

## HEALTHY EATING CHANGES

The food guide pyramid is your best guide. Eat five or more fruits and vegetables a day: for example, strawberries on your cereal, carrots and half a banana with your lunch, celery and peanut butter for snack, and a salad with dinner.

### **Don't drink your calories.**

Do you drink soda or juice when you are thirsty? Switch to water or calorie-free drinks.

But drink plenty of low fat (1% or skim) milk. It's a great way to build bones, essential when you are a teenager.

Choose naturally low-fat foods, like chicken, bread, fruits and vegetables. Don't fry. Less than 30% of your calories should come from fat. Avoid fast food; burgers, fries, and pizza are full of fat.

### **Watch out for portion size.**

People feel satisfied when their plate is empty, so put smaller servings on your plate.

Eat at the table with the television off, even for snacks.

### **Eat breakfast every day.**

Even a small breakfast will keep you from getting too hungry and overeating after school.

A dietitian can help you figure out the best way to eat and suggest changes that fit with your schedule and tastes.

## **Physical Activity.**

- Limit television and computer games to one hour a day or less. It's easy to spend hours in front of the screen, but your body needs to move around more
- Aim for 60 minutes a day of physical activity. Start with half an hour and slowly increase. You can do 5 or 10 minutes at a time but it's a good idea to have 30 continuous minutes of an activity that makes you break a sweat.

### **Activity ideas:**

- Sign up for PE, a team, martial arts, or dance class.
- Walk and talk. If you enjoy telephone calls with a friend, invite the friend to walk and talk instead.
- Dance to the music. Put on your favorite music and dance for half an hour.
- If you work part-time, pick a job where you do some moving. Mow lawns or wait tables rather than run a cash register or (worse) cook French fries.

### **If you feel discouraged**

- Talk to your doctor. He or she can suggest additional help, such as a meeting with a dietitian.

### **Other handouts and websites are available**

“Just enough for you”

[http://win.niddk.nih.gov/publications/just\\_enough.htm](http://win.niddk.nih.gov/publications/just_enough.htm)

“Helping your overweight child”

[http://win.niddk.nih.gov/publications/over\\_child.htm](http://win.niddk.nih.gov/publications/over_child.htm)

“Take charge of your health”

[http://win.niddk.nih.gov/publications/take\\_charge.htm](http://win.niddk.nih.gov/publications/take_charge.htm)

Food guide pyramid

<http://www.mypyramid.gov/>

# FATTY LIVER IN CHILDREN

## What is fatty liver?

Fat can sometimes accumulate in the liver in a condition called fatty liver, "hepatic steatosis", or "NAFLD" (Nonalcoholic fatty liver disease).

If the liver is being injured by the fat, causing abnormal blood tests or damage to the liver tissue, the condition is called "steatohepatitis" or "NASH" (Non-alcoholic steatohepatitis).

Note: the "non-alcoholic" term means that the liver abnormality is NOT from drinking excess alcohol. The "hepatitis" term means that the liver is injured, not that there is a virus.

## What causes fatty liver?

Most commonly, fatty liver is seen in overweight patients. Diabetics, patients with cholesterol or triglyceride problems, and some women with a syndrome called "polycystic ovary syndrome" are at increased risk, as well.

A few medicines, such as prednisone, have also been associated with fat in the liver. New research suggests that insulin, a hormone that helps control blood sugar, doesn't work well in obese patients; this "insulin resistance" may contribute to the liver problem in NAFLD.

A few patients with fatty liver are not overweight; the cause of their NAFLD is unknown.

## What does the liver do?

The liver performs many important functions in the body. It helps make proteins that make the blood clot and keep fluid within blood vessels. It helps get rid of wastes, including bilirubin, a substance which makes people jaundiced (yellow in color) when it accumulates. The liver helps the body use sugars, proteins, and fats from the diet. It also helps process some drugs.

## What tests can be done to tell how my liver is doing?

Your doctor will do a physical examination, during which she/he measures liver and spleen size by pressing on the abdomen; she/he will also look for dark skin around the neck that some NAFLD patients have. Your doctor may obtain an ultrasound, CT, or MRI; these x-ray tests can often detect excess fat in the liver. Blood work measures liver enzymes including ALT and AST; elevations in liver enzymes suggest damage to liver cells. Blood tests may be done to exclude other causes of liver disease and to look at possible underlying causes of fatty liver. Sometimes, a liver biopsy is done so that a tiny piece of liver can be examined under a microscope to evaluate liver injury and scarring.

## What will happen to my liver if I have NASH?

Doctors are researching outcome in patients who have fatty liver. In some patients, there is no significant damage to the liver from fat. In others, however, scarring and even cirrhosis (severe scarring) of the liver can occur, usually after many years.

## What can I do to help my liver?

1. Gradual weight loss, via diet and exercise, is the most reasonable approach to NAFLD at this time. Research is underway to evaluate potential drug therapy to help.
2. Avoid alcohol, and other drugs or substances that can damage the liver.
3. Ask your doctor about immunization for Hepatitis A, to protect your liver from further injury if you happen to be exposed to that virus.
4. If you have diabetes or elevated cholesterol/triglycerides, controlling these conditions with diet and medicines can help your liver.

## HELP YOUR LIVER BY HEALTHY LIVING

Extra body fat contributes to NASH. These days, many Americans are overweight. If your doctor has told you that your weight is higher than is healthy, then these guidelines will help you balance how much you eat and how active you are so that you will gradually lose the extra weight.

Remember, the extra weight came on slowly and slow reduction is the safest road - aim for 2 to 4 pounds a month.

### Practice healthy habits

- It takes over 6 months to make a behavior a habit.
- Set a goal, keep track on a calendar, and then reward yourself for success! For example, if you dance 5 times a week for 3 weeks, pick out a new CD.

### Get help from your family.

If everyone in the home is living healthier, you'll feel more motivated and won't face so many temptations.