

Non-Alcoholic Fatty Liver

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Note: to have optimal response, all recommendations begin with **Ultra Vites** and **Ultra Omega-Linic**.

This information is intended for the use of health care professionals. It has not been evaluated by the FDA and is not intended to diagnose, treat, cure or prevent any disease. You should consult a qualified health care provider for advice before beginning any new health care program.

Nutrient	Product	Quan
Essential Fatty Acids	Ultra Omega-Linic	4-12
A Good, Broad Spectrum, Multi vitamin/mineral *	Ultra-Vites	2
Vitamin E mixed tocopherols	Vitamin E 400	1
Vitamin C	Ultra C 1000	1-2
Alpha Lipoic Acid, Cinnamon, Chromium	Ultra-DM Complex	4
Probiotics	Ultra 4x6 Probiotic	2
<i>Consider:</i>		
Milk Thistle (Silymarin)	Milk Thistle	1
Coenzyme Q10	Ultra CoQ10 100	1
* Use a multi without iron unless there is a known need for iron		

Non-Alcoholic Fatty Liver Disease (NAFLD)

June 2015 *This is the scariest piece of information we have come across recently.*

You probably know that drinking too much alcohol can damage your liver. But you might not know that too much sugar can lead to very similar severe liver problems.

In the past 30 years Non-Alcoholic Fatty Liver Disease has emerged as **the most common liver disease in the world!** These are fatty changes in the liver not associated with alcohol excess. The process of fatty changes in the liver can produce a spectrum of liver injuries.

The world-wide increase in the consumption of high fructose corn syrup parallels the increase in overweight people and obesity **world wide!** Studies have shown that consumption of sucrose (which is glucose and fructose) and fructose (sugars) promotes fatty liver disease, **whereas fatty acids from the diet do not.** Ps. On the label - anything ending in 'ose' is sugar.

Insulin resistance or Type II Diabetes is always present with NAFLD and leads to triglyceride accumulation in the liver. The increase in fructose consumption is another aggravating problem, because fructose is metabolized in the liver and leads to hepatic fatty acid synthesis and deposition in the liver. These fatty acids are fully saturated and cause liver damage. This process is associated with free radical generation, cell injury and fibrosis.

Medical approaches are relatively ineffective "This new and ever-growing group of NAFLD patients has become the third most common population considered for liver transplantation in the United States."

One effect of high consumption of fructose is bacteria overgrowth in the small intestine, which increases intestinal permeability. This also contributes to the development of NAFLD. Another

emerging hypothesis is that pathogenic gut bacteria and fungi (they LOVE sugar) can produce alcohol, which further increases gut permeability and liver injury.

Low Carbohydrate



For years we have promoted the Low Carbohydrate Lifestyle Modification. We encourage people to read labels on all foods in cans or boxes. Look at the Carbohydrate and Fiber

content - not the calorie content. And be sure to note the 'serving size' on which these figures are based. The goal is to choose low Net Carb foods (Total carbs minus fiber). Shop the perimeter of the store. Buy real food - not processed foods. The long standing (not funny) joke is that the box for the cereal may contain more nutrition value than the contents. Many fruits and vegetables are high in carb (sugar) content. You can obtain nutritional information in the fresh foods section of most grocery stores. You can find the carbohydrate content of foods in many of Dr Atkin's books, and at Atkins.com.

We also checked out a number of sugar alternatives. Agave, Molasses and other similar products contain nearly as much fructose as high fructose corn syrup. In other words, if you have liver disease you should avoid sugar, **period**. If you use sugar alternatives avoid Aspartame. It has been linked to severe neurological problems.

Gluten and Dairy Sensitivity

Many of you are becoming aware of the GUT problems associated with gluten sensitivity. If gluten sensitivity is an associated problem for you, ALL gluten should be eliminated from the diet. Thankfully it is becoming easier to buy gluten-free foods in the market. Most grains are high in carbohydrate without the added value of fiber. So grains should be used sparingly. And whole grains are best. Again, check the net carbohydrate total.

If you are sensitive to dairy products you may also be causing damage to your GUT. This increases intestinal permeability. We have found a number of milk, butter and cheese alternatives in the stores recently.

The BEST way:

Absolutely the **BEST** way to protect the liver is to avoid foods and drinks that contain high fructose corn syrup (what's in that pop you are drinking?) Some studies show dramatic weight loss and liver enzymes normalization just by changing eating habits; moving to high protein, high fat and low carbohydrate food choices. Other studies show that "diets", which focus on low calorie and low fat food choices, have a limited ability to impact either weight or liver health.

On the other hand, diets which emphasize carbohydrate restriction (especially processed sugar and grains), but which contain healthy fats, are quite successful. If you exercise you should know that exercise by itself, while it has many benefits, may not lead to weight loss or improved liver function.

Essential Fatty Acid Terms	
PUFA	PRE Formed PolyUnsaturated Fatty Acids
GLA	Gamma Linolenic Acid (w6)
Omega 3 Fatty Acids	
EPA	Eicosapentaenoic Acid
DHA	Docosahexaenoic Acid
SDA	Stearidonic Acid

Nutritional Supplements that can help NAFLD

AFTER you have eliminated the high fructose corn syrup, **and** you have broken the habit of eating processed foods and refined sugars, there are some nutritional approaches that should be considered. High on the list of nutrients that have been studied for NAFLD is (*did you guess?*) Omega 3 *preformed* polyunsaturated fatty acids (i.e. **Ultra Omega-Linic**). Because the omega 3 fatty acids improve insulin sensitivity, and reduce inflammation, they should be considered a first line defense for hypertriglyceridemia. I recommend Ultra Omega-Linic for all my patients. It is high in the preformed polyunsaturated essential fatty acids, GLA, EPA and DHA. It also has SDA, a plant source omega 3, which is converted almost 100% to even more EPA. Ultra Omega-Linic is regarded by many as an important daily supplement because it is critical to fight inflammation from any source, and for proper brain and liver function.

Because inflammation is an aggravator for NAFLD, I consider Ultra Omega-Linic superior to fish oil omega 3 supplements. The high level of GLA PG1 precursors adds an extra level of anti-inflammatory protection.

One study showed that 1/3 of patients treated with fish oil (rich in EPA and DHA) had complete resolution of fatty liver, and 50% had reductions in liver fat. Other studies showed similar positive results.

A number of supplements have been shown to reduce insulin resistance: chromium, cinnamon and alpha lipoic acid (**Opti-DM Complex**).

Other fatty liver studies looked at vanadium, milk thistle (silymarin) and curcumin (turmeric).

Since so many nutrients are important to a healthy liver, and in fatty acid metabolism, I always recommend a quality multi vitamin/mineral supplement like **Ultra Vites**.

Antioxidants

It has been proposed that a major mechanism of liver damage is oxidative stress. Vitamin E, Alpha Lipoic Acid and Silymarin (Milk Thistle) have been shown to be very effective antioxidants. In NAFLD conditions, the most effective antioxidants are those that protect the phospholipids. These are Vitamin C, Vitamin E, Alpha Lipoic Acid and Coenzyme Q 10. These nutrients have also been shown to be effective in helping blood sugar normalization.

One of the most important antioxidants is Alpha Lipoic Acid. There are several reasons for its effectiveness.

1. It is both water and fat soluble
2. It deactivates free radicals
3. It recycles other antioxidants, like glutathione and Vitamins C and E
4. It reduces heavy metal toxicity
5. It reduces hepatic lipid accumulation
6. IT HELPS NORMALIZE BLOOD SUGAR

Probiotics

Studies have shown that probiotics may be an effective therapy for various kinds of liver damage. It has been suggested that this is due in part to the ability of these micro flora to enhance your intestinal barrier function. The probiotic studies were done in conjunction with diet modification. They used a low carbohydrate diet.

Conclusion:

A likely consequence of increased use of sugar, especially high fructose syrup, is that the incidences of obesity, insulin resistance, diabetes and Non-Alcoholic Fatty Liver Disease (NAFLD) have dramatically increased world wide.

Few drugs show any long-term benefit in this disease. Achieving and maintaining weight loss using the low carbohydrate approach may offer the best chance of improvement. Recent studies strongly suggest that the use of omega 3 essential fatty acids, probiotics and certain antioxidants complement standard treatments.

In summary:

High fructose corn syrup gives you a triple knockout.

1. You get a high glycemic load which causes insulin resistance and diabetes.
2. The storage of fat in the liver causes severe liver damage
3. You could be setting yourself up for obesity, diabetes and liver cancer



These statements have not been evaluated by the Food and Drug Administration. The products are not intended to diagnose, treat, cure, or prevent any disease

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