WHAT CAN YOU DO TO TREAT YOUR NAFLD?

Diet

- We recommend a daily diet of **2,000 calories**, with 60-100 g of carbohydrates. Low-carbohydrate, low-sugar, plant-based (vegetarian or vegan) or Mediterranean diets are ideal.

Consuming adequate calories each day is important for your body to function properly and burn energy. Restricting nutrient intake too much can actually trick your body into thinking it’s starving, causing it to hold on to fat and preventing weight loss. Making small changes over a long period has proven to be the best way to establish long-term lifestyle changes.

- **Portion sizes** have grown over the last 50 or more years, and is a major contributor to obesity in America (see figure 2). Your goal should be returning to smaller portion sizes. For example, when eating out cut your portion in half, share with a partner or have it removed.

- **Eating too fast** can result in overeating. It takes about 20 minutes from when you start eating for your brain to send out signals that you are full. Slow down!

- You should avoid consuming:
  - **Alcohol** is processed through the liver and can worsen existing liver disease.
  - **Fructose**, the simplest form of sugar, can’t be broken down any further. Unlike glucose, another sugar, fructose does not cause significant insulin release and is transported mainly to liver cells. Once there, fructose can create glycerol, the backbone of fat, and increase fat formation.
  - **Excessive carbohydrates** can lead to excess fat in your body and will make it difficult for your liver to do its job.
  - **Too much salt** can increase fluid retention and swelling in people with liver disease and can affect blood pressure.

Figure 1. THE NEW (AB)NORMAL

![Figure 1](https://www.cdc.gov/makinghealthier/)

Figure 2. PORTION DISTORTION

<table>
<thead>
<tr>
<th>What you are served</th>
<th>What's one serving</th>
</tr>
</thead>
<tbody>
<tr>
<td>½ pound cheeseburger, french fries, ¾ cup ketchup, tomato slice and lettuce</td>
<td>¼ pound cheeseburger, half the french fries, 2 tablespoons ketchup, tomato slice and lettuce</td>
</tr>
<tr>
<td>1,345 calories</td>
<td>685 calories</td>
</tr>
<tr>
<td>53 grams fat</td>
<td>33 grams fat</td>
</tr>
</tbody>
</table>

Source: Centers for Disease Control and Prevention, cdc.gov/makinghealthier
**WHAT CAN YOU DO TO TREAT YOUR NAFLD?**

**Weight Loss**
Your goal for weight loss is to lose 0.5-1 pounds a week.

**Exercise**
- **Start slow,** with five minutes a day, three to five days a week. Increase as tolerated and adjust based on your current activity level. Every one to two weeks, increase time by two minutes a day.
- **Low impact** activities are best, such as recumbent bike, water aerobics, swimming, walking, elliptical, yoga, circuit training, row machine and sit-and-be-fit at-home exercises.
- **Develop a plan for your goals.** What types of activities would you enjoy? What do you miss doing because you are too tired and lack the energy?

**Supplements**
Probiotics and supplements often can be used, but discuss them with your doctor to make sure they are safe for your liver.

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**Figure 1.**
Sugar content in sodas
- **33 oz.** = 27 teaspoons of sugar
- **20 oz.** = 16 teaspoons of sugar
- **12 oz.** = 10 teaspoons of sugar

**Figure 2.**
**WHAT’S ON YOUR PLATE?**
The plate method is a simple way to learn healthy portion sizes.

Divide the plate so the largest portion is fruits and vegetables.

- **50%** Fruits and vegetables
- **30 g** Carbohydrates
- **25%** Protein

Your hand can help you measure the right amount of food to eat.
- **PALM OF HAND** Amount of lean meat
- **A FIST** Amount of rice, cooked pasta or cereal
- **A THUMB** Amount of cheese
- **THUMB TIP** Amount of peanut butter

- **2,000 calories per day**
- **100g carbohydrates per day**
- **Avoid sugar**
Vitamin E is an antioxidant that has been investigated in treating NASH. Studies (PIVENS trial) have shown that vitamin E improves liver tissue in nondiabetic adults with biopsy-proven NASH.

Actos, also known as pioglitazone, is part of the PIVENS trial and has shown that it improves liver histology (steatosis, inflammation and insulin sensitivity) in patients with biopsy-proven NASH.

Metformin has undergone several studies investigating the effect on liver enzymes and liver test results in patients with NASH. It does not significantly improve liver tissue for function in patients with NAFLD or NASH, and is not currently recommended for treatment.

Bariatric surgery can be considered on a case-by-case basis.

Antifibrotic drugs, intended to reduce fibrosis, are currently being investigated.

*Our team is working on numerous research opportunities as well as clinical drug trials to better understand NAFLD and available treatment advances. You may be approached during your time at Houston Methodist to participate in a research study.