



THE SOLINGER METHOD

by Root Health L.L.C.

Fatty Liver

FUNCTIONAL WELLNESS SUPPORT PLAN

Adult Fatty Liver

Root Health L.L.C, The Solinger Method

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What Is Fatty Liver

Fatty liver, most commonly non-alcoholic fatty liver disease (NAFLD), is a metabolic condition characterized by **excess triglyceride accumulation within liver cells**. It reflects impaired fat export, insulin resistance, oxidative stress, and inflammatory signaling rather than alcohol exposure alone.

Fatty liver exists on a spectrum, ranging from simple steatosis to steatohepatitis, fibrosis, and eventual cirrhosis when unaddressed.

In adults, fatty liver commonly reflects:

- Insulin resistance and hyperinsulinemia
- Impaired hepatic fat oxidation
- Reduced VLDL export
- Mitochondrial dysfunction
- Chronic inflammatory signaling
- Excess fructose and refined carbohydrate intake
- Choline deficiency
- Dysbiosis and endotoxin burden

Fatty liver is a **metabolic traffic jam**, not a passive storage issue.

Conventional Medicine Perspective

Conventional medicine often identifies fatty liver incidentally through imaging or elevated liver enzymes. Management typically focuses on weight loss recommendations and monitoring, with limited guidance beyond caloric reduction and avoidance of alcohol.

While weight reduction can improve liver fat, this approach often fails to address:

- Insulin signaling dysfunction
- Mitochondrial inefficiency
- Nutrient deficiencies driving fat accumulation
- Gut derived inflammatory load
- Why fat export from the liver is impaired

Normal liver enzymes do not equal a healthy liver.

Naturopathic Medicine Perspective

Naturopathic medicine views fatty liver as a **reversible metabolic and mitochondrial condition**, driven by insulin resistance, nutrient insufficiency, impaired fat transport, oxidative stress, and inflammatory burden.

Key systems involved include:

- Insulin and glucose signaling
- Hepatic mitochondrial beta oxidation
- Choline dependent VLDL synthesis
- Bile production and fat export
- Gut liver axis and endotoxin load
- Inflammatory cytokine signaling



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The goal is to **restore fat handling, reduce inflammation, and improve hepatic energy metabolism**, not simply reduce calories.

Key Drivers and Patterns in Adult Fatty Liver

Insulin Resistance Pattern

Elevated fasting insulin, triglycerides, central adiposity, postprandial fatigue.

Choline Deficiency Pattern

Low intake of eggs or animal foods, poor fat tolerance, elevated liver enzymes.

Inflammatory Gut Liver Pattern

Bloating, dysbiosis, food reactions, elevated inflammatory markers.

Mitochondrial Dysfunction Pattern

Fatigue, exercise intolerance, poor metabolic flexibility.

Fructose Driven Pattern

High intake of sweetened beverages, juices, processed foods.

Nutritional Strategy

Nutrition for fatty liver focuses on **improving insulin sensitivity, restoring fat export, supporting mitochondrial oxidation, and reducing inflammatory load**, not aggressive caloric restriction.

Core Nutritional Priorities

- Stabilize blood sugar
- Reduce insulin demand
- Increase protein adequacy
- Restore choline intake
- Reduce fructose exposure
- Support bile flow and digestion



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Therapeutic Foods to Emphasize

Protein at each meal, targeting 25 to 35 grams per meal. Mechanism, improves insulin sensitivity and supports hepatic fat oxidation.

Eggs, particularly yolks. Mechanism, primary dietary source of choline required for VLDL formation and fat export from the liver.

Fatty fish such as salmon, sardines, and anchovies. Mechanism, omega 3 fatty acids reduce hepatic triglyceride synthesis and inflammatory signaling.

Non starchy vegetables and leafy greens. Mechanism, improve insulin sensitivity and provide antioxidants.

Olive oil and whole food fats. Mechanism, support fat oxidation without driving insulin spikes.

Coffee, if tolerated. Mechanism, associated with reduced hepatic fibrosis and improved liver enzyme profiles.

Reduce or Avoid

Refined carbohydrates and sugar. Mechanism, drives de novo lipogenesis in the liver.

Fructose containing beverages and sweeteners. Mechanism, preferentially metabolized by the liver and promotes triglyceride accumulation.

Ultra processed foods. Mechanism, increase inflammatory load and metabolic stress.

Chronic calorie restriction. Mechanism, worsens metabolic adaptation and mitochondrial efficiency.

Targeted Supplement Support

Therapeutic Adult Dosing

Choline (as Phosphatidylcholine or CDP Choline)

Mechanism, required for VLDL assembly and export of triglycerides from the liver.

Dose: 500 to 1,000 mg daily



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Omega 3 Fatty Acids (EPA and DHA)

Mechanism, reduce hepatic triglyceride synthesis, improve insulin sensitivity, lower inflammation.

Dose: 3 to 4 grams daily combined EPA and DHA

Berberine

Mechanism, improves insulin sensitivity, reduces hepatic glucose output, lowers triglyceride accumulation.

Dose: 500 mg two to three times daily with meals

N Acetyl Cysteine (NAC)

Mechanism, supports glutathione production, reduces oxidative stress, protects hepatocytes.

Dose: 600 to 1,200 mg daily

Alpha Lipoic Acid

Mechanism, improves insulin signaling and mitochondrial function, reduces hepatic fat accumulation.

Dose: 300 to 600 mg daily

Vitamin E (Mixed Tocopherols)

Mechanism, reduces oxidative stress in non-alcoholic steatohepatitis patterns.

Dose: 200 to 400 IU daily, guided by clinical context

Magnesium Glycinate

Mechanism, supports insulin signaling and mitochondrial enzyme function.

Dose: 400 to 600 mg daily

Targeted Herbal Support

Milk Thistle (Silymarin)

Mechanism, stabilizes hepatocyte membranes, supports detoxification enzymes, reduces inflammation.

Dose: 300 mg standardized extract one to two times daily

Artichoke Leaf



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Mechanism, improves bile flow, supports fat digestion and hepatic lipid export.
Dose: 600 to 1,200 mg daily

Dandelion Root

Mechanism, supports bile production and liver clearance pathways.
Dose: 500 to 1,000 mg daily

Schisandra

Mechanism, improves hepatic detox enzyme activity, supports mitochondrial efficiency.
Dose: 500 to 1,500 mg daily

Turmeric (Curcumin)

Mechanism, reduces inflammatory signaling and oxidative stress within the liver.
Dose: 500 to 1,000 mg daily

Herbal strategy targets bile flow, hepatocyte protection, and metabolic resilience.

Celery Juice Support for Fatty Liver

Celery juice may support fatty liver by improving hydration, mineral balance, bile flow, and digestive signaling, which can indirectly support fat export and insulin sensitivity.

Suggested use is 8 oz fresh celery juice daily, taken in the morning or between meals, with response guiding continuation.

Supplement Access

A complete supplement protocol for Adult Fatty Liver is available in Fullscript under Protocols, listed by the matching condition name. Individuals can create a free account to access the full recommended list of professional grade supplements and therapeutic adult dosing.

Lifestyle Support That Matters

Strength training improves insulin sensitivity and hepatic fat oxidation.



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Daily movement supports glucose disposal independent of insulin.

Sleep optimization reduces insulin resistance and inflammatory signaling.

Alcohol reduction or elimination is essential even in non alcoholic fatty liver patterns.

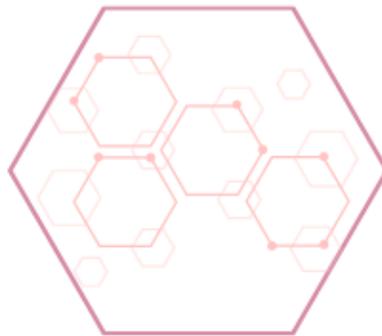
Stress regulation matters, cortisol worsens hepatic insulin resistance.

When to Dig Deeper

Further evaluation is warranted when fatty liver is present:

- Fasting insulin and A1c
- Triglycerides and HDL
- Liver enzymes and ferritin
- Inflammatory markers
- Ultrasound or elastography when indicated
- Gut health assessment if endotoxin burden is suspected

Fatty liver is highly reversible when **insulin signaling improves, fat export is restored, and inflammation is reduced**, rather than when calories are simply cut.



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