

Central Valley Bariatrics

1205 Garces Hwy Suite 303
Delano, CA 93215

to some of the substance becoming deposited in the skin. Bilirubin is produced from hemoglobin, which is released when red blood cells break down. The liver takes bilirubin and attaches conjugated sugar molecules to it so it can leave the body through the urine. This type of bilirubin is called conjugated direct (because it can be measured directly in a water solution) bilirubin. In liver disease, bilirubin levels in blood can become high. Measurements of total and direct bilirubin can be helpful in diagnosing specific liver problems.

Some scary statistics to share regarding alcohol abuse:

- **In the US:** Approximately 15.3 million people in United States abuse or depend on alcohol. Fatty liver develops in 90-100% of patients with heavy alcohol use.
- **Internationally:** One observational study from northern Italy demonstrated prevalence rates of steatosis in 46.4% of heavy drinkers (>60 g/d of alcohol) and in 94.5% of obese heavy drinkers.

Mortality/Morbidity: Simple steatosis rarely is fatal. With complete abstinence,

histologic changes can return to normal within 2-4 weeks.

Continued alcohol consumption may result in more advanced forms of liver disease, either alcoholic hepatitis or cirrhosis.

Race: Very little data are available on racial differences in the incidence of alcoholic fatty liver. However, overall differences in alcoholic liver disease have been noted in various studies.

- One study of 42,862 US adults showed differences in drinking patterns among different races. Whites were the most likely to drink, but blacks had the highest volume of intake and frequency of heavy drinking.
- Another study showed a higher rate of cirrhosis among blacks.

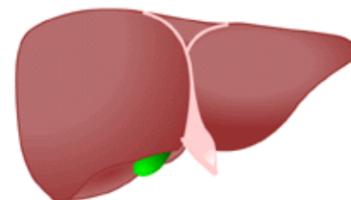
Sex: Women develop more severe alcoholic liver disease (ALD) more quickly and at lower doses of alcohol than men.

Increased susceptibility of females possibly is related to sex-dependent differences in the hepatic metabolism of alcohol, cytokine production, and the gastric metabolism of alcohol.

Ode to the liver

**There, inside, you filter and apportion
you separate and divide,
you multiply and lubricate
you raise and gather
the threads and the grams of
life...**

**from you I hope for justice:
I love life:
Do not betray me! Work on!
Do not arrest my song.**



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Central Valley Bariatrics Newsletter

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www.gr-ds.com

Calendar of Group Meetings:

All group meeting information can also be found on the website www.gr-ds.com under the group meeting icon or e-mail keshishiand@gr-ds.com

Delano:

December 14 & January 11 6:00 PM
(Second Tuesday of every month)
Delano Regional Medical Center
Zacharias Conference Center 1401
Garces Hwy.

Paso Robles:

December 16 & January 20 6:30 PM
(Third Thursday of every month)
Centennial Park 6000 Nickerson in the
Live Oak room.

Ukiah:

December 3 & January 7 6:00 PM
(First Friday of every month)
398 N. Barnes directions on the website
www.gr-ds.com. Please contact Ruth
Lorain regarding meeting at
letstalk@iwon.com.

Bishop:

December 20 & January 17 6:30 PM
(Third Monday of every month)
The Partridge Building, Northern Inyo
Hospital. Contact keshishiand@gr-ds.com for further details.

Red Bluff:

December 2 & January 6 6:00 PM
(First Thursday of every month.)
Across the parking lot from the Coyne
Educational Center in the modular
building, 2550 Sister Columbia Dr.,
Red Bluff.

Eureka:

December 7 & January 4 6:00 PM
(First Monday of every month)
St. Joseph Hospital Conference Room C-
1, 2700 Dolbeer Ave. Eureka, CA 95501
Contact me at keshishiand@gr-ds.com for
further information.

Las Vegas:

December 20 & January 17 6:00 PM
(Third Monday of every month)
Sunrise Hospital, 3186 S. Maryland
Pwky. Usually in the Auditorium or in
the Rendezvous Room.

Sacramento:

December 3 6:00 PM
(The Friday before San Jose)
Mercy General Hospital Campus 4001 J.
Street in the Conference Room #2. Due
to the meeting day falling on New
Year's Eve there will not be a meeting
for January.

San Jose:

December 4 10:00 AM
(First Saturday of every month)
Regional Medical Center of San Jose in
the Peppertree C Room, 225 N. Jackson,
San Jose, CA. 95116. Due to the meeting
day falling on New Year's Day there will
not be a meeting in January.

Mariposa:

There will not longer be a Mariposa
meeting due to lack of participation and
Kim Scott moving out of the area.



It is so hard to believe that another year has gone by. November marked our fifth year of Bariatric Surgery in Delano! Wow! Where has the time gone. We want to take this time to wish everyone a joyous, safe holiday season, enjoy each other and good health!

Calling all Post-op Patients

Please send me your stories! We would love to hear how your lives have changed and how things are going!

We would like to feature one post-op patient in each of edition of the newsletter. If you are interested in being a featured post-op patient and would like to share your story with us, please e-mail a one page story to me at keshishiand@gr-ds.com in Word format. Any pictures (in Jpeg format) you may also want to share of yourself pre and post-op. If you do not have a computer you can send via regular mail a typed one-page story and your pictures of yourself pre and post-op. You can send the story and pictures to me at 1205 Garces Hwy Suite #303, Delano, CA 93215. Hope to be able to share all your successes!

Alcohol and Weight Loss Surgery ... Why they don't mix!

The holiday season is here and it can be tempting to indulge or over indulge in a glass of holiday cheer. We would like to warn you that a few moments of cheer can have long term effects.

There have been studies done that find WLS patients ingest far less alcohol to increase the blood alcohol levels much higher than a non WLS person. These studies also show that the peak blood alcohol levels took far less time than non WLS people.

In order to understand the detrimental effects alcohol can have on a WLS patients you need to understand the function of the liver. The liver is a complex organ, located in the upper right corner of the abdomen, which has many vital roles:

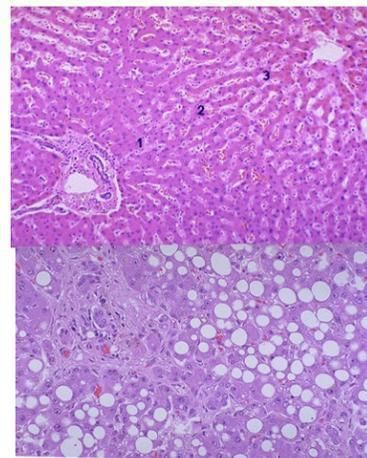
- ✦ The liver detoxifies poisons, both those produced by the body and those from outside;
- ✦ Filters bacteria from the blood;
- ✦ Regulates fat metabolism;
- ✦ Stores and manufactures vitamins;
- ✦ Regulates and manufactures cholesterol and fats;
- ✦ Synthesizes proteins, some of which are essential for blood clotting;
- ✦ Maintains the body's water and salt balance;
- ✦ Secretes bile for the digestion of fat;
- ✦ Stores energy (in the form of glycogen a type of glucose)
- ✦ Helps regulate overall body metabolism;
- ✦ Transforms the highly toxic ammonia (produced by exercise and by metabolism of proteins) into urea which is eliminated in the urine;
- ✦ Manufactures lipoproteins for fat and cholesterol transport;
- ✦ And, metabolizes alcohol.

This is a large job for a relatively small

organ. After Weight Loss Surgery (WLS) there is additional stress placed on the liver as the fat mass is broken down, metabolized by the liver, and the by-products and toxins excreted. However, this puts an additional burden on the liver. Some patients respond with slightly elevated liver enzyme which resolves, but is a clear indication of added stress on the liver. This added stress combined with alcohol consumption can have devastating effects. Pathologic changes observed in patients with alcohol-induced liver disease can be divided into the following 3 groups: alcoholic fatty liver (simple steatosis), alcoholic hepatitis, and alcohol-related cirrhosis.

Fatty Liver (Steatosis):

Alcoholic fatty liver is an early and reversible consequence of excessive alcohol consumption. Alcohol abuse can lead to the accumulation of fat within hepatocytes, the predominant cell type in the liver. A similar condition can also be seen in some obese people who are not alcohol abusers. Some of our patients may have been told that their liver had various degrees of fat infiltration when their GRDS was done. Fatty liver is reversible if the patient stops drinking or loses weight. However, fatty liver can lead to steatohepatitis. Steatohepatitis is fatty liver accompanied by inflammation and this condition can lead to scarring of the liver and cirrhosis. Here is a picture of normal liver cells:



Fatty Liver Cells

In addition, chronic ingestion of alcohol inhibits the breakdown of fatty acids in the liver and release of very low-density lipoprotein (VLDL) into the blood. VLDL

are the fats that are culprits in causing plaque build up in arteries. The inhibition of fatty acid breakdown is also detrimental to WLS patients during the rapid weight loss period because at this point most patients are in some degree of ketosis. Ketosis is the breakdown of fat into ketones which can be used for fuel for the body, nerves and brain. Alcohol inhibits this, so not only is the toxic effect of the alcohol impairing your judgment but you may also have impairment due to lack of energy to the brain and nerves. Bad decision making topped off with lack of coordination. Pushed to the limits this inhibitory process could lead to loss of consciousness, coma, death or cause the death of another.

Hepatitis

Alcohol can cause acute and chronic hepatitis. The patient who presents with alcoholic hepatitis is usually a chronic drinker with a recent episode of exceptionally heavy consumption. Other presentations are also possible. Alcoholic hepatitis can range from a mild hepatitis, with abnormal laboratory tests being the only indication of disease, to severe liver dysfunction with complications such as jaundice (yellow skin caused by bilirubin retention), hepatic encephalopathy (neurological dysfunction caused by liver failure), ascites (fluid accumulation in the abdomen), bleeding esophageal varices (varicose veins in the esophagus), abnormal blood clotting and coma. Alcoholic hepatitis is reversible if the patient stops drinking, but it usually takes several months to resolve. Alcoholic hepatitis can lead to liver scarring and cirrhosis, and very frequently occurs in alcoholics who already have cirrhosis of the liver.

Cirrhosis

Cirrhosis is characterized anatomically by widespread nodules in the liver combined with fibrosis. In the United States, alcohol abuse is the leading cause of liver cirrhosis.

Cirrhosis can result from many causes other than alcohol such as chronic viral hepatitis, metabolic and biliary diseases. The co-existence of another chronic liver

disease in a patient who abuses alcohol likely increases the risk of developing cirrhosis (e.g. an alcoholic with chronic viral hepatitis C). Alcoholic cirrhosis can occur in patients who have never had evidence of alcoholic hepatitis. Cirrhosis can lead to end-stage liver disease. Some of the complications of cirrhosis are jaundice, ascites, edema, bleeding esophageal varices, blood coagulation abnormalities, coma and death.

Slowed Weight Loss

An additional negative effect of alcohol consumption after WLS is slowed weight loss or not getting the maximum benefit of weight loss from your surgery.

Calories:

Alcohol has seven calories per ounce, which has no nutritional value.

Ingestion of additional calories that give you no benefit of maintaining muscle mass, health or physiological function.

Appetite:

The combination of alcohol and a high-calorie meal is especially fattening, mainly because alcohol acts as a potent appetizer. A Canadian study shows that an aperitif (an alcoholic drink taken before a meal to increase the appetite) increased calorie intake to a greater extent than other non-alcoholic drinks.

Increased intake can mean slowed weight loss in two different ways: increased calorie intake and stretching the stomach with a larger meal.

Transference of Addiction

Some WLS patients have had food issues and/or food addictions in the past. If not dealt with or ignored these food addictions can and have transferred to other substances and behaviors such as alcohol, smoking, out of control shopping, sexual addiction, etc. While not all of these are detrimental to your health there are serious consequences. It is important to deal with your feelings and to get qualified professional assistance when needed to deal with addiction.

Liver function tests (LFTs) measure liver injury, rather than liver function. They are a group of blood tests that measure substances in the blood that reflect whether the liver has been injured and the extent of the injuries. Sometimes these tests are also called a liver panel. The tests usually include the following: alanine transaminase (ALT), aspartate transaminase (AST), alkaline phosphatase (ALP), albumin, total protein, and total and direct bilirubin.



of liver disease. Children - especially teens - normally have higher blood levels of ALP than adults. This is related to rapid growth of their bones. Compared to the transaminases, alkaline phosphatase tends to be higher in diseases associated with injury to the bile-secreting part of the liver's activity.

Albumin and Total Protein

Once again the importance of

protein and how everything is interconnected.

Albumin and total protein levels in the blood reflect the protein-building function of the liver. Found throughout the body, proteins perform many functions: hold cells together, carry information from place to place, control chemical reactions, fight infections, transport oxygen - and much more. Albumin is a protein made by the liver found in large amounts in the blood. In fact, it's similar to the protein in egg whites. In some types of liver disease, the ability of the organ to make proteins is affected. In these cases the blood levels of total protein and albumin are low.

Because most proteins, including albumin, have fairly long half lives, the liver's incapacity to produce proteins must last weeks to months to be reflected in lowered blood levels of total protein or albumin.

Total and Direct Bilirubin

Total and direct bilirubin levels in blood are also measured as part of the liver function tests. Bilirubin is the chemical substance that gives bile, a fluid produced by the liver, its yellow-green color. Jaundice, the yellow discoloration of the skin seen in some types of liver disease, occurs because high levels of bilirubin accumulating in the blood lead

Alanine Transaminase (ALT)

Alanine transaminase is an enzyme that is important in the processing of proteins. This enzyme is found in large amounts in the liver, and small amounts of this enzyme are also found in the heart, muscle, and kidney. When the liver is injured or inflamed, the levels of ALT in blood usually rise; therefore, this test is done to check for signs of liver disease. The ALT is elevated, for example, in some viral infections of childhood that may affect the liver, such as [mononucleosis](#).

Aspartate Transaminase (AST)

Aspartate transaminase is an enzyme that plays a role in many aspects of body metabolism. This enzyme is found in many body tissues including the heart, muscle, kidney, brain, and lung. It is also present in the liver. If there is cell injury or death in any of these tissues, AST is released into the bloodstream; therefore, elevated AST levels can be seen in a variety of conditions, including liver disease. For example, the AST may be elevated in viral [hepatitis](#), [mononucleosis](#), or following a heart attack.

Alkaline Phosphatase (ALP)

Alkaline phosphatase is an enzyme found in the liver and bone. Blood levels of the enzyme are elevated in some types