

# Gender Dysphoria: Information for Primary Care



Image credit: Adobe Stock

**Summary:** Gender dysphoria is the distress that may come when a person’s gender identity is different than the gender they were assigned at birth. People who are gender non-conforming or transgender can lead happy, productive lives, whereas others may have significant distress. There is a whole spectrum of gender identities - including gender queer or gender fluid, transgender, gender non-conforming, and non-binary. It is important to note that gender identity is separate from sexual orientation.

Primary care providers can play a key role in supporting people who are questioning their gender identity by providing a safe, accepting, and welcoming environment and having knowledge of resources available to help them and their families. Where indicated, referral to specialized services can be undertaken to establish an individualized management plan that may potentially include social transition, hormone blocking, and/or hormone replacement therapy, and/or gender affirming surgery.

## Case, Part 1

Jennifer is a 10-yo patient, assigned female, who is well known to you... Now you find out that Jennifer is asking you to call her “Jason”. Her parents tell you... “Of course we will love our child no matter what... but we didn’t grow up with any of this “LGBT stuff”...Could it just be a phase? Will our child grow out of this?”

How are you going to support “Jason” and his parents?

## Introduction

Children and youth are exploring their gender identity and asking for assistance at younger ages than ever before.

For most people, their assigned/experienced gender matches their external sex organs and chromosomal gender. However, this is not the case for everyone. Many people experience gender on a spectrum defined as biology not pathology. Some gender diverse youth are also moving away from the binary of male/man and female/woman and identifying instead as neither male or female, or as both. Transgender individuals may seek to express themselves in the way that best matches their inner sense of self and often includes manifestations associated with each gender stereotype. The concept of two-spirited has evolved within the indigenous culture and honours those who

identify as both male and female. As we broaden our concept of gender, these gender stereotypes that boys play with trucks and girls like makeup, become less relevant.

Debate continues as to whether gender diversity should be considered a psychiatric diagnosis. DSM-5 recognized that diversity did not represent psychopathology, described in DSM-IV by the term Gender Identity Disorder. The DSM-5 diagnosis of Gender Dysphoria describes the discomfort or distress caused by a discrepancy between a person's perceived gender identity and the sex they were assigned at birth. Whereas Gender Identity Disorder suggested psychopathology in the individual, Gender Dysphoria recognizes that the mental distress derives largely from having to live in a potentially unwelcoming environment and living in a body that doesn't match their gender identity. Whereby some individuals may feel inappropriately labelled by DSM-5 as having a condition, others accept it as a means to accessing the medical/surgical treatment and quality research that is key to optimizing outcomes for these individuals. The next version of the DSM (i.e. DSM-6) will hopefully provide further helpful evolution.

## Terms

Cisgendered	Those whose natal gender (aka assigned gender or gender at birth) matches their gender identity, i.e. most people.
Cross Dressing	Wearing the clothing designated by society as representing the "opposite" sex. People who cross dress may or may not be transgender.
Gender	Behavioural, cultural, or psychological traits commonly associated with one sex.
Gender Binary	The classification of gender into two distinct and disconnected forms of 1) male/man/masculine and 2) female/woman/feminine.
Gender-fluid	Someone whose gender identity and/or expression is not fixed. This can be itself a gender identity.
Gender Identity	The intrapersonal feeling of being male, female or elsewhere on the gender spectrum. Gender is not always visible to others depending on how the gender identity is expressed.
Gender Non-conforming (or Gender Queer or Gender Non-binary)	Describes a person who does not identify as a man or a woman; they do not conform to gender norms.
Natal Gender	Describes the gender (and sex) that one is born into, versus the gender that a person is felt to be (i.e. the 'Felt' gender or 'authentic gender').
Sex (aka Designated Sex)	How we understand our bodies as male or female, including whether we're born with a penis or a clitoris.
Transgender/Transsexual	Describes people who don't conform/identify with the gender expectations associated with their assigned sex at birth. This can include people who live as the gender they feel inside. Some decide to have hormone therapy +/- surgery so that their bodies match their gender identity.
Transgender man	A person assigned female at birth who identifies as a man or in similar terms (eg, as a "trans man" or "man of transgender experience").
Transgender woman	A person assigned male at birth who identifies as a woman or in similar terms (eg, as a "trans woman" or "woman of transgender experience").
Transphobia	A mix of negative cultural and personal beliefs, opinions, attitudes and aggressive behaviours based on prejudice, disgust, fear and/or hatred directed against individuals or groups who do not conform to or who transgress societal gender expectations and norms.

**Two Spirit**

Reclaimed concept from First Nations, Inuit and Métis people. It refers to those who are born one sex, and fulfill roles across sex and gender lines, including roles reserved for Two Spirit people. Some say they maintain balance by housing both the male and female spirit. Two Spirit people were considered to be a gift to the community. They were able to cross a range of genders, hold the balance and were respected and honoured as visionaries, peacemakers and healers.

## Epidemiology

---

The prevalence of self-reported transgender identity in children, adolescents and adults ranges from 0.5% (Conron et al., 2012) to 1.2% (Clark et al., 2014). Though previously felt to be “rare” and “uncommon” as suggested in the DSM-5, there is a growing recognition that rates appear to have increased in recent decades. This may be due to an increase in absolute prevalence and/or to greater recognition and acceptance in society.

## Clinical Presentation

---

A child with gender dysphoria may show some or all of the following:

- Consistently introduces themselves as the gender they identify with as opposed to their natal gender (i.e. gender at birth).
- Rejects clothes, toys, and games that are associated with the cultural norms of another sex and prefers playing with other-sex peers.
- Refuses to urinate in a fashion typical for their sex, i.e. natal male child who prefers to sit; natal female child who prefers to stand.
- Believes that they will grow up to be the identity with which they identify as opposed to their natal gender.
- Distress over body changes that will happen during puberty.

An adolescent or adult with gender dysphoria may show some or all of the following:

- Distress that begins or is worsened by the onset of puberty
- Is certain that their gender does not align with their physical traits.
- Disgust with their genitals; may avoid showering, changing clothes.
- Avoids having sex or has low libido.
- Strong desire to get rid of their genitals, chest/breasts, or other sex traits.

## Diagnosis: DSM-5 Criteria for Adolescent Gender Dysphoria

---

A marked incongruence between one’s experienced/expressed gender and assigned gender, of at least 6 months’ duration, as manifested by at least two of the following:

1. A marked incongruence between one’s experienced/expressed gender and primary and/or secondary sex characteristics
2. A strong desire to be rid of one’s primary and/or secondary sex characteristics because of a marked incongruence with one’s experienced/expressed gender.
3. A strong desire for the primary and/or secondary sex characteristics of the other gender
4. A strong desire to be of the other gender (or some alternative gender different from one’s assigned gender.
5. A strong desire to be treated as the other gender (or some alternative gender different from one’s assigned gender)
6. A strong conviction that one has the typical feelings and reactions of the other gender (or some alternative gender different from one’s assigned gender)

This condition is associated with clinically significant distress or impairment in social, occupational or other important areas of functioning.

## History, Screening and Assessment

---

## Name/Pronouns:

- Clinician: “What name shall I use? What pronoun do you prefer” (Keep in mind that in young people pronouns and name preferences can change as they explore their identity).

## Gender/Sex:

- What is your current gender identity? How would you describe your gender identity?
- What sex were you assigned at birth? Have there been changes to your gender identity over time?
- How long have you thought about living as your gender?
- Have you ever had any concerns relating to your gender? What was puberty/adolescence like?
- Do you currently have concerns or questions relating to your gender?
- How do you feel about your gender now? About being transgender or non-binary?
- Are there any cultural or religious conflicts for you as a transgender person?
- Have you ever pursued any changes to your appearance or body to bring it closer to your sense of self? Do you have any concerns relating to this now?
- Have you changed the kind of clothing you wear to have it fit with your gender identity? If so, what has that experience been like for you? If not, what do you imagine it would be like?
- Have you ever sought to change your body through hormones/surgery? Is this something you have thought about pursuing in the future? What do you know about these options?
- If you could change your external appearance in any way you wanted to more closely match your sense of who you are, what would this look like in terms of your gender?
- What are your feelings about the parts of your body that are often associated with gender (e.g. genitals, chest/breasts)?
- Who have you come out to? Have people been supportive? Have you experienced any negative reactions? For example, do your parents or family know? Do any friends know? (This helps you understand their support network, as well as helps you ensure that you do not accidentally “out” them. For example, if they have not disclosed to their parents, do not disclose to parents without first seeking permission, and exploring if parents would be supportive.)

## Relationships/Sexuality:

- Do you have supportive surroundings, friends and family?
- Does your body interfere with your romantic or sexual relationships?
- Are you attracted to men, women, both, neither? Do you identify with a specific term in regards to your sexual orientation?
- Have you had any concerns about relationships or sexuality in the past? Any current concerns?
- What are your feelings about the parts of your body that are often associated with sexuality (e.g., genitals, chest/breasts)?

## Environment:

- Do you have any concerns relating to school, work, or community involvement?
- Have you missed any school or work because of any bullying? discrimination? and /or stigmatization?
- What are some of the barriers you face in your day-to-day life?
- How does your gender identity impact how you feel about school, work, friends, relationships, family, or other aspects of your life?

## Supports

- When you are under stress, who do you turn to for help?
- Do the people in your life know that you are transgender or non-binary? If so, what was it like to tell them? If not, how do you feel about them not knowing?
- What do you see your relationship being to the transgender / non-binary community now? What would you like it to be in the future?
- Have you had any contact with other transgender or non-binary individuals? What was that like for you?

## Differential Diagnosis

Other conditions and issues that may resemble gender dysphoria include the following:

Nonconformity to Gender Roles	Children/youth with gender nonconformity are those whose behavior or gender expression does not match masculine or feminine gender norms. They may or may not also have gender dysphoria.
Transvestic Disorder	At least 6 months of experiencing recurring sexual arousal brought on by the act of cross-dressing. This arousal may manifest as sexual fantasies, behaviors, or urges that cause the patient significant distress or impairment in important areas of function, such as social or occupational setting.
Body Dysmorphic Disorder and dysmorphic concerns	Obsession with one or more perceived defects or flaws in physical appearances and resulting in repetitive behaviours aimed at appeasing these obsessions to the point of causing clinically significant distress or impairment in social, occupational or other areas of functioning.

## Comorbid Mental Health Concerns

Screen for confounding mental health concerns, as a majority of people with gender dysphoria (estimates up to 71%) will have some other mental health issue in their lifetime including:

- Mood disorders (such as depression)
- Anxiety disorders
- Post traumatic stress disorder (PTSD)
- Substance use disorder
- Eating disorders
- Suicide attempts
- Autism spectrum disorder (ASD), possibly due to biological reasons not yet well understood

## Physical Exam

Trans persons have often not had regular screening completed as they have experiences mistreatment or stigmatization in the past.

- Consider deferring physical exam until rapport and trust is built over time. A physical examination for trans people can be difficult as they may not be comfortable with their own body.
- Ask the person how the exam can be made most comfortable.
- Explain ahead of time the components of the physical examination and why the exam is important for the patient's health.
- Consider less gendered terms to describe parts of the body. Examples: Chest (instead of breast).

Important elements of the physical exam include:

- Height, weight and blood pressure (BP);
- Pubertal development should be assessed if any concerns were raised regarding puberty as well as prior to and in follow-up of hormonal therapy

## Investigations

Baseline laboratory testing can help with:

- Identifying health problems such as liver dysfunction, high cholesterol, or diabetes. If present, these conditions should ideally be managed prior to starting hormones.
- Providing a baseline to help with future monitoring for endocrine changes

Examples:

- CBC looking specifically at hemoglobin and hematocrit
- ALT/AST
- Creatinine/Lytes/Urea
- Fasting Glucose
- LDL/HDL/TG
- Testosterone (+/- Estradiol)
- Prolactin (for trans females prior to and while on estrogen))
- LH
- Beta HCG
- Bone mineral density (BMD)

## Management: Primary Care Interventions

---

Basic education and support to youth and families

- Provide an inclusive clinical environment wherein young people can access validation and objective information regarding gender identity.
- Maintain a gender-affirming approach, including using preferred names and pronouns when interacting with, on behalf of, and when charting on the young person .
- Discuss current supports and plans for navigating transition in relationships, school and work settings and offer support and resources.
- Assist patients to change their name and identification documents if desired.
- Work to stabilize any physical or mental health conditions to ensure they do not pose barriers to the patient accessing gender-affirming interventions (hormones/surgery).
- Identify any mental health comorbidity that might hinder the transition process
- Ascertain that the young person is well-informed and capable for health related decisions

## When and Where to Refer

---

Are there significant mental health concerns?

- Consider referral to mental health professionals (such as psychotherapist, psychologist or psychiatrist)

Does the youth have gender dysphoria? If so, then refer to:

- Gender identity clinic (e.g. "Gender Diversity Clinic") at a local (paediatric) hospital
- Local clinic or specialists such as endocrinologists, paediatricians specialized in adolescent health, psychologists and/or psychiatrists.

Consider explaining the following to your patient so that they have realistic expectations when they are seen:

"The specialty clinic 1) may consider puberty blockers (Lupron Depot ®) or other medication if the youth is in puberty; 2) must complete a puberty exam prior to starting treatment; 3) cross sex hormones (testosterone (T) or estrogen (E2) are initiated around age 16 and therefore these are not started at the first appointment."

## Family Resources

---

Families in Transition Guide, 2nd edition. Created by Central Toronto Youth Services (CTYS), this is an incredible resource guide for families of transgender youth.

<http://www.ctys.org>

Gender Creative Kids Canada  
<http://www.gendercreativekids.ca>

True Selves online support for Gen-X and Y youth and young adults:  
<http://www.trueselves.com>

CHEO handout on Gender Identity and Diversity: Information for Parents and Caregivers  
<https://www.ementalhealth.ca/index.php?m=article&ID=8888>

## Management: Specialized Services

After your patient is referred to a specialty service, further management may include the following:

- Confirm diagnosis of gender dysphoria
- Individualized decision making with the youth and family towards a transition plan.
- Support through social transition re dealing with family, extended family, school, etc
- Education re pro's and con's of social, hormonal and surgical interventions
- Assistance re name and gender marker change
- Discussion of fertility
- Discussion of resources and referral
- Education for youth and families/guardians
- Support youth through transition process
- Application to OHIP for coverage of surgical interventions

Hormonal intervention. Hormonal interventions are typically started by an endocrinologist. Usual considerations include:

- Ensuring the patient is psychosocially ready to begin;
- Completing pubertal examination - puberty must have begun before initiation of medications
- Puberty blockers or other medication (example: oral contraceptive pill to suppress menses for natal female) and cross sex hormones around age 16.
- Discussion of current guidelines
- Discussion of fertility
- Absence of absolute contraindications
- Reduction of risk associated with pre-existing health conditions
- Ensuring informed consent / capacity, including ensuring patients understand risk, precautions and side effects of treatment.
- Engaging, where possible, family/guardians in this process
- Gender Affirming Surgery, undertaken by a plastic surgeon. The specialty clinic can refer your patient to a surgeon that performs gender affirming surgery. Typical procedures may include mastectomy and chest reconstruction, hysterectomy and bilateral salpingo-oophorectomy, metoidioplasty, and phalloplasty for trans men; orchiectomy and vaginoplasty for trans women.

## Resources in Ontario

Hormone therapy. In Ontario, OHIP+ and the Ontario Drug Benefit program cover Lupron, DepoPovera, birth control pills, spironolactone, and oral estrogen. Intramuscular or subcutaneous testosterone can be covered with submission of the Exceptional Access Form (EAP). It is suggested that an EAP submission be made early in the process of assessment for testosterone as approval may take 4-6 weeks.

Gender affirming surgery. In Ontario, qualified physicians and nurse practitioners with appropriate training in the care of transgender and non-binary individuals can submit requests to the MOHLTC for approval of individuals for funding of Gender Affirming Surgery. The MOHLTC have specific criteria for approval of funding for different types of Gender Affirming Surgery (<http://www.health.gov.on.ca/en...> surgeon also has their own criteria. A list of providers with knowledge and experience working with trans patients may be found on Rainbow Health Ontario's

online service directory.

Changes to gender markers on Ontario health cards and birth registrations. Sex designation is no longer displayed on new Ontario health cards. If patients do not exclusively identify as male or female, they will be able to display an 'X' on their card as their gender identifier. New health cards will not indicate sex, however if the patient would like a card without a sex indicator before their renewal date, they can obtain one by calling 1-866-532-3161 (TTY 1-800-387-5559) or by visiting any ServiceOntario centre.

Does your patient want to change their sex designation on Ontario Birth Registration? Template Letter in Support of an Application For Change of Sex Designation on an Ontario Birth

Registration: [https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC\\_AppendixP.pdf](https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC_AppendixP.pdf)

Does your patient want to change their sex designation on an Ontario Driver's License? Template Letter in Support of an Application For Change of Sex Designation on an Ontario Driver's

License: [https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC\\_AppendixQ.pdf](https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC_AppendixQ.pdf)

## Case, Part 2

---

Jennifer is a 10-yo patient known to you... Now you find out that Jennifer is asking you to call her "Jason". Parents tell you... "We didn't grow up with any of this LGBT stuff! Could it be just a phase? Will our child grow out of this?"

You meet alone with Jason, and confirm that Jason has gender dysphoria. You provide validation and reassurance for Jason, and he is visibly relieved at your support.

You meet alone with parents. You educate them about gender dysphoria, and how they can provide unconditional acceptance and validation of their child.

You refer Jason to the local gender diversity clinic. While they are awaiting to be seen, you provide follow-up visits in the interim where you give additional education and guidance to both Jason and his parents.

## Clinician References

---

Clinical Practice Guidelines.

Endocrine Treatment of Gender-Dysphoric/Gender -Incongruent Persons: An Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab Nov 2017 102 (11) 3869-3903.

Guidelines and Protocols For Hormone Therapy and Primary Health Care for Trans (Adult)Clients. Rainbow Health Ontario by Sherbourne Health Centre. <http://sherbourne.on.ca/wp-content/home/ementalhealth/ementalhealth.ca/frontend/uploads/2014/02/Guidelines-and-Protocols-for-Comprehensive-Primary-Care-for-Trans-Clients-2015.pdf>

Standards of Care for the Health of Transsexual, Transgender and Gender Nonconforming People by the World Professional Association for Transgender Health (WPATH) <https://www.wpath.org/publications/soc>

Primary Care Guides

Gender-affirming Care for Trans, Two-Spirit, and Gender Diverse Patients in BC: A Primary Care Toolkit <http://www.phsa.ca/transgender/Documents/Primary%20Care%20Toolkit.pdf>

Transgender Health Information Program (THiP) <http://transhealth.phsa.ca/>

Quick Reference Guide: Protocols for Hormone Therapy for Trans (Adult)Clients: [https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/rho\\_transprimarycare\\_quickreferenceguide.pdf](https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/rho_transprimarycare_quickreferenceguide.pdf)  
<https://www.rainbowhealthontario.ca/TransHealthGuide/index.html>



Note that these are hormonal dosing guidelines for trans adults, and are thus at higher dosages than would be used to trans youth.

	Feminizing Hormones	Masculinizing Hormones
Quick Reference Guide for Hormones	<a href="https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/rho_transprimarycare_feminizinghtguide.pdf">https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/rho_transprimarycare_feminizinghtguide.pdf</a>	<a href="https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/rho_transprimarycare_masculinizinghtguide.pdf">https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/rho_transprimarycare_masculinizinghtguide.pdf</a>
Precautions	<a href="https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC-ht-precautions.pdf">https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC-ht-precautions.pdf</a>	<a href="https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC-mht-precautions.pdf">https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC-mht-precautions.pdf</a>
Monitoring Schedule	<a href="https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/fem-ht-hormonemonitorsummary.pdf">https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/fem-ht-hormonemonitorsummary.pdf</a>	<a href="https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/masc-ht-hormonemonitorsummary.pdf">https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/masc-ht-hormonemonitorsummary.pdf</a>
Patient Education	<a href="https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC_AppendixE.pdf">https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC_AppendixE.pdf</a>	<a href="https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC_AppendixG.pdf">https://www.rainbowhealthontario.ca/TransHealthGuide/pdf/SHC_AppendixG.pdf</a>

## References

Bockting, Walter O., et al. "Counseling and Mental Health Care for Transgender Adults and Loved Ones." *International Journal of Transgenderism*, vol. 9, no. 3-4, 2006, pp. 35-82., doi:10.1300/j485v09n03\_03.

Clark T et al.: The health and well-being of transgender high school students: results from the New Zealand adolescent health survey (Youth'12). *J Adolesc Health* 2014; 55: 93-99.

Conron KJ et al.: Transgender health in Massachusetts: Results from a household probability sample of adults. *Am J Public Health* 2012; 102: 118-22.

"Media Reference Guide: Discussing Trans and Gender-Diverse People." Rainbow Health Ontario, 2nd edition, 2018, [https://www.rainbowhealthontario.ca/wp-content/home/ementalhealth/ementalhealth.ca/frontend/uploads//woocommerce\\_uploads/2018/02/MediaReferenceGuide-final.pdf](https://www.rainbowhealthontario.ca/wp-content/home/ementalhealth/ementalhealth.ca/frontend/uploads//woocommerce_uploads/2018/02/MediaReferenceGuide-final.pdf)

Mira Schneiders. "Values and Preferences of Transgender People: a Qualitative Study." WHO/HIV/2014, no. 2.1, 2014, DOI: [http://apps.who.int/iris/bitstream/handle/10665/128119/WHO\\_HIV\\_2014.21\\_eng.pdf;jsessionid=1504813CFB64E5CB96A2A1EE7F0F2AB2?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/128119/WHO_HIV_2014.21_eng.pdf;jsessionid=1504813CFB64E5CB96A2A1EE7F0F2AB2?sequence=1).

"Resources." Masculinizing Hormone Therapy - Trans Primary Care Guide, <https://www.rainbowhealthontario.ca/resources/?orderby=date>

Speck, Kelly. "My Guide to Caring for Trans and Gender-Diverse Clients." Masculinizing Hormone Therapy - Trans Primary Care Guide, [www.rainbowhealthontario.ca/TransHealthGuide/index.html#intro](http://www.rainbowhealthontario.ca/TransHealthGuide/index.html#intro)

Winter S et al.: Transgender people: health at the margins of society. *Lancet*. 2016 Jul;388(10042):390-400. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)00683-8/abstract](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00683-8/abstract)

## Authors

Written by Elisabeth H. Merner (Medical Student, Class of 2019, Queens School of Medicine at Kingston, ON), Stephen Feder (Family Physician, Children's Hospital of Eastern Ontario); Scott Somerville (Endocrinologist, Children's Hospital of Eastern Ontario); Karine Khatchadourian (Endocrinologist, Children's Hospital of Eastern Ontario); Rishi Kapur (Psychiatrist, Children's Hospital of Eastern Ontario); Margaret Lawson (Endocrinologist, Children's Hospital of Eastern Ontario Ontario).

Reviewed by Mireille St-Jean (Family Physician, Ottawa Hospital). Michael Cheng (Psychiatrist, Children's Hospital of Eastern Ontario).

## Disclosures

Elisabeth Merner: No competing interests declared.  
 Karine Khatchadourian: No competing interests declared  
 Stephen Feder: No competing interests declared.  
 Scott Somerville: No competing interests declared.

Rishi Kapur: No competing interests declared.

Mireille St-Jean: No competing interests declared.

Margaret Lawson: No competing interests declared.

Michael Cheng: No competing interests declared within past 2 years.

## Disclaimer

---

Information in this pamphlet is offered 'as is' and is meant only to provide general information that supplements, but does not replace the information from a qualified expert or health professional. Always contact a qualified expert or health professional for further information in your specific situation or circumstance.

## Creative Commons License

---

You are free to copy and distribute this material in its entirety as long as 1) this material is not used in any way that suggests we endorse you or your use of the material, 2) this material is not used for commercial purposes (non-commercial), 3) this material is not altered in any way (no derivative works). View full license at <http://creativecommons.org/licenses/by-nc-nd/2.5/ca/>