

The Prevention and Management of Metabolic Side Effects

Psychosis Recovery and Treatment (PRT)

What are Metabolic Side-Effects?

Some medications can have side effects that change the way your body processes food, leading to a metabolic imbalance. Metabolic imbalance relates to problems in how the body converts food into energy and how the energy is used.

When our metabolism is out of balance, it can lead to problems like high blood pressure, abnormal cholesterol levels and abdominal obesity. This can place people at higher risk of heart disease, Type 2 diabetes and stroke.

Some medications, and even psychiatric disorders themselves, increase the risk of metabolic imbalance. All medications have both risks and benefits. While it is important to address concerns you may have, it is also very important that you do not stop taking prescribed medications without talking to your doctor.

Metabolic imbalance is identified based on measurable signs such as a larger waist size and high blood sugar. At CAMH, we aim to track these signs at least once a year. People with signs of metabolic imbalance may be referred to the **CAMH Metabolic Clinic** (www.camh.ca/en/your-care/programs-and-services/mental-health-metabolism-clinic) for additional treatment and support strategies, some of which are outlined below:

- Maintaining healthy eating habits
- Engaging in physical activity
- Reducing or quitting smoking

Metabolic Health Assessment:

A clinician will measure your height, weight, waist size, and blood pressure.

A simple blood test will provide additional information about how your body is processing the food you eat.

A healthy diet can help you maintain a healthy weight and reduce the risk of developing metabolic imbalance. The following are some tips for a healthy diet:

- Speak to a Registered Dietitian who can help with your goals
- Eat regular meals and snacks. Do not skip meals or go longer than 4-6 hours without eating. Skipping meals may result in overeating at the next meal.



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- Reduce sugary drinks and sweets (e.g., pop, juice, coffee/tea with sugar, desserts, candy).
- Eat more high fibre foods, which include vegetables, fruits, lentils, beans, and whole grains to help you feel more full (see Canada's Food Guide image). Frozen fruits and vegetables can be an affordable and healthy option if fresh produce is unavailable or too expensive.
- Reduce trans and saturated fats by limiting fried foods, chips, pastries, fast food, and whole dairy products.
- Limit sodium intake by eating less processed foods like canned or packaged foods (e.g., soups), convenience items (e.g., seasoning mixes), processed meats, and salty snacks.

Reduce alcohol intake

Using a journal or app for logging meals help you monitor your food intake.

Traditional foods offer healthy and delicious choices. To find cultural recipes, visit [Nutrition.gov](http://www.usda.gov/media/blog/2021/05/11/celebrate-cultural-heritage-healthy-recipes) (www.usda.gov/media/blog/2021/05/11/celebrate-cultural-heritage-healthy-recipes) or [MyPlate Kitchen](http://www.myplate.gov/myplate-kitchen) (www.myplate.gov/myplate-kitchen) for a collection of budget friendly recipes and resources.

Physical Activity

Physical activity is important to reduce the risk of developing metabolic imbalance. Exercise can help reduce blood sugar, blood pressure, waist size, and weight. Physical activity can also reduce the risk for other health conditions and improve fitness and mental health (i.e., mood). The [Canadian 24-Hour Movement Guidelines](https://csepguidelines.ca/) (https://csepguidelines.ca/) for adults aged 18-64 years recommends the following:

- Engage in moderate to vigorous intensity aerobic exercise (e.g., brisk walking or jogging) for 150 minutes per week or about 20 minutes a day. You can start slow and build up your activity gradually.
- Mix long periods of sitting, especially at a desk, with standing.

- Try to get 7-9 hours of sleep each night. Speak to your doctor if you are having trouble sleeping.

Quitting Smoking

Smoking lowers 'good' cholesterol levels, increasing the risk of developing metabolic imbalance. It also negatively impacts cardiovascular health.

The following are some services that can help you quit smoking:

- The [CAMH Nicotine Dependence Clinic](http://www.nicotinedependenceclinic.com) (www.nicotinedependenceclinic.com) offers various treatment services including a pharmacotherapy consultation and group counselling
- [Smokers' Helpline](http://www.smokershelpline.ca) (www.smokershelpline.ca) offers support and information online, over the phone through Telehealth Ontario at 1-877-513-5333, and by text message when you text the word "iQuit" to 123456

Promising Results

What Might Metformin Do For You?

Patients who are struggling with metabolic side effects may be offered medications such as metformin, which can be effective in reducing or preventing weight gain associated with antipsychotic use. Metformin is now recommended in the [Canadian Obesity Guidelines](http://www.cmaj.ca/content/cmaj/192/31/E875.full.pdf) (www.cmaj.ca/content/cmaj/192/31/E875.full.pdf)—developed in part by CAMH and University of Toronto researchers—to prevent weight gain in people with severe mental illness who are treated with antipsychotic medications.

In summary, complex mental illness is associated with high rates of metabolic imbalances, including diabetes. Since metabolic risks can develop early in the illness progression, timely intervention is needed for prevention.

NEXT STEPS

To learn more about medications that can help manage weight gain, please speak to your doctor or care team today.

To learn more about participating in psychosis research at CAMH, contact us at 416 535-8501 ext. 31765 or schizophrenia.research@camh.ca.

For information about programs and services at CAMH, please visit www.camh.ca or call 416 535-8501 (or 1 800-463-6273).