

# DIABETES AND FATTY LIVER

**DID YOU KNOW?**

## Most of Those With Type 2 Diabetes Have a Fatty Liver

### PROBABILITY OF FATTY LIVER

General Public Up to 40%	Those with Type 2 Diabetes Up to 80%	Those who are Obese Up to 90%
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Source: National Institutes of Health

### WHAT IS FATTY LIVER?

- Excess fat in liver.
- Affects 100 million Americans.
- Little-known and typically undetected condition.
- Can cause life-threatening liver disease.
- Normal weight people also at risk.

### WHY YOU SHOULD CARE

- Can lead to cirrhosis, cancer, high blood pressure, cardiac issues and the need for a liver transplant.
- In combination with diabetes, increases risk of serious disease.

### WAYS TO DIAGNOSE

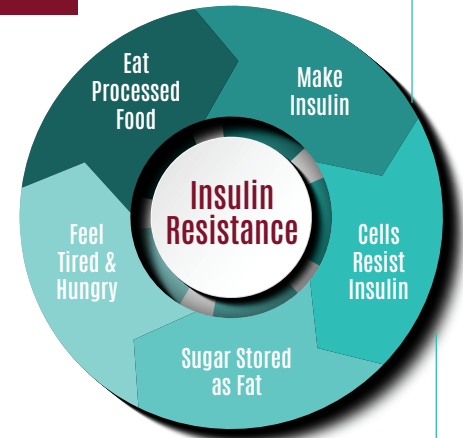
- Blood tests (hepatic panel, etc.)
- Ultrasound (e.g., Fibroscan, VELACUR, Mindray and similar)
- Imaging (MRI, etc.)
- Biopsy

### THE PROBLEM

- There is one approved medication and that is only for moderate and advanced fibrosis
- Improved diet, weight loss & physical activity are the principal ways to stop disease progression

### INSULIN RESISTANCE

- When excessive sugar enters the blood stream, the pancreas makes insulin to reduce blood sugar levels.
- Insulin helps blood sugar enter the body's cells to be used as energy.
- When excess starch and sugar consumption continues, the cells eventually become resistant to the insulin and sugar stays in the blood stream causing high blood sugar levels and elevated insulin levels, contributing to weight gain instead of being used for energy.
- The fructose component of sugar can itself promote fatty liver and insulin resistance.
- A fatty liver is an insulin resistant liver, releasing its sugar into the blood stream, increasing blood sugar.
- Insulin resistance is a precursor to diabetes.



### TAKE ACTION NOW

- HEALTHIER DIET
  - Stop alcohol, soda and sugar-sweetened beverages, including juice
  - Less fats from processed and fried foods; more fats from fish and nuts
  - Replace starchy carbs (e.g., bread, pasta, snacks, etc.) with carbs from vegetables
- MORE PHYSICAL ACTIVITY
- MANAGE STRESS
- MORE SLEEP (7-9 HOURS PER NIGHT)
- EXPLORE THERAPEUTIC CARBOHYDRATE REDUCTION

**GET TESTED FOR FATTY LIVER!**

