

## What is Medical Genetics?

Medical Genetics brings cutting-edge genomic research, knowledge and technology into the practice of medicine, making it relevant to the diagnosis and management of both rare and common conditions.

## What is a Medical Geneticist?

A Medical Geneticist (or Clinical Geneticist) is a physician consultant who has completed a residency program or fellowship in Medical Genetics. He/she usually works in a hospital setting seeing patients of different ages, sometimes with their family members, regarding a wide range of conditions. Geneticists have the curiosity and knowledge of scientists, the observation skills and clinical acumen of top-notch diagnosticians and the superior communication skills of empathic counsellors. They combine clinical data with the results of rapidly evolving genetic technologies to diagnose genetic conditions. They provide the patient, family members and other care providers with reliable information about the natural history of genetic conditions and their recurrence risks, in addition to recommendations to prevent or manage the health concerns associated with genetic conditions. Medical Genetics combines the art of caring with the science of life.

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## Is Medical Genetics for YOU?

*Information for Medical Students  
about the Medical Genetics Residency  
and Fellowship Programs*



**IT'S IN YOUR GENES.**

Get a leading-edge education  
in genetics.

## A day in the life of a Geneticist:

Time	Activity
8:00-8:30	Prepare for Clinic Day
8:30-9:30	Genetics Grand Rounds
9:30-10:30	4-year-old child with autism and duplication 17p11.2 on microarray
10:30-11:30	65-year-old male with spastic paraplegia
11:30-12:30	37-year-old woman with breast and thyroid cancer
12:30-1:00	Lunch
1:00-2:00	Pregnant woman with fetal heart malformation on ultrasound
2:00-3:00	Infant with cleft palate and developmental delay
3:00-6:00	Dictations/Paperwork/Meetings/Research

## Who do Geneticists work with?

Medical Geneticists work closely with Genetic Counsellors, who are Masters trained health care professionals who provide individuals and families with information on the nature, inheritance, and implications of genetic disorders to help them make informed medical and personal decisions. Geneticists also work closely with MDs or PhDs who direct laboratories performing clinical genetic tests, as well as research colleagues, often in the context of a university appointment. Geneticists typically work in multi-disciplinary settings. They receive referrals from primary care providers as well as many medical and surgical specialties.

## Are there opportunities?

Yes. As genetic technology is rapidly integrated into the care of individuals with common, as well as rare, conditions, there is an increasing need for Geneticists. Geneticists work in a variety of payment models, including Alternative Funding Plans (AFP). Some are salaried hospital and/or university employees, some receive clinical honorariums and some have mixed remuneration models that include fee-for-service.

## How do I become a Medical Geneticist?

There are three routes to clinical training:

**1** A 5-year direct entry Royal College of Physicians and Surgeons of Canada (RCPSC) or Collège des médecins du Québec (CMQ)) specialist training program in Medical Genetics. Successful candidates are eligible for CCMG fellowship without an additional exam. See <http://royalcollege.ca> or <http://www.cmq.org>

**2** A 3-year Canadian College of Medical Geneticists (CCMG) Fellowship Training in Clinical Genetics for MDs who have already completed 3 years of postgraduate medical education in a RCPSC- and/or CMQ-accredited residency program. This route is designed for an MD who has, or intends to, complete a primary specialty such as Pediatrics, Obstetrics or Internal Medicine and wants to obtain expertise in Medical Genetics. See [www.ccmg-ccgm.org](http://www.ccmg-ccgm.org)

**3** A 1 to 2 year CCMG Fellowship Training in Clinical Biochemical Genetics (Metabolics) for MDs who have already completed 3 years of postgraduate medical education in a RCPSC- and/or a CMQ-accredited residency program. This training is intended for MDs whose primary focus is diagnosing and treating inborn errors of metabolism.

Comparison	FRCPC/FCMQ (Genetics) + FCCMG	FRCPC (other) + FCCMG
Work as a fully trained Geneticist	✓	✓
Minimum length of postgrad training	5 years	6 years
Minimum length of Genetics training	5 years	1 to 2 years
See non-Genetic patients	No	✓ within primary specialty

## How can I learn more?

A great way to learn whether you would like to practice Medical Genetics as your specialty of choice is to do an elective in the field. In addition to the academic sites detailed on the back page of the brochure that offer training programs, there are also sites or outreach clinics in almost every province. Contact a Genetics centre near you and explore this rewarding career!

Visit [www.carms.ca](http://www.carms.ca) | Medical Genetics and [www.ccmg-ccgm.org](http://www.ccmg-ccgm.org) | Training