

Anal HPV infections in vaccinated and unvaccinated gay, bisexual and other men who have sex with men in Montreal, Toronto and Vancouver

WHY DID WE RESEARCH THIS TOPIC?

- The human papillomavirus (HPV) is a very common sexually transmitted infection. There are many different types of HPV, and the HPV vaccine can protect gay, bisexual and other men who have sex with men (GBM) from up to nine disease-causing types.
- We know the HPV vaccine is good at preventing anal HPV infections when given to guys before they have sex. Once guys have an HPV infection, the vaccine cannot help the immune system remove it, but it can prevent additional infections with other HPV types.
- Guys in our study often got vaccinated after becoming sexually active, so they may have had HPV infections when they got their first dose. However, it's unlikely that they already had infections with every HPV type that the currently available vaccine can prevent.
- Knowing that many guys in our study may have had HPV infections before getting vaccinated, we wanted to find out if vaccinated guys were still less likely to have an anal HPV infection compared to unvaccinated guys.



HPV types: There are over 100 types of the HPV virus. A small proportion of infections with some of these HPV types can cause cancer and skin or mucous membrane warts.



HPV vaccine: A 3-dose vaccine that prevents anal cancer and anal warts. An earlier version of the vaccine prevents infection with four types. The vaccine that is currently available to GBM in Canada prevents infection with nine types.

HOW DID WE RESEARCH THIS?

- We asked 645 GBM aged 16-30 from Montreal, Toronto and Vancouver to answer questions about their sexual health and whether they had received the HPV vaccine.
- Guys in the study also provided an anal swab that we tested for different types of the HPV virus.

WHAT DID WE LEARN?

- Roughly 2 in 5 guys had gotten at least one dose of HPV vaccine.
- Taking into account sexual history and other risk factors, guys who were vaccinated were 27% less likely to have an infection with at least one of four types of HPV that can be prevented by an earlier version of the vaccine.
- Guys who got their first vaccine dose before 24 years old may have been less likely to have an infection with the HPV types the vaccine protects against compared to guys vaccinated at an older age.
- About 1 in 3 unvaccinated guys had an anal infection with at least one of the nine HPV types that the currently available vaccine could have prevented.

WHAT ARE THE IMPLICATIONS OF THESE FINDINGS?

- Many vaccinated *and* unvaccinated GBM had an anal infection with the HPV types vaccination protects you from. However, getting vaccinated did lower guys' risk of having an infection with these types.
- Vaccinating all young GBM against HPV is an important step towards decreasing the amount of HPV infections and HPV-related cancers that GBM experience.
- Healthcare providers can prevent a larger proportion of infections by ensuring GBM have access to the HPV vaccine as young as possible.

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Vaccine Coverage:

In BC, Ontario and Quebec, the HPV vaccine has been free for GBM under 27 since 2015/16. For men 27 and older, it costs about \$200 per dose (over \$600 total) but is covered by some private health insurance plans.

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