



HIV PrEP – A SUMMARY FOR CLINICIANS

WHAT IS HIV Pre-exposure prophylaxis (PrEP)?

HIV PrEP is the administration of anti-retroviral medications to HIV-uninfected individuals at high and ongoing risk of HIV acquisition to prevent HIV. In Canada, 2 anti-retroviral combination medications are approved for PrEP: emtricitabine 200 mg/tenofovir disoproxil fumarate 300 mg, (Truvada) and emtricitabine 200 mg/tenofovir alafenamide 25 mg (Descovy).

WHO SHOULD BE CONSIDERED FOR HIV PrEP?

Daily PrEP with Truvada is approved for use by adults with sexual risks for HIV. It can be used off-label for people who inject drugs (PWID).

According to the 2017 *Canadian Guidelines on HIV pre-exposure prophylaxis and non-occupational postexposure prophylaxis*:

- Daily PrEP with Truvada is recommended for gay, bisexual and other men who have sex with men (gbMSM) and transgender females with a HIRI-MSM score ≥ 11
- Daily PrEP with Truvada is recommended for gbMSM and transgender females who have had condomless anal intercourse within 12 months **AND**
 - o have infectious syphilis or rectal STI **OR**
 - o have recurrent use of HIV post-exposure prophylaxis **OR**
 - o have an ongoing sexual relationship with an HIV+ partner with detectable viral load
- Daily PrEP with Truvada is recommended for the HIV-negative partner in a heterosexual serodiscordant relationship where condomless anal or vaginal sex is occurring in the context of a substantial or non-negligible risk of transmission (negligible risk is defined as some with a viral load < 40 copies/mL **AND** no known STIs present at time of exposure)
- Daily PrEP with Truvada may be considered for individuals who share injection drug use paraphernalia

Daily PrEP with Descovy is approved for adolescents and adults with sexual risks for HIV. It has not been studied for people having receptive vaginal sex.

Truvada has been studied for use in an On-Demand, or Event-Based, manner. This might be an option for gbMSM individuals. It has not been studied for people who have vaginal sex, or people who inject drugs.

HOW MUCH DOES PrEP COST?

Truvada is covered under the ODB formulary, and Trillium coverage can be obtained by most individuals without private or public drug benefits. The PrEP Start Program (<https://ontarioprep.ca/prepstart/>) provides the first 3 months' of Truvada to eligible patients in Ontario free-of-charge. Descovy is covered through private benefits plans.

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WHAT IS THE HIRI-MSM?

The HIV Incidence Risk Index for MSM (HIRI-MSM) is a validated risk tool. A score of 10 corresponds with a 2% annual risk of HIV acquisition; a score of 25 with a 7% annual risk.

Question number	Question	Response	Score
1	How old are you today (years)?	<18 years 18-28 years 29-40 years 41-48 years ≥49 years	0 8 5 2 0
2	How many men have you had sex with in the last 6 months?	>10 male partners 6-10 male partners 0-5 male partners	7 4 0
3	How many of your male sex partners were HIV positive?	>1 positive partner 1 positive partner <1 positive partner	8 4 0
4	In the last 6 months, how many times did you have receptive anal sex (you were the bottom) with a man without a condom?	1 or more times 0 times	10 0
5	In the last 6 months, how many times did you have insertive anal sex (you were the top) with a man who was HIV positive?	5 or more times 0-4 times	6 0
6	In the last 6 months, have you used methamphetamines such as crystal or speed?	Yes No	5 0
7	In the last 6 months, have you used poppers (amyl nitrate)?	Yes No	3 0

^a Reproduced from ⁶⁹. Add down entries in right-hand column to calculate total score.

(source: Tan DHS, Hull MW, Yoong D, et al, 2017, Appendix 1 p.37)

WHAT ARE THE MOST COMMON SIDE EFFECTS AND POSSIBLE RISKS OF PrEP?

Truvada is extremely well tolerated, with some minor transient gastrointestinal symptoms and headache possible in the first week. Truvada has been associated with reductions in bone density. This may be reversible. Vitamin D and calcium should be optimized. Truvada can impact renal function. Creatinine and eGFR should be monitored quarterly. Descovy does not appear to have the same renal and bone density effects as Truvada. However, Descovy may be associated with weight gain, and changes in metabolic parameters.

Hepatitis B screening is part of the initial work up, and vaccination is recommended in individuals who are non-immune. Discontinuation of Truvada or Descovy by individuals with chronic hepatitis B can cause a flare. A clinician with relevant expertise should be consulted regarding the provision of PrEP for patients with chronic hepatitis B. Anyone with symptoms of acute retroviral syndrome (fever, headache, myalgia, sore throat) should be assessed and tested.

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WHAT BASELINE TESTING AND MONITORING SHOULD BE DONE?

Assay Type	Baseline	30 days	Q3 months	Q 12 months
Laboratory evaluation				
HIV testing ^a	X	X	X	
Hepatitis A immunity (hepatitis A IgG) ^b	X			
Hepatitis B screen (surface antigen, surface antibody, core antibody) ^{bc}	X			X ^b
Hepatitis C antibody	X			X
Screening for gonorrhoea and chlamydia ^d (urine nucleic acid amplification test, throat and rectal swabs for culture or nucleic acid amplification; test anatomic sites depending on type of sexual activity reported)	X		X	
Syphilis serology ^d	X		X	
Complete blood count	X			
Creatinine	X	X	X	
Urinalysis	X			
Pregnancy test (as appropriate)	X		X	
Clinical evaluation				
Symptoms of HIV seroconversion	X	X	X	
PrEP adherence		X	X	
Indication for PrEP	X	X	X	
Use of other HIV and STI prevention strategies	X	X	X	
Presence and management of syndemic conditions	X	X	X	

^a Preferred HIV test is a 4th generation antibody/antigen combo assay. Those with signs or symptoms of acute HIV should also undergo HIV RNA or pooled nucleic acid amplification test.

^b Hepatitis A or B vaccine should be initiated in unvaccinated individuals. Those who remain non-immune to hepatitis B virus should be rescreened annually.

^c Individuals with chronic active hepatitis B should be managed in consultation with an expert on hepatitis B virus according to Canadian guidelines.

^d Individuals diagnosed with STIs should be offered standard therapy and follow-up as per local guidelines.

(source: Tan DHS, Hull MW, Yoong D, et al, 2017, p. E1453)

Reference: Tan DHS, Hull MW, Yoong D, et al. *Canadian Guidelines on HIV pre-exposure prophylaxis and non-occupational postexposure prophylaxis*. CMAJ. 2017. 189:E1448-58. doi: 10.1503/cmaj.170494

Version 3. Updated October 27, 2021.