

The Hidden Protector of Liver Health

Introduction

Many people know that fibre plays a role in regulating bowel movements, but new research shows that eating fibre may benefit more than our digestive health, it may also help protect our liver.

As fatty liver disease, especially metabolic dysfunction–associated steatotic liver disease (MASLD) has become a major health concern worldwide, researchers are paying closer attention to the role of fibre and the benefit of eating more legumes, beans, peas, nuts, seeds, whole grains, colorful vegetables and fruits.

Liver is the “smartest organ” and it is one of the few places in our body where we can reverse damage.

If you have been informed by your physician you have fatty liver disease, you have probably heard of this, nutrition alongside healthy lifestyle is one of the most effective ways to reverse or manage metabolic dysfunction–associated steatotic liver disease.

What does the liver do and when was the last time you thought about your liver?

We feel our heart beating in our chest, our lungs expanding when we take in air, or our stomach growling when hungry. We don’t feel our liver. We take it for granted because we don’t feel it even if it is sick.

The liver can be found in the upper right-hand side of the belly. All blood that leaves the stomach and intestine must pass through the liver.

The liver is essential for proper nutrition and health. It helps with digestion, storage, and supplying nutrients such as sugar, fat, protein, vitamins, and minerals. The liver does hundreds of different jobs in the body. Here are just a few jobs the liver performs day in and day out.

What is fatty liver disease?

Our liver normally contains a small amount of fat however when too much fat accumulates, it's called fatty liver - the most common liver disease in Canada.

While it is more common in individuals living in larger bodies, it can happen at any size.

People with fatty liver are more likely to already have or develop diabetes, heart disease, high cholesterol and high blood pressure. Other causes of fatty liver or liver damage can include starvation and rapid weight loss, autoimmune conditions, genetic factors, and environmental exposures like drugs or chemicals.

Many people have no symptoms, and they can feel completely healthy. Fatty liver disease is often found during routine blood work or ultrasound. In many cases, a family doctor will notice that liver enzymes are higher than normal and will then order an ultrasound, which can confirm the diagnosis

Why should we care about fatty liver disease?

Fatty liver disease is mostly “silent”, and it has almost no symptoms in the early stages. If left untreated, can lead to more serious liver disease, such as cancer, and land you on a liver transplant wait-list.

Fatty liver disease affects an estimated 25% of the general population with that number expected to grow. It is estimated 10-25% of patients with fatty liver will develop a more severe form of fatty liver disease in which swelling of liver and liver cell damage take place. With continuous inflammation and scarring of liver, this can lead to cirrhosis in 20% of people within 20 years.

Why do we see more fatty liver disease among young adults?

We see more fatty liver disease in young adults because of modern lifestyle changes. These include eating more ultra-processed foods, drinking more alcohol, and sitting much more. This spike in rates is directly tied to the rise in obesity and metabolic syndrome.

Are there any risk factors to developing fatty liver disease?

From the latest statistics, the biggest risk factors are Type 2 diabetes and obesity. However some people who aren't overweight can develop fatty liver, especially if they have belly fat.

Other common risk factors include high triglycerides or cholesterol, high blood pressure, obstructive sleep apnea, cardiovascular disease, chronic kidney disease, alcohol use disorder.

Studies have shown that certain ethnic groups, like South Asians, may be at higher risk for fatty liver diseases.

If we were trying to be proactive, which is where we should be, we should probably think of those people who are at higher risk and try and screen these individuals.

What is fibre?

Fibre is the part of plant foods that our bodies cannot break down and absorb. There are many different types of fibre, the most common are soluble and insoluble. All foods that contain fibre have more than one type.

Soluble fibre dissolves in liquid, turning into a thick gel. It can help lower our blood cholesterol and control blood sugar.

Insoluble fibre does not dissolve in water. It helps maintain a healthy digestive system, regulates bowel movements and may lower our risk of getting heart disease and certain types of cancer.

Why are researchers interested in fibre? How fibre help with fatty liver disease?

Steadily over the years, researchers have concluded that fibre helps support weight management and improve blood sugar control. New research suggests fibre may also help the liver through our gut. Our gut and liver are closely connected through something called the "gut-liver axis."

Our digestive system has about 38 trillion microorganisms. These bacteria help break down certain types of fibre that our bodies cannot break down and absorb. When gut bacteria in the large intestines ferment fibre, they produce helpful substances that may help reduce inflammation in the body, enhance insulin sensitivity, and support liver health.

Not all fibre is created equal

The latest research indicates different types of fibre may have different effects on our bodies. To help build a diverse and balanced gut microbiota, it is important to eat a wide range of plant foods rather than focusing on a single type of fibre.

Prioritize eating more fibre-rich whole plant foods such as whole grains, vegetables, fruits and beans, over relying solely on processed fiber supplements. Think about food first!

How much fibre do I need?

How much fibre you need depends on your age and gender.

Age between 19 to 50 years old, for females, we aim for at least 25 grams of fibre each day while for males at least 38 grams of fibre.

Age above 50 years old, for females, we aim for at least 21 grams of fibre each day while for males, at least 30 grams of fibre.

How much fluid do I need?

It is important to drink enough fluid when you eat a higher fibre diet. Drinking fluid will help keep your stools soft. Fluid includes water and other liquids such as milk, coffee, tea, broth and soup.

Like the recommendation for fibre, how much fluid you need depends on your age and gender.

Age above 19 years old, for females, we aim for at least 10 cups (2.5L) of fluid each day while for males, we aim for at least 12 cups (3L) fluid.

Tips to help you eat more fibre for liver health

Rather than focus on how many grams of fibre are eaten, you can increase your fibre consumption by exploring different shapes and colours of plant foods throughout the week. The cumulative effect of small steps can add up over time.

This week, set a goal to eat three different colours and four different shapes of plant foods. Variety matters!

Here are a few ideas to increase your fibre intake:

- Start your day with oatmeal, and add ground flaxseeds, chia seeds and nuts. Make a small colourful fruit salad.
- Add black, navy, or kidney beans, chickpeas, lentils or barley to soups and stew.
- Choose vegetables and fruits for your snack.
- Brown rice and/or barley mixed with white rice
- Choose whole grain, whole wheat breads.
- Eat the skins or peels of vegetables and fruits when possible.

To avoid gas and bloating, add fibre slowly into your diet and try spreading higher fibre foods over your day and drink more fluids.

My friends have recommended herbal teas and supplements, they are safe, natural and help “improve” the liver health.

Most herbal substances lack scientific evidence of efficacy and may cause liver toxicity. There have been rare cases of acute liver inflammation and liver failure associated with usage of certain "natural" supplements.

Do you have any additional information which I should watch before I purchase a supplement?

- No supplement has been proved to cure diseases such as fatty liver, cancer, diabetes, heart disease, or digestive problems. Always stay cautious of supplements that promise quick and dramatic results.
- A generic brand (or store brand) often works just as well as a name-brand supplement. Look for generic brands that contain the same amount of vitamins and minerals as the name brand.

In summary:

You can slow, stop, or partly reverse fat build up in the liver through healthy eating, physical activity, weight loss if needed, and good control of diabetes for those who have diabetes. This can decrease your risk of progressing to worse liver damage.

Furthermore, eating healthily, being physically active, having good sleep and stress management are also important. Speak to your physician or healthcare team if you feel you might have anxiety or depression

How can Alberta Healthy Living Program help support the Chinese in the community, living with fatty liver disease and/or gastrointestinal tract medical conditions (such as acid reflux):

- We have Registered Dietitian speaking both Mandarin and Cantonese who can offer one-on-one advice via phone, Zoom or in person meeting.
- These services are free of charge and are provided by Alberta Health. You do not need a referral from a health care provider - you can just call to book appointment.
- All our programs and services can be accessed through one toll-free number: 1-844-527-1160.

- Better choices, better health (BCBH) for chronic disease management and BCBH-chronic pain that are offered in Cantonese, and they can register for this 6-week program (one 2.5-hour session per week) by calling one toll-free: 1-844-527-1160.