



Trans Care

# Medical issues

## Trans people and cardiovascular disease

### What is Cardiovascular Disease?

*Cardiovascular disease* refers to disease of the heart and/or blood vessels. Some babies are born with cardiovascular disease, but most types of heart disease happen later in life – usually as a result of repeated stress on the heart and blood vessels over a long period of time. Some forms of cardiovascular disease (e.g., high blood pressure, buildup of fatty deposits in the artery that supplies the heart muscle with blood) cause other forms of cardiovascular disease (e.g., heart attack).

The most common forms of cardiovascular disease are failure in the delivery of blood to the heart muscle (heart attack) or to the brain (stroke). If the blockage of blood to the heart or the brain lasts long enough, the tissues there die. Heart attack and stroke can be fatal.

According to the Heart and Stroke Foundation of Canada, 25% of all Canadians have some type of cardiovascular disease. In North America, cardiovascular disease is more deadly than any other disease (including cancer). In Canada 79,000 people die every year from cardiovascular

disease – 32% of all deaths of people born male and 34% of all deaths of people born female.

## Are Trans People at Increased Risk?

Not enough trans health research has been done to know whether trans people get cardiovascular disease or die from cardiovascular disease more than non-trans people. **But:**

- the trans community generally has a number of risk factors for cardiovascular disease, including smoking, alcohol use, chronic stress, poverty, and lack of access to health care
- studies of trans and non-trans people taking estrogen or testosterone found that both have negative effects on the cardiovascular system
- for reasons that are not understood, among F'TMs there may be increased rates of polycystic ovarian syndrome (PCOS), which affects cholesterol and blood pressure

### 1. Smoking and alcohol

Many trans people use smoking and alcohol to cope with the stress of living in a transphobic world. Additionally, professional drag queens/kings and female/male impersonators who work in smoky bars are exposed to secondhand smoke.

Smoking is considered a major contributing factor in cardiovascular disease, with 30% of all heart disease deaths caused by cigarette smoking. The chemicals in tobacco smoke increase clotting factors in the blood, decrease good (HDL) cholesterol and increase the level of blood fats (triglycerides), damage the lining of blood vessels, increase heart rate and blood pressure, cause arteries to constrict, and decrease the amount of oxygen the blood is able to carry (making your heart have to work harder to get your body the oxygen it needs). These combined effects increase the risk of heart attack, high blood pressure, blood clots, strokes, and ruptured blood vessels. In North America, cardiovascular disease caused by smoking results in more deaths per year than lung cancer from smoking.

Alcohol is not as damaging to the heart as cigarette smoke, but it is still damaging. While according to the American Heart Association there is some evidence that drinking a *small* amount of alcohol (maximum one 12-oz. beer, 4 oz. of wine, or 1.5 oz. of hard liquor per day) can help

increase good (HDL) cholesterol and reduce clotting, even this small amount increases the level of one type of blood fats (triglycerides) and raises blood pressure; excessive drinking or binge drinking increases the risk of heart failure, disease of the heart muscle, irregular heartbeat, heart attack, and stroke. For this reason alcohol is not suggested as a way to improve heart health; there are less risky ways to increase HDL levels and reduce clotting.

### 2. Stress

Chronic stress is known to be a risk factor in heart disease. Being a trans person in a transphobic society is very stressful. Numerous studies have shown that harassment, discrimination, and abandonment by loved ones are common experiences for people who are out as trans. Employment discrimination creates increased poverty in the trans community, adding further stress. For trans people who are not out, the stress of keeping the secret and the fear of being discovered as trans can be tremendously stressful.

Living in a transphobic society, trans people often internalize transphobia and come to believe that there is something wrong with being trans. This can manifest as wishing you're not trans, being more critical of trans people than non-trans people, being uncomfortable around other trans people, not accepting yourself as trans, or having low self-esteem. For some people peer support and activism are useful ways of overcoming internalized transphobia and building pride as a trans person; professional counselling is also helpful for some people.

### 3. Diet, weight, and exercise

There are strong cultural values about weight. *Fatphobia* is like transphobia: it involves a lower value for people who are heavy than people who are thin, with disrespect, disgust, and mistreatment of people who don't fit cultural norms about thinness. Health professionals can, like anyone else, be fatphobic – pressuring their patients to lose weight, assuming that people who are large don't exercise or that they eat too much, using scare tactics instead of talking in a balanced way about weight and health, and automatically assuming all health problems relate to weight. It is hard to sort through all the fatphobic health information out there to figure out what it means to be healthy.

While diet, exercise, and weight all have an impact on cardiovascular health, having a weight that conforms with societal norms is not as important as exercising and eating well. Regular physical exercise (at least 30 minutes of moderately intense activity every day) helps to prevent cardiovascular disease by reducing blood pressure and mental stress; improving blood circulation; and increasing good (HDL) cholesterol. Limiting the amount of fat, saturated fat, cholesterol, sodium, and caffeine you eat or drink, along with increasing the amount of fibre you eat, will also benefit your blood cholesterol levels, blood pressure, and sugar metabolism. For more on weight and health, see the booklet *Fit or Fatphobic?* (available from the Transgender Health Program).

#### 4. Hormone use

The long-term impact of hormones on trans people's cardiovascular health is not known, as most trans-specific studies have involved young adults monitored over a relatively short period of time. The risks of hormones for people age 40 and older who have been taking hormones for over 10 years is not entirely clear. However, research on trans and non-trans people suggests that both testosterone and estrogen have some negative effects on the cardiovascular system.

##### **Heart attack and stroke**

**MTF:** Studies have shown that non-trans women taking conjugated estrogens experienced increased blood pressure and one type of blood fats (triglycerides), and higher risk of heart attack and stroke. It is not clear whether this is also a risk for MTFs who are taking other forms of estrogen. Although taking estrogen seems to negatively impact cardiovascular health overall, studies of estrogen in both non-trans women and MTFs found that estrogen does promote some good changes, including increasing good (HDL) cholesterol and decreasing bad (LDL) cholesterol. Estrogen's tendency to raise blood pressure can be counteracted by taking it in combination with the anti-androgen spironolactone, which lowers blood pressure (see *Hormones: A Guide for MTFs*).

**FTM:** Studies of people born female who are prescribed testosterone or have a condition which involves naturally high levels of testosterone concluded that the testosterone increased blood pressure, increased bad [LDL] cholesterol, decreased good [HDL] cholesterol, and increased fat deposits on internal organs and around the abdomen.

#### **If I have heart disease or have had a heart attack, can I take hormones?**

Having a history of cardiovascular disease greatly increases the risks of hormone therapy. Your past history and your current cardiovascular health will affect whether or not you can take hormones at all, and if so, at what dose. The doctor or nurse who is working with you on hormones should get the opinion of a cardiologist (heart specialist) so that you have a clear medical opinion about your risk for a future heart attack or stroke. This will allow you and your primary care provider to make an informed decision about hormones.

##### **Blood clots**

Estrogen is directly linked with increased rate of blood clots. One study found that MTFs taking estrogen had 20 times more blood clots than a male comparison group, with fatal clots in the lungs in some cases. The risk of estrogen-induced blood clots increase with smoking, the amount of estrogen being taken (the MTFs who had clots were often taking more than they were prescribed), age, and lack of physical activity. Strategies to reduce the risk include using a combination of drugs that lower the body's testosterone so less estrogen is needed, taking the estrogen via skin patch instead of by injection or pill, stopping smoking, and increasing physical activity.

#### 5. Polycystic Ovarian Syndrome (FTMs)

PCOS is a hormonal condition believed to be caused by an overproduction of insulin (see diabetes booklet), which in turn stimulates the ovaries to produce testosterone. PCOS is associated with increased risk for a number of health problems including; heart disease, glucose intolerance and diabetes (see diabetes booklet), and endometrial/ovarian cancer (see cancer booklet). The main symptoms of PCOS are similar to the changes that happen when FTMs start taking testosterone:

- acne
- obesity
- growth of facial and body hair
- no menstrual period or infrequent period; infertility or reduced fertility

It is recommended that all FTMs not taking testosterone be evaluated for PCOS, and FTMs taking testosterone be asked questions about any signs and symptoms of PCOS that may have existed before starting hormones. This can be useful in evaluating and trying to reduce risks for the health problems associated with PCOS, including cardiovascular disease.

## Prevention and Screening

Trans people can reduce their risks for cardiovascular disease by:

- Cutting down or stopping smoking; avoiding secondhand smoke.
- Limiting alcohol use.
- Eating a healthy diet and being physically active.
- Getting regular health check-ups by a nurse or doctor.
- Not taking more hormones than what's been prescribed.
- Using hormone combinations that are known to be lower risk.

For all trans people, getting your cardiovascular system checked on a regular basis is an important part of basic health care. During your visit, your nurse/doctor will listen to your heart, take your heart rate, and check your blood pressure. They may check your circulation by looking at your eyes, your arms and legs, and your skin. A stress test (monitoring your heart while you exercise) can help give more detailed information about your heart function. A blood test may be recommended to check your cholesterol and other markers that may indicate heart disease.

Trans people who are taking hormones need to have blood tests done on a regular basis to monitor hormone levels, cholesterol, and blood sugar. Information for your doctor/nurse is available from the Transgender Health Program (see next page).

## Treatment

There are various options for treating cardiovascular disease. Ask for information about your options and take the time to consider which one you feel best about trying. Your nurse/doctor may encourage you to stop smoking or reduce the amount you smoke, get more exercise, make changes in your diet, learn relaxation techniques, take medication (e.g., to lower your blood pressure), or change the type of hormones you are taking. The Transgender Health Program's training for nurses and

doctors emphasizes cutting down or stopping hormones as a *last resort*, as other treatments are often successful in bringing down cardiovascular risks to a point where you can continue hormones.

## Local Cardiovascular Health Resources

### **Heart and Stroke Foundation of Canada – BC & Yukon Branch**

Main office: 1212 West Broadway, Vancouver, BC V6H 3V2

Phone: 604-736-4404 Web: <http://www.heartandstroke.ca>

The Heart and Stroke Foundation is a national non-profit community-based organization that aims to prevent and reduce disability and death from heart disease and stroke through research, health promotion, and advocacy on government policy. HSF creates public educational materials and coordinates programs relating to nutrition, blood pressure, smoking, and physical activity.

**heartBC** Web: <http://www.heartbc.ca>

The heartBC website was designed by health professionals and researchers to give people in BC a way to access reliable and accurate information about heart health and heart disease. It includes a searchable database of programs around BC that promote heart health.

### **Questions? Contact the Transgender Health Program:**

Office: #301-1290 Hornby Street, Vancouver, BC V6Z 1W2

Phone/TTY/TDD: 604-734-1514 or 1-866-999-1514 (toll-free in BC)

Email: [transhealth@vch.ca](mailto:transhealth@vch.ca) Web: <http://www.vch.ca/transhealth>

The Transgender Health Program is an anonymous and confidential free service for anyone in BC who has a trans health question or concern. Services for trans people and loved ones include:

- information about trans advocacy, medical care, hormones, speech change, and surgery
- help finding health/social services, and help navigating the trans health system
- non-judgmental peer counselling and support
- information about trans community organizations and peer support groups



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