

**Goals and Objectives for the Orthopaedic Surgery Resident  
McGill Orthopaedic Sports Medicine (SMH)  
Knee & Shoulder Surgery**

**PGY 1 & 2**

**1. Medical Expert**

**A. Basic Science**

- a) General Knowledge of functional anatomy and musculoskeletal physiology as it applies to athletic performance.
- b) Basic understanding of pathophysiology of acute injuries in the athletic population.
- c) Basic knowledge of the pathophysiology of degenerative disorders of the knee and shoulder.

**B. Basic Clinical Knowledge**

- a) Awareness of mechanisms of injury as it applies to acute and chronic injuries in the athlete.
- b) Awareness of clinical signs and symptoms and presentation of common acute athletic injuries, as well as degenerative conditions about the knee and shoulder.

**C. History and Physical**

- a) Ability to elicit a pertinent history and to physically examine the knee to elicit ligamentous instability, meniscal pathology, tendonitis, and degenerative disease.
- b) Ability to elicit a pertinent history and to physically examine the shoulder to evaluate the various types of instability, rotator cuff tears, impingement, tendonitis, acromioclavicular joint pathology, scapular dyskinesis, labral pathology, and degenerative states.
- c) Ability to elicit a pertinent history and to physically examine the ankle to evaluate sprains, instability, other acute traumatic injuries.
- d) Ability to elicit a pertinent history and to physically examine the elbow to evaluate sprains, other acute traumatic injuries, tendinopathy and other degenerative conditions.

**D. Interpretation and Utilization of Information**

- a) Ability to order the appropriate and necessary blood tests as it pertains to the above conditions.
- b) Ability to interpret standard radiographs and other relevant imaging tests and blood work as it pertains to the above conditions.

**E. Clinical Judgement and Decision Making**

Ability to demonstrate a basic understanding of potential treatment options for the above-mentioned conditions.

## ***F. Technical Skills***

- a) Demonstrate knowledge of surgical principles and a basic familiarity with common surgical procedures used to treat the above conditions.

## **2. Communicator**

- a) Able to effectively demonstrate skills as a communicator and work and communicate effectively with other physicians, allied health professionals, patients and families.
- b) Able to complete organized and accurate history and physicals, progress notes, consultations and discharge summaries.

## **3. Collaborator**

- a) Awareness of a team approach to the management of athletic problems involving physician, surgeon, therapist, coach/trainer and nutritionist.
- b) Interacts and consults effectively with all allied health professionals and acknowledges their roles and expertise.

## **4. Manager**

- a) Shows ability to incorporate the use of current information technology into the practice of medicine (e.g.: use of PACS, internet, digital imaging...)
- b) Shows a basic understanding of the use of healthcare resources in a cost-effective and patient sensitive manner.
- c) Exhibits and ability effectively organize his/her work and work effectively as part of a team to ensure total and continuing care of his/her patients.

## **5. Health Advocate**

Shows an ability to act as an effective healthcare advocate for the patient, society, and the community.

## **6. Scholar**

- a) The trainee exhibits a familiarity with sources of current scientific literature as it pertains to sports medicine, knee and shoulder surgery.
- b) Develops an ability to critically evaluate and appraise medical literature.
- c) Shows an ability and interacts in teaching medical students and allied healthcare workers and patients.
- d) Able to organize and successfully complete a research project.

## **7. Professional**

- a) Displays dependability, reliability, honesty and is forthright with patients and colleagues.
- b) Displays an understanding and sensitivity to age, gender, culture and ethnicity issues.
- c) Displays responsibility and self-discipline and punctuality.
- d) Communicates with patients with compassion and empathy.
- e) Recognizes his/her own limitations and is able to seek and give advice/assistance when necessary.
- f) Understands the principles and practice of biomedical ethics as it relates to sport medicine, knee and shoulder surgery.

## **PGY 3**

### **1. Medical Expert**

#### ***A. Basic Science***

- a) Detailed knowledge of functional anatomy and musculoskeletal physiology as it applies to the athletic performance.
- b) Understanding of pathophysiology of acute and chronic injuries in the athletic population.
- c) Knowledge of exercise physiology and its relevance to overall fitness and athletic performance.
- d) Knowledge of the pathophysiology of degenerative disorders of the knee and shoulder.

#### ***B. Basic Clinical Knowledge***

- a) Awareness of mechanisms of injury as it applies to acute and chronic injuries in the athlete.
- b) Awareness of clinical signs and symptoms and presentation of common athletic injuries acute and chronic, as well as degenerative conditions about the knee and shoulder.

#### ***C. History and Physical***

- a) Ability to elicit a pertinent history and to physically examine the knee to elicit ligamentous instability, meniscal pathology, tendonitis, and degenerative disease.
- b) Ability to elicit a pertinent history and to physically examine the shoulder to evaluate the various types of instability, rotator cuff tears, impingement, tendonitis, acromioclavicular joint pathology, scapular dyskinesis, labral pathology, and degenerative states.
- c) Ability to elicit a pertinent history and to physically examine the ankle to evaluate sprains, instability, other acute traumatic injuries.
- d) Ability to elicit a pertinent history and to physically examine the elbow to evaluate sprains, other acute traumatic injuries, tendinopathy and other degenerative conditions.

#### ***D. Interpretation and Utilization of Information***

- a) Ability to order the appropriate and necessary blood tests as it pertains to the above conditions.
- b) Ability to interpret standard radiographs and other relevant imaging tests and blood work as it pertains to the above conditions.

#### ***E. Clinical Judgement and Decision Making***

Ability to demonstrate knowledge of potential treatment options for the above-mentioned conditions.

#### ***F. Technical skills***

- a) Demonstrate a knowledge of and familiarity with common surgical procedures used to treat the above conditions.
- b) Demonstrate proficiency with intra-articular injection and arthrocentesis techniques for the knee, shoulder, ankle and elbow.

- c) Diagnostic arthroscopy

## **2. Communicator**

- a) Able to effectively demonstrate skills as a communicator and work and communicate effectively with other physicians, allied health professionals, patients and families.
- b) Able to complete organized and accurate history and physicals, progress notes, consultations and discharge summaries.

## **3. Collaborator**

- a) Awareness of a team approach to the management of athletic problems involving physician, surgeon, therapist, coach/trainer and nutritionist.
- b) Interacts and consults effectively with all allied health professionals and acknowledges their roles and expertise.
- c) Able to delegate appropriately and effectively to other members of the healthcare team.

## **4. Manager**

- a) Shows ability to incorporate the use of current information technology into the practice of medicine (e.g.: use of PACS, internet, digital imaging...)
- b) Shows an ability to use healthcare resources in a cost-effective and patient sensitive manner.
- c) Exhibits an ability to effectively organize his/her work and work effectively as part of a team to ensure total and continuing care of his/her patients.

## **5. Health Advocate**

Shows an ability to act as an effective healthcare advocate for the patient, society and the community.

## **6. Scholar**

- a) The trainee exhibits a familiarity with sources of current scientific literature as it pertains to sports medicine and knee surgery.
- b) Exhibits an ability to critically evaluate and appraise medical literature.
- c) Shows ability and interacts in teaching medical students and allied healthcare workers and patients.
- d) Able to organize and successfully complete a research project.

## **7. Professional**

- a) Displays dependability, reliability, honesty and is forthright with patients and colleagues.
- b) Displays an understanding and sensitivity to age, gender, culture and ethnicity issues.
- c) Displays responsibility and self-discipline and punctuality.
- d) Communicates with patients with compassion and empathy.
- e) Recognizes his/her own limitations and is able to seek and give advice/assistance when necessary.
- f) Understands the principles and practice of biomedical ethics as it relates to the sports medicine and knee surgery.

## **PGY 4**

### **1. Medical Expert**

#### **A. Basic Science**

- a) Appreciation of biomechanics as it relates to specific functions: walking, running, and throwing.
- b) Detailed knowledge of principles of knee and shoulder rehabilitation as it pertains to athletic injuries and degenerative problems and postoperative rehabilitation.

#### **B. Basic Clinical Knowledge**

- a) Detailed knowledge of mechanisms of injury as it applies to acute and chronic injuries in the athlete.
- b) Knowledge of the non-surgical and surgical management of common problems about the knee including: instability, meniscal pathology, degenerative arthritis.
- c) Knowledge of the non-surgical and surgical management of common problems about the shoulder including: impingement, rotator cuff tears, instability, adhesive capsulitis, and AC joint pathology, scapular dyskinesis, and degenerative arthritis.
- d) Knowledge of the non-surgical and surgical management of common problems about the elbow including: instability, tendinopathy, impingement, and degenerative arthritis.
- e) Knowledge of the surgical and non-surgical management of common problems about the ankle including: instability, osteochondritis dissecans, impingement, tendinopathy, and other degenerative conditions.

#### **C. History and Physical**

- a) Ability to elicit a pertinent history and to physically examine the knee to elicit ligamentous instability, meniscal pathology, tendonitis, and degenerative disease.
- b) Ability to elicit a pertinent history and to physically examine the shoulder to evaluate the various types of instability, rotator cuff tears, impingement, tendonitis, acromioclavicular joint pathology, scapular dyskinesis, labral pathology, and degenerative states.
- c) Ability to elicit a pertinent history and to physically examine the ankle to evaluate sprains, instability, other acute traumatic injuries.
- d) Ability to elicit a pertinent history and to physically examine the elbow to evaluate sprains, other acute traumatic injuries, tendinopathy and other degenerative conditions.

#### **D. Interpretation and Utilization of Information**

- a) Ability to order the appropriate and necessary blood tests and imaging as it pertains to all the above conditions.
- b) Ability to interpret imaging tests ordered including x-ray, CT, MRI, as it pertains to all the above conditions.

#### **E. Clinical Judgement and Decision Making**

- a) Able to demonstrate knowledge of the appropriate work-up and non-surgical and surgical management for the above-mentioned conditions.
- b) Demonstrate an understanding of the impact of the disease process and its necessary treatment in the patient's life and sport.

## ***F. Technical Skills***

- a) Demonstrate knowledge of the various surgical techniques used to treat the above-mentioned conditions.
- b) Develop a proficiency in performing the following surgical procedures in the knee:
  1. Diagnostic arthroscopy
  2. Arthroscopic debridement
  3. Simple and arthroscopic partial meniscectomy
  4. Arthroscopic removal of loose bodies
  5. Total knee arthroplasty
- c) Develop a proficiency in performing the following surgical procedures in the shoulder
  1. Diagnostic arthroscopy
  2. Open and arthroscopic instability repairs
  3. Arthroscopic acromioplasty
  4. Open and arthroscopic distal clavicle excision
  5. Simple open and arthroscopic rotator cuff repairs
  6. Introduction to the principles of shoulder arthroscopy
  7. Capable of performing sliding and non-sliding arthroscopic knots

## **2. Communicator**

- a) Able to effectively demonstrate skills as a communicator and work and communicate effectively with other physicians, residents, allied health professionals, patients and families.
- b) Able to complete organized, concise and accurate history and physicals, progress notes, consultations and discharge summaries.

## **3. Collaborator**

- a) Awareness of a team approach to the management of athletic problems involving physician, surgeon, therapist, coach/trainer and nutritionist.
- b) Interacts and consults effectively with all health and allied health professionals and acknowledges their roles and expertise.
- c) Able to delegate appropriately and effectively to other members of the healthcare team.

## **4. Manager**

- a) Shows the ability to effectively incorporate the use of current information technology into the practice of medicine (e.g.: use of PACS, internet digital imaging, telemedicine....)
- b) Shows an ability to use healthcare resources in a cost-effective and patient sensitive manner.
- c) Exhibits an ability to effectively organize his/her work effectively as part of a team to ensure total continuing care of his/her patients.

## **5. Health Advocate**

Shows an ability to act as an effective healthcare advocate for the patient, society and the community.

## **6. Scholar**

- a) Exhibits a familiarity and awareness of current scientific literature as it pertains to sports medicine, knee and shoulder surgery.
- b) Exhibits an ability to critically evaluate and appraise medical literature and journal articles.
- c) Shows an ability and interest in teaching students, junior residents and allied healthcare workers and patients.
- d) Able to organize and successfully complete a research project.

## **7. Professional**

- a) Displays dependability, reliability, honesty and is forthright with patients and colleagues.
- b) Displays an understanding and sensitivity to age, gender, culture and ethnicity issues.
- c) Displays responsibility, self-discipline and punctuality.
- d) Communicates with patients with compassion and empathy.
- e) Recognizes his/her own limitations and is able to give advice/assistance when necessary.
- f) Understands the principles and practice of biomedical ethics as it relates to sports medicines, knee and shoulder surgery.

## **PGY 5**

### **1. Medical Expert**

#### ***A. Basic Science***

- a) Detailed knowledge of biomechanics as it relates to specific functions: walking, running, and throwing.
- b) Detailed knowledge of principles of knee and shoulder rehabilitation as it pertains to athletic injuries, degenerative conditions and post-op rehabilitation.

#### ***B. Basic Clinical Knowledge***

- a) Detailed knowledge of mechanisms of injury as it applies to acute and chronic injuries in the athlete.
- b) Thorough knowledge of the non-surgical and surgical management of common problems about the knee (see PGY-4), as well as complex knee disorders including:
  - Osteochondral lesions
  - Patellofemoral arthritis and instability
  - Chronic and complex knee instabilities
  - Malalignment disorders
  - Failed arthroplasty/ligament reconstruction
- c) Thorough knowledge of the non-surgical and surgical management of common problems about the shoulder (see PGY-4), as well as complex shoulder disorders including:
  - Multidirectional instability
  - Internal impingement
  - Labral tears

#### ***C. History and Physical (same as PGY 4)***

- a) Ability to elicit a pertinent history and to physically examine the knee to elicit ligamentous instability, meniscal pathology, tendonitis, and degenerative disease.

- b) Ability to elicit a pertinent history and to physically examine the shoulder to evaluate the various types of instability, rotator cuff tears, impingement, tendonitis, acromioclavicular joint pathology, scapular dyskinesis, labral pathology, and degenerative states.
- c) Ability to elicit a pertinent history and to physically examine the ankle to evaluate sprains, instability, other acute traumatic injuries.
- d) Ability to elicit a pertinent history and to physically examine the elbow to evaluate sprains, other acute traumatic injuries, tendinopathy and other degenerative conditions.

***D. Interpretation and Utilization of Information***

- a) Ability to order the appropriate and necessary blood and fluid tests and imaging as it pertains to all the above conditions.
- b) Ability to interpret imaging tests ordered including x-ray, CT, MRI, MR-Arthrography, arthrography and bone scan as it pertains to all the above conditions.

***E. Clinical Judgement and Decision Making***

- a) Able to demonstrate knowledge of the appropriate work-up, non-surgical and surgical management for all of the above conditions.
- b) Demonstrate a good understanding of the impact of the disease process and its necessary treatment in the patient's life and sport.
- c) Demonstrate knowledge of factors involved in return-to-play decisions for competitive and recreational athletes.

***F. Technical Skills***

- a) Demonstrate a knowledge and understanding of different surgical techniques used to treat the above mentioned conditions.
- b) Exhibit a proficiency in performing the surgical procedures in the knee and shoulder described in the PGY-4 objectives.
- c) Develop a proficiency in performing the following surgical procedures in the knee:
  1. Complex partial meniscectomies (bucket-handle tears)
  2. Meniscal repair – all inside and inside-out
  3. ACL reconstructions (arthroscopic)
  4. Mosaicplasty/cartilage grafting
  5. Tibial tubercle osteotomy
  6. Lateral retinacular release
  7. High tibial osteotomy (opening & closing wedge)
  8. Unicompartmental knee arthroplasty
  9. Osteochondral fragment fixation
- d) Develop a proficiency in performing the following surgical procedures in the shoulder
  1. Diagnostic arthroscopy
  2. Complex rotator cuff repairs
  3. Manipulation under anaesthesia and capsular releases for adhesive capsulitis
  4. Chronic AC joint instability reconstructions
  5. Shoulder arthroplasty/resurfacing.
- e) Develop an understanding of the principles of shoulder arthroscopic reconstructive techniques and basic ankle and elbow arthroscopy techniques.



## **2. Communicator**

- a) Able to effectively demonstrate skills as a communicator and work and communicate effectively with other physicians, residents, allied health professionals, patients and families.
- b) Able to complete organized and concise and accurate history and physicals, progress notes, consultations, and discharge summaries.

## **3. Collaborator**

- a) Awareness of a team approach to the management of athletic problems involving physician, surgeon, therapist, coach/trainer and nutritionist.
- b) Interacts and consults effectively with all health and allied health professionals and acknowledges their roles and expertise.
- c) Able to delegate appropriately and effectively to other members of the healthcare team.

## **4. Manager**

- a) Shows the ability to effectively incorporate the use of current information technology into the practice of medicine (e.g.: use of PACS, internet, digital imaging, telemedicine...)
- b) Shows an ability to use healthcare resources in a cost-effective and patient sensitive manner.
- c) Exhibits an ability to effectively organize his/her work effectively as part of a team to ensure total and continuing care of his/her patients.

## **5. Scholar**

- a) Exhibits a knowledge and understanding of current scientific literature as it pertains to sports medicine and knee surgery.
- b) Exhibits an ability to critically evaluate and appraise medical literature and journal articles.
- c) Shows an ability and interest in teaching and instructing students, junior residents and allied healthcare workers as well as families and patients; exhibits an ability to instruct and teach surgical and procedural techniques to junior members of the team.
- d) Able to organize and successfully complete a research project.

## **6. Professional**

- a) Displays dependability, reliability, honesty and is forthright with patients and colleagues.
- b) Displays an understanding and sensitivity to age, gender, culture and ethnicity issues.
- c) Displays responsibility, self-discipline and punctuality.
- d) Communicates with patients with compassion and empathy.
- e) Recognizes his/her own limitations and is able to seek and give advice/assistance when necessary.
- f) Understands the principles and practice of biomedical ethics as it relates to sports medicine, knee and shoulder surgery.