

Medical Physicist

The physicist who makes sure the radiation machines in a cancer centre are safe and accurate. A PhD, a residency and a national exam. Long road, rare job, high pay.

TYPICAL PAY

\$117,000

a year, full time

PAY RANGE

\$73k to \$200k

starting to experienced

TIME TO QUALIFY

8 to 12 years

after high school

DEMAND

Moderate

job outlook

LICENCE NEEDED

No

anyone can do it

WHERE YOU WORK

Cancer centres, hospital radiology departments, universities, equip...

How you get there

- 1 High school** Grades 11 and 12
Top marks in physics, calculus, chemistry and English.
- 2 Bachelor's in physics** 4 years
Or engineering physics. Strong marks, research summers, and comfort with programming.
- 3 Accredited graduate degree** 2 to 6 years
A master's or PhD in medical physics from a CAMPEP (Commission on Accreditation of Medical Physics Education Programs) accredited program. Thirteen Canadian universities qualify, including UBC (University of British Columbia), Alberta, Calgary, McGill, Laval, Toronto Metr...
- 4 Residency** 2 years
Two years of supervised clinical training at a cancer centre. Thirteen accredited programs across Canada, from BC Cancer in Vancouver to the Ottawa Hospital. Positions are few and competitive.
- 5 CCPM (Canadian College of Physicists in Medicine) exam** After residency
Needs a graduate degree and two years of patient-related physics experience. A written exam in March and an oral exam in May. Recertify every 5 years.

Pros and cons

- + Physics applied directly to saving lives
- + High pay and a pension once you are certified
- + Research and teaching built into many jobs
- Ten or more years of school before a full salary
- Residency spots are scarce and the bottleneck of the field
- Almost all jobs are in large cities with cancer centres

Good to know

A Canadian physicist built the cobalt bomb

Harold Johns, a medical physicist in Saskatoon, led the team that treated the first cancer patient with a cobalt-60 unit in 1951. The machine, nicknamed the cobalt bomb, made high-energy radiation tr...

Fewer than a thousand

COMP (the Canadian Organization of Medical Physicists) has just over 800 members, including academics and students. The number of certified clinical physicists is smaller still, which is why each one is re...

Optional boosts

Radiation oncology physics. Diagnostic imaging physics. Nuclear medicine and MRI (magnetic resonance imaging) physics. Industry and regulation.

Where these numbers come from

Job Bank: Medical physicist, wages (updated Nov 2025)
Canadian College of Physicists in Medicine: certification
CCPM: exam schedule and fees
COMP: accredited graduate programs in Canada

Numbers checked September 2026. Pay figures are typical full-time annual amounts in Canadian dollars, based on Government of Canada Job Bank wage data and published salary grids. They vary by province, employer and experience. Tuition is for domestic students. Sources, links and the click-through version: <https://career.help/ca/careers/medical-physicist>



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