm non-allergic</td>
<td>2</td>
</tr>
<tr>
<td>5 cm non-allergic</td>
<td>2</td>
</tr>
<tr>
<td>Gauze roller bandages</td>
<td></td>
</tr>
<tr>
<td>5 cm</td>
<td>6</td>
</tr>
<tr>
<td>10 cm</td>
<td>6</td>
</tr>
<tr>
<td>Pressure bandages (army type)</td>
<td>5</td>
</tr>
<tr>
<td>Triangular bandages</td>
<td>12</td>
</tr>
<tr>
<td>Elastic bandages</td>
<td></td>
</tr>
<tr>
<td>10 cm</td>
<td>3</td>
</tr>
<tr>
<td>15 cm</td>
<td>3</td>
</tr>
<tr>
<td>Safety pins</td>
<td>12</td>
</tr>
<tr>
<td>Sterile gauze compresses 7.6 cm</td>
<td>20</td>
</tr>
<tr>
<td>Medium-size kidney basin</td>
<td>1</td>
</tr>
<tr>
<td>Tongue depressors</td>
<td>12</td>
</tr>
<tr>
<td>Eye pads</td>
<td>6</td>
</tr>
<tr>
<td>Paper cups</td>
<td>5</td>
</tr>
<tr>
<td>Adhesive bandages</td>
<td>1 box</td>
</tr>
<tr>
<td>Reuscitation masks with back-flow protection valve</td>
<td>2</td>
</tr>
</tbody>
</table>
III. OXYGEN ADMINISTRATION KIT
- Each vehicle must contain enough oxygen to provide a flow of 10L/min for the longest travel time.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Regulators</td>
<td>- in accordance with subparagraph 1 of section 21</td>
</tr>
<tr>
<td>2</td>
<td>- Variable concentration oxygen delivery masks</td>
</tr>
<tr>
<td>2</td>
<td>- Resuscitator with mask</td>
</tr>
<tr>
<td>2</td>
<td>- Nasal cannulae</td>
</tr>
<tr>
<td>1</td>
<td>- Stand for portable oxygen bottles</td>
</tr>
</tbody>
</table>

RESCUE EQUIPMENT

Rescue equipment

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Extinguishers</td>
<td>- Dry chemical</td>
</tr>
<tr>
<td>2</td>
<td>- Tool kit including screwdriver, pliers adjustable wrench, etc.</td>
</tr>
<tr>
<td>1</td>
<td>- Warning triangle with support</td>
</tr>
<tr>
<td>3</td>
<td>- Hand lamps</td>
</tr>
<tr>
<td>2</td>
<td>- 6 volts, sealed</td>
</tr>
<tr>
<td>3</td>
<td>- 6 volts, warning light</td>
</tr>
<tr>
<td>1</td>
<td>- 12 volts (Q-Beam type)</td>
</tr>
<tr>
<td>2</td>
<td>- Flashlights</td>
</tr>
<tr>
<td>1</td>
<td>- Large link chain (9,525 mm) with hooks</td>
</tr>
<tr>
<td>2</td>
<td>- Polyamide-polyester rope (9,525 mm, 50')</td>
</tr>
<tr>
<td>1</td>
<td>- Cable type hoist</td>
</tr>
<tr>
<td>2</td>
<td>- Non-split grills</td>
</tr>
<tr>
<td>1</td>
<td>- Axe</td>
</tr>
<tr>
<td>1</td>
<td>- Crow-bar (1 m)</td>
</tr>
<tr>
<td>1</td>
<td>(1.5 m)</td>
</tr>
<tr>
<td>1</td>
<td>- Shovel</td>
</tr>
</tbody>
</table>

- Extrication and immobilization device 1
- Jumper cables 1

SCHEDULE 3

1. Application
   - This program applies to establishments in the “Forestry” sector where the employer must provide attendants for first-aid vehicles the First-aid Minimum Standards Regulation.

2. Goal of the Program
   - The goal of the program is to allow every person designated as a first-aid vehicle attendant by his employer to acquire knowledge of the theoretical and practical aspects of pre-hospital care so that he may act promptly and efficiently in the first moments following an accident to help any person needing emergency care on the work site.

3. Operating Objective
   - The employer is deemed to have fulfilled his obligation to provide first-aid vehicle attendants if he ensures that a sufficient number of people have taken and passed the basic training required by the program and refresher courses on practice and theory as often as required.
### Hours

#### 4. Training

<table>
<thead>
<tr>
<th>Topic</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles and responsibilities</td>
<td>1</td>
</tr>
<tr>
<td>Legal aspects</td>
<td>2</td>
</tr>
<tr>
<td>Medical terminology</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to systems</td>
<td>4</td>
</tr>
<tr>
<td>Examination of beneficiary (worker)</td>
<td>8</td>
</tr>
<tr>
<td>Cardiorespiratory resuscitation</td>
<td>12</td>
</tr>
<tr>
<td>Respiratory system</td>
<td>4</td>
</tr>
<tr>
<td>Cardiovascular system</td>
<td>6</td>
</tr>
<tr>
<td>Nervous system (head-spinal column)</td>
<td>9</td>
</tr>
<tr>
<td>Eye injuries</td>
<td>3</td>
</tr>
<tr>
<td>Locomotor system</td>
<td>10</td>
</tr>
<tr>
<td>Digestive system</td>
<td>3</td>
</tr>
<tr>
<td>Injuries to soft tissue</td>
<td>5</td>
</tr>
<tr>
<td>Metabolic disorders</td>
<td>2</td>
</tr>
<tr>
<td>Psychological aspects</td>
<td>3</td>
</tr>
<tr>
<td>Rescue - freeing of trapped worker, stretcher manoeuvres and simulations</td>
<td>30</td>
</tr>
<tr>
<td>Ambulance operation</td>
<td>12</td>
</tr>
<tr>
<td>Oxygen administration</td>
<td>5</td>
</tr>
<tr>
<td>Fluids and solutions</td>
<td>5</td>
</tr>
<tr>
<td>Safe transport of beneficiary according to his condition</td>
<td>2</td>
</tr>
<tr>
<td>Communications</td>
<td>1</td>
</tr>
<tr>
<td>Practical training</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>160</strong></td>
</tr>
</tbody>
</table>

Refresher course (practical: 16 hrs; theoretical: 8 hrs) 24 hrs/year

O.C. 1798-87, s. 9.
Bibliography


COMITÉ PROVINCIAL DES SOINS INФIRMERS EN SANTÉ AU TRAVAIL. Recommandation du réseau public de la santé au travail. Table nationale de concertation en santé au travail. May 2000.


COMMISSION DE LA SANTÉ ET DE LA SÉCURITÉ DU TRAVAIL.  

COMMISSION DE LA SANTÉ ET DE LA SÉCURITÉ DU TRAVAIL et CENTRES LOCAUX DE SERVICES COMMUNAUTAIRES.  
Que faire lors d’une exposition au sang?, Gouvernement du Québec, 2006.


MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX.  


A worker falls 20 metres. A manual labourer is hit by a forklift truck. A cook is splattered with boiling oil. A co-worker suddenly has difficulty breathing. What should you do?

Accidents happen fast. So you have to be ready to act quickly and efficiently in emergency situations. The casualty's life may depend on it; thus, the action taken by first aiders in the workplace is of crucial importance.

A basic training tool developed by the Commission de la santé et de la sécurité du travail (CSST), the First Aid in the Workplace manual offers first aiders a well-structured, efficient intervention plan that will help them respond appropriately in emergencies. Concise texts and numerous illustrations cover key topics such as the survey, resuscitation and first aid techniques to be used in assisting people suffering from an emergency medical condition or trauma. This edition also includes the new Heart and Stroke Foundation of Québec standards for cardiopulmonary resuscitation (CPR), a section on defibrillation and the use of automated external defibrillators (AED), a section on stress management in emergency situations, and additional information on oxygen therapy. This manual is therefore an essential part of the process first aiders follow in acquiring the knowledge and skills they need to intervene effectively.

First Aid in the Workplace is a reference document useful to anyone who may be required to administer first aid in emergency situations. A manual designed to be read and reread periodically ... to ensure readiness at all times.