

Manitoba-McGill Fracture Study

Fall, 2011

Update



We want to share with you exciting results from our study aimed at identifying the genetic causes of osteoporosis

What have we learned about the genetic causes of osteoporosis and fractures?

Thank you to all participants for their enthusiastic participation in our hunt for genes that contribute to osteoporotic fractures!

As you know, we recruited individuals from Manitoba who had undergone forearm and hip fractures to help us to understand the genetic causes of osteoporotic fractures. The purpose of this letter is to update you on our findings.

Since collecting the DNA from all participants we have reached several milestones:

1 *Collaborating* with an international group of osteoporosis studies, we have **identified 56 new genes** that are involved in fractures. The Manitoba-McGill study played an integral role in this project, which in total included 81,000 individuals from all over the world. This project is currently wrapping up and we hope will be published shortly.

2 In addition to identifying these *new genes*, this information was helpful in better understanding the causes of osteoporosis. However, we also learned that there is no single gene or combination of genes that can predict exactly who will get osteoporosis or suffer an osteoporotic fracture. Therefore, this information cannot be used at the present time to give a genetic "diagnosis" of osteoporosis in individual participants.



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Are you interested in learning more about osteoporosis? Check out the Osteoporosis Canada website:

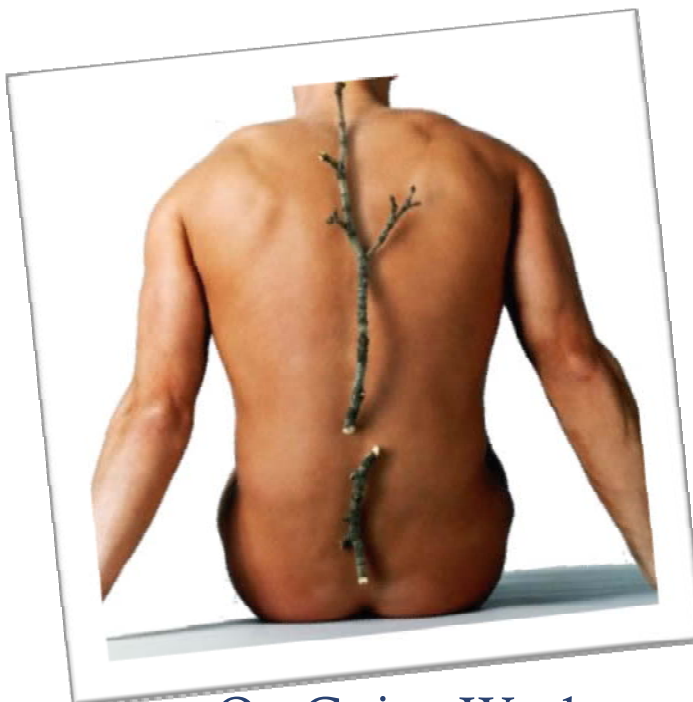
www.osteoporosis.ca

Are you interested in learning more about this study? Please see our study website:

www.mcgill.ca/genepi/manitoba-mcgill/

All future information regarding our project will be posted on the study website:

www.mcgill.ca/genepi/manitoba-mcgill/



On-Going Work...

We were able to find the above-mentioned genes by taking a snap shot of the genetic information in your DNA, which allowed us to see several hundred thousand pieces of genetic information. However, in all, our genes contain approximately 3 billion pieces of information.

Therefore, we are currently attempting to assess this entire collection of 3 billion bits of information in a subset of participants from the Manitoba-McGill Project. To date, less than a thousand people in the

world have had undergone this process of sequencing their genomes, *and we are excited that approximately 100 individuals from our project will join this elite group.*

Once again, thank you for contributing to this groundbreaking research. It is our hope that through the identification of the genetic causes of osteoporosis we will be able to develop and better target therapies to prevent fractures!



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