Trans Care

Medical issues

Trans people and diabetes

What is Diabetes?

Diabetes (short for "*diabetes mellitus*") is a disorder of the metabolism that causes high blood sugar due to problems with the hormone *insulin*. The body needs insulin to store and use sugar and fat. When the body isn't producing enough insulin or the body's cells aren't using insulin properly, glucose (a type of sugar) can't get from the bloodstream to the cells.

Type 1 diabetes (10% of cases) occurs when the pancreas (an organ behind the stomach) no longer produces insulin. Type 2 diabetes (90% of cases) occurs when the pancreas doesn't produce enough insulin or the body doesn't effectively use the insulin that is produced (*insulin resistance*).

Over time, high levels of blood sugar severely damage various organs, including the heart, blood vessels, kidneys, eyes, and nerves. The Canadian Diabetes Association estimates that diabetes is a contributing factor in the deaths of approximately 41,500 Canadians each year, and that Canadian adults with diabetes are twice as likely to die prematurely than people without diabetes.

Impaired Glucose Tolerance (IGT), or "borderline diabetes," refers to a condition where your blood sugar is higher than normal, but not so high that you have diabetes. People with IGT are at increased risk for cardiovascular disease (see *Trans people and cardiovascular disease*), and also for getting full-blown diabetes. Treatment of IGT can help delay or prevent progression to diabetes.

Diabetes is a serious problem in North America and is increasing. More than two million Canadians (200,000 people in BC, or 5% of the population) had diabetes as of 2002, and by 2010 it is predicted that this will rise to three million people in Canada (350,000 people in BC).

Are Trans People at Increased Risk of Getting Diabetes?

Not enough trans health research has been done to know whether trans people get diabetes more than non-trans people. ***But***:

- Estrogen is known to affect glucose tolerance and may increase MTFs' risk of IGT.
- Although there is no evidence that testosterone increases FTMs' risk of Type 2 diabetes, studies of FTMs found increased fat deposits around the abdomen and the internal organs after starting testosterone, and this is considered a risk factor for insulin resistance.
- Several studies of FTMs who had not yet started testosterone showed increased rates of polycystic ovarian syndrome (PCOS) compared to other people born female. PCOS is associated with increased rate of IGT. (For more information on PCOS, see the cancer or cardiovascular booklets.)

Your risk of getting diabetes is higher if you:

- are age 40 or older
- are a member of a high-risk ethnic group (Aboriginal, African, Asian/South Asian, Hispanic)
- are overweight – especially if you carry most of your weight around your middle
- have metabolic syndrome: 3 or more of – high blood pressure, low HDL cholesterol levels, high triglyceride levels, high blood sugar, high amount of fat around your waist
- have polycystic ovarian syndrome (PCOS)

Screening and Testing

Screening involves looking for disease before a person has any symptoms. In the early stages of Type 2 diabetes most people do not have symptoms. If your nurse/doctor suspects diabetes because you have symptoms (for example, unusual thirst, frequently needing to urinate, weight gain or loss, extreme fatigue or lack of energy, blurred vision, frequent infections, cuts and bruises that are slow to heal, tingling or numbness in your hands or feet) you may be referred for a *diagnostic* test to see if you have diabetes.

Diabetes screening and testing involves a blood test that checks your blood sugar 10–12 hours after you've eaten (the "fasting glucose" test). If the results of this test are normal, but you have symptoms or risk factors for diabetes, a glucose tolerance test might be recommended to see how fast your blood sugar rises after you eat (a high level can indicate insulin resistance). A blood test called "A1c" can be used to give a picture of the average amount of glucose in your blood over the last few months (this helps show how much your blood sugar goes up and down over time).

Canadian guidelines recommend that all people over age 40 be screened for diabetes every 3 years, with screening every year for people who have other risk factors. Because estrogen is known to affect glucose tolerance, the Transgender Health Program recommends that MTFs who gain more than 5 kg after starting estrogen have their blood sugar levels checked. For FTMs, yearly testing is recommended if you had signs and symptoms of PCOS before starting testosterone (e.g., high blood level of testosterone, no menstrual period or infrequent periods, unusual amount of facial/body hair, brown/black discoloration of the skin in your armpits or on the back of your neck).

Treatment

In treating diabetes, the goals are:

- keep blood sugar levels as near to average as possible
- keep blood fat levels (cholesterol and triglyceride) as near to average as possible
- control blood pressure
- prevent or slow down diabetes-related health problems

Type 1 diabetes is treated with insulin injections, a balanced diet plan, and careful health monitoring. For people with pre-diabetes or Type 2 diabetes, treatment usually focuses on lifestyle changes (increased exercise, changes in diet). If this does not bring your blood sugar under control, various medications may be prescribed to help your body make or use insulin more effectively. In some cases of Type 2 diabetes, insulin may be recommended.

For MTFs who are diagnosed with Type 2 diabetes or glucose intolerance after starting estrogen, medication may be recommended to help sensitize your body to insulin (as estrogen can affect glucose metabolism). If this does not work, you may be switched to a different hormone combination or a different type of estrogen. If all else fails, your nurse or doctor may recommend that you decrease your estrogen dose to see if that helps stabilize your blood sugar.

For FTMs, there is no evidence that taking testosterone contributes to diabetes or makes diabetes worse. However, testosterone does tend to have an impact on cholesterol and can affect blood pressure. If you are not able to bring these under control through diet, exercise, and/or medication, you may be switched to a different hormone combination or a different type of testosterone. If all else fails, your nurse or doctor may recommend that you decrease your testosterone dose to reduce your risk of heart disease.

Local Diabetes Resources

Canadian Diabetes Association – Pacific Area

Main office: 360-1385 West 8th Avenue, Vancouver, BC V6H 3V9
Phone: 604-732-1331 or 1-800-665-6526 (toll-free in BC)
Email: info@diabetes.ca
Web: http://www.diabetes.ca

The Canadian Diabetes Association is a national non-profit community-based organization that aims to improve the health of Canadians through diabetes education, research, and advocacy. The CDA doesn't provide health services but can offer information and referrals.

National Aboriginal Diabetes Association

Mail: 174 Hargrave Street, Winnipeg, MB R3C 3N2
Toll-free: 1-877-232-NADA (6232)
Email: diabetes@nada.ca
Web: http://www.nada.ca

NADA aims to:

- support Aboriginal individuals, families, and communities to access resources for diabetes prevention, education, monitoring, and research
- inspire Aboriginal communities to develop and enhance their ability to reduce diabetes
- advocate for diabetes and the health needs of Aboriginal people to be a top priority for the Canadian government

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
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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For more copies, email the Transgender Health Program at trans.health@vch.ca or call/TTY 1-866-999-1514 (toll-free in BC) and quote Catalogue No. GA.100.D54.