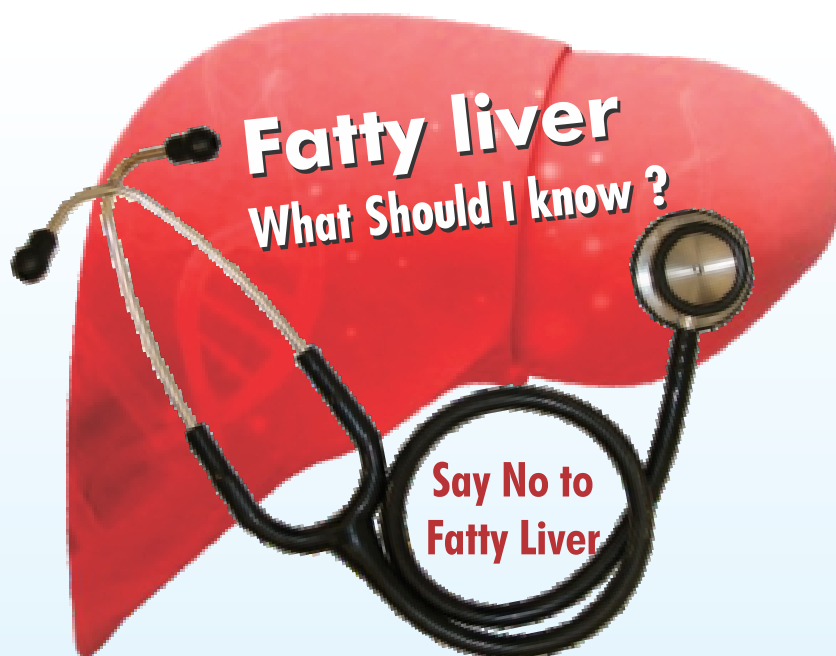


Indian Liver Patient Foundation

CLOSING THE GAP

Better Health for All



An initiative of ILPF for public awareness

Web.: www.ilpfindia.org, Email: info@ilpfindia.org, indianliverpatientfoundation@gmail.com



State Level Awareness Meeting



Empowering the Youth - Addressing their Concern



Institutional Awareness for Students



Rural Awareness cum Health Camp

Young, obese and at risk of disease

Experts estimate 2 to 5 percent of American children over age 5 have nonalcoholic fatty liver disease — nearly all of them significantly overweight.

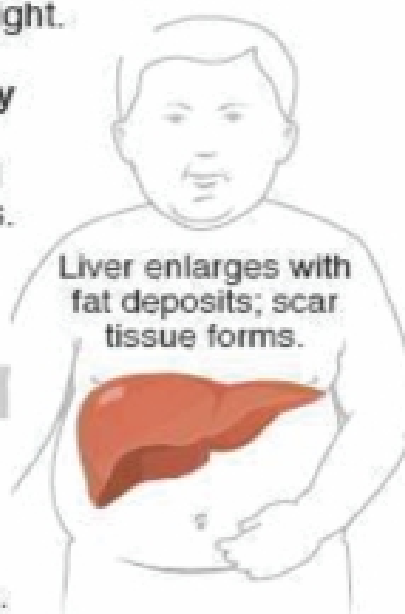
Progression of fatty liver disease

Liver can be scarred within 10 to 15 years.

Healthy



Cleans blood of bacteria, toxins and other foreign particles.



Liver enlarges with fat deposits; scar tissue forms.

Cells are injured, organ hardens and reduces in size.

Liver failure or liver cancer can follow.

Cirrhosis



Some may need a new liver by their 30s or 40s.

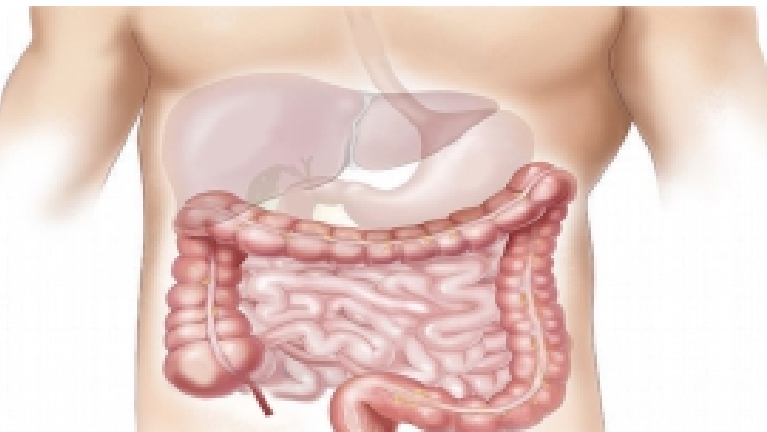
SOURCES: American Liver Foundation; AP reporting

AP

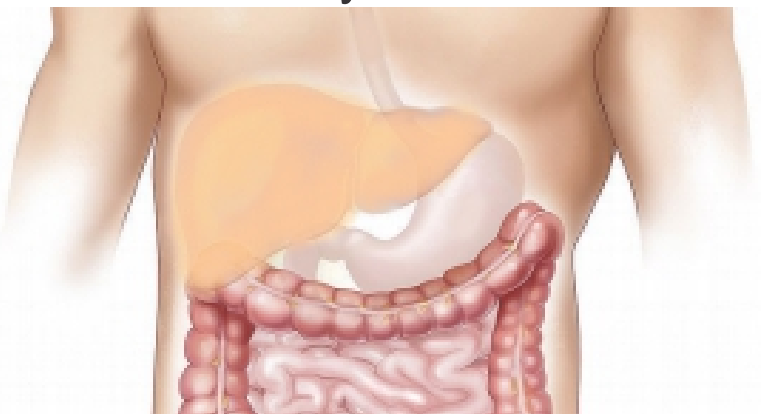
Introduction

In our clinics, quite often when patients come with complaints of gastritis, bloating, sense of fullness even after a small meal and mild discomfort below the rib on right side and we investigate further, we see that they are diagnosed with “fatty liver”. Let us go through this common problem, which is also a rising health concern and is now seen in nearly one third of our population. At the outset, let us appreciate that it is a disease of deranged lifestyle with limited treatment options; in fact, lifestyle modification is the only treatment in most cases. So, prevention is better than cure!

Healthy Liver



Fatty Liver





What is fatty liver disease? (commonly told as enlarged liver)

It is a condition when fat gets accumulated inside the liver. This excess fat in liver is troublesome and can lead to a spectrum of liver diseases with or without symptoms. While an enlarged liver is commonly due to deposition of extra fat, an enlarged liver could be due to a lot of other diseases and needs opinion from your physician.

Fatty liver problem is increasing day by day. Is it true?

Yes, it is true! The global prevalence is 22-28% i.e. about one fourth of world's population is struggling with the problem of fatty liver. Obesity and fatty liver show similar rising trends. Experts predict that in near future, fatty liver and its consequences will pose one of the biggest health hazards to mankind. India is also not away from the Global scenario as a developing country; rather, our situation seems to be even worse. About 30 crores of Indian have this problem. The irony of this problem is that 20% percent of the people in 20 years time (as per western data) will develop liver cirrhosis and/or liver cancer, which is beyond our imagination.

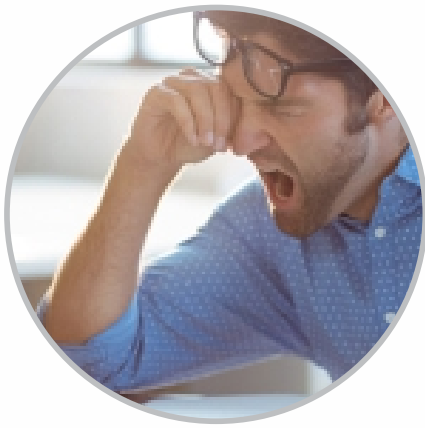
Why is my doctor worried about my fatty liver problem though I am fit and fine?

Fatty liver is a silent killer. When diagnosed, it is usually without any symptoms but over time can progress through stages of simple fat deposition (steatosis) to liver injury due to fat (Non Alcoholic Steato Hepatitis, NASH) to liver cirrhosis (irreversible stage, shrunken liver due to fibrosis). About 20% progress through this stages and subsequently develop complications of cirrhosis and liver cancer. In USA, fatty liver is the leading cause for liver disease, liver cirrhosis and liver cancer as well as for need of liver transplant. India has started showing similar trends. Fatty liver has huge financial implication in short term and long term as its consequences could manifest in the economically productive age groups.



What are the risk factors for fatty liver?

Obesity, diabetes, deranged lipid profile, hypertension, alcohol intake, lack of physical activity, smoking, faulty dietary habits i.e. excess of junk food, skipping breakfast/lunch with heavy dinner are the major risk factors.

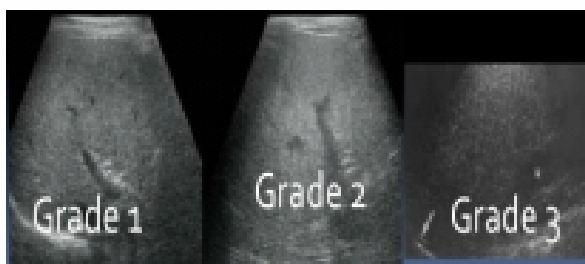


How do fatty liver present i.e. Symptoms of fatty liver?

There is no such specific symptom; a person with fatty liver may experience fatigue or abdominal discomfort/fullness particularly in right lower rib cage, and occasional pain.

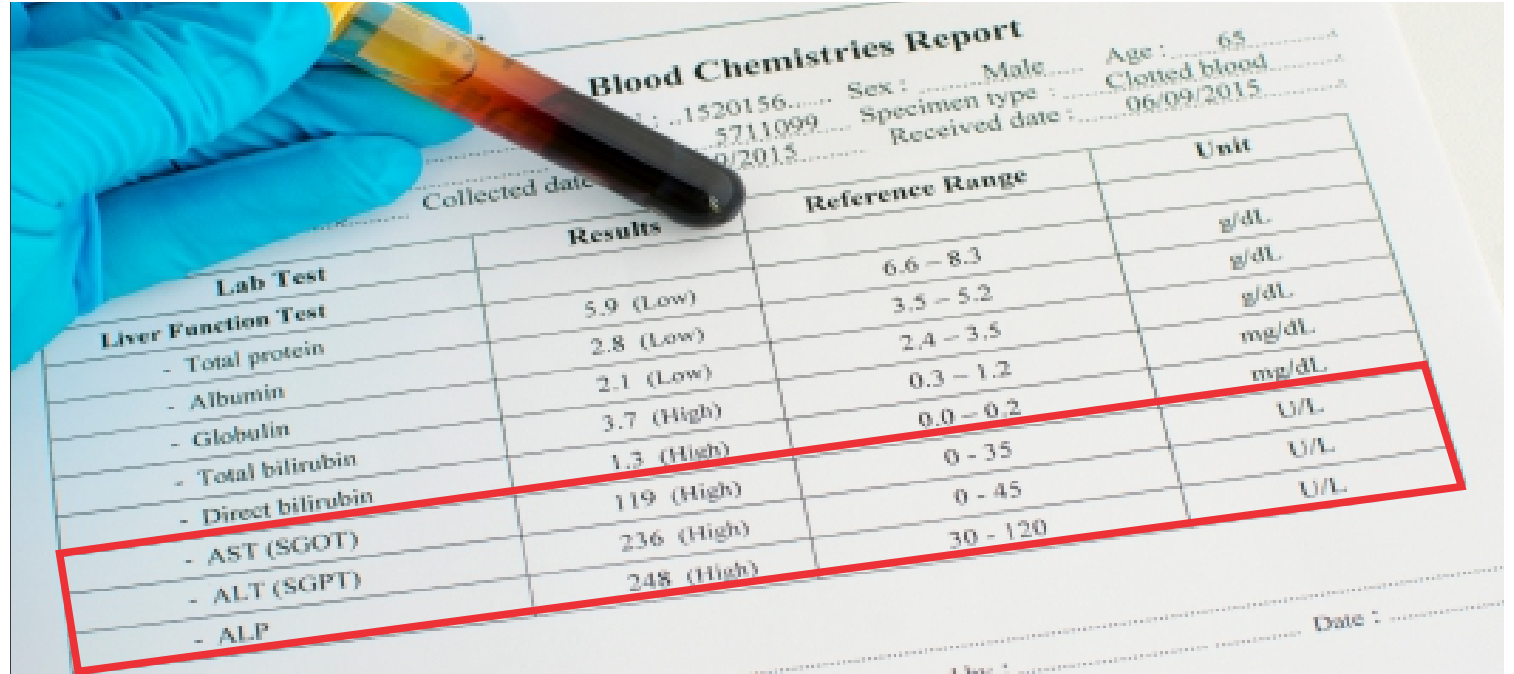
What are the tests needed for fatty liver?

An examination by the doctor an enlarged liver could be appreciated. Ultrasound abdomen and recently newer methods like liver stiffness (e.g., FibroScan, Fibrometer and a lot of other brands) can easily detect fatty liver. After diagnosing fatty liver,



further tests needed to find the cause, severity of problem and to guide the treatment. Test for sugar, cholesterol, triglyceride, thyroid, uric acid, hepatitis B & C helpful to know the causes. Liver function

test, endoscopy and if possible CT scan and sometimes liver biopsy to know the stage of disease and progression to cirrhosis.



Blood Chemistries Report			
Patient Information		Specimen Information	
Age: 65	Sex: Male	Specimen type: Clotted blood	Received date: 06/09/2015
1520156	5711099	9/2015	
Lab Test	Results	Reference Range	Unit
Liver Function Test			
- Total protein	5.9 (Low)	6.6 - 8.3	g/dL
- Albumin	2.8 (Low)	3.5 - 5.2	g/dL
- Globulin	2.1 (Low)	2.4 - 3.5	mg/dL
- Total bilirubin	3.7 (High)	0.3 - 1.2	mg/dL
- Direct bilirubin	1.3 (High)	0.0 - 0.2	U/L
- AST (SGOT)	119 (High)	0 - 35	U/L
- ALT (SGPT)	236 (High)	0 - 45	U/L
- ALP	248 (High)	30 - 120	U/L

Liver function test in fatty liver-what do I need to know?

In fatty liver disease, there is elevation in AST (SGOT) and ALT (SGPT) usually up to 2-3 times the upper normal limit. However, these could also be within normal ranges. Alkaline phosphatase (SAP) and GGT levels may rise 2-3 times greater than upper limit value in more than 50% of the patients with non-alcoholic fatty liver disease. Bilirubin elevation to up to 2 times (predominantly indirect bilirubin) is common; further elevation warrants immediate physician consultation.

Uric Acid and Fatty liver-Should I worry of it?

Serum Uric acid is often elevated in patients of NAFLD/NASH. It is an independent predictive marker for fatty liver. Also predicts as well as precedes the development of diabetes and Insulin resistance. Sometime may be associated with joint pain (especially, the great toe) and needs treatment. In most of the cases, elevated uric acid improves with weight reduction and diet modification.

Can I prevent fatty liver?

Yes, you can prevent fatty liver with proper control on diet, by quitting alcohol and undertaking regular exercise. Fatty liver is a disease of deranged life style, which includes an imbalanced diet and associated sugar and lipid problems. Addressing these issues will help to prevent development of fatty liver. In similar way it also helps in resolution of liver injury (NAFLD/NASH) and early fibrosis (liver hardness) too.

Can it be treated and cured?

There isn't a specific treatment using drugs or surgery for fatty liver. Instead, your doctor will advise you some recommendations that will reduce your risk factors like-1) avoiding alcoholic beverages 2) proper dietary modification 3) weight reduction 4) daily exercise or walk 5) adequate control of risk factors i.e. control of blood sugar, cholesterol, triglyceride etc.

Few drugs have been tried with limited success particularly in early stages. Surgical remedy are undertaken in terminal cases and options majorly include liver transplantation.

Fatty liver-needs no treatment with medicine, but with diet/lifestyle-is it true?

Yes, it's true! In majority cases diet and life style and weight reduction is the only treatment.



Is it serious and what is the future risk with Fatty Liver?

It could be serious if not prevented or treated on time. Continuous progression of fatty liver may worsen the case can progress to liver fibrosis, cirrhosis and increases the risk of developing liver related cancer.

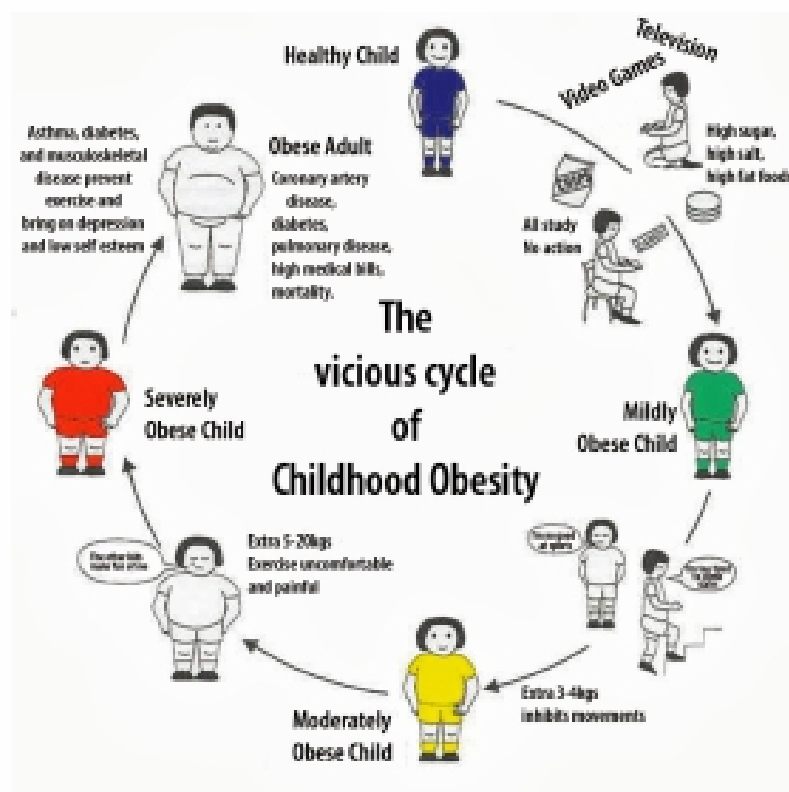
Is it a risk for kids too?

In ways similar to that in adults, childhood obesity is also increasing. 10-20% of children and adolescents have obesity, of which 50-80% have fatty liver in parallel to weight; about one fourth have NASH and progress to cirrhosis by adult age.



Does it run in family?

Yes, it has genetic predisposition. Obesity, diabetes, hypertension, deranged lipids runs in family. Physical activity is influenced by the family members, as is the dietary practice. This is also a reason why it runs in families. If any of the family members had or have liver cirrhosis related to NAFLD, then chances for cirrhosis due to fatty liver in family members increases 12 times suggesting a genetic predisposition.



Fatty liver can predict the future- non-liver problems-like-Diabetes, High Blood Pressure or heart disease?

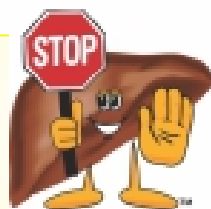
Yes, fatty liver is commonly associated with diabetes, hypertension or atherosclerosis leading to heart disease (CAD). But recent studies show that fatty liver could predict future development of diabetes or hypertension. Presence of fatty liver in diabetics predicts the future development of heart disease (CAD).

Can I drink alcohol after diagnosis of fatty liver?

No. It is strictly prohibited.

Fatty liver in absence of alcohol intake is a risk for disease, further additional drink is a risk factor for disease progression, and also the protective effect of alcohol to heart disease and others vanish. The studies yet did not show any favorable effect even with small doses. So, individuals with NAFLD should avoid alcohol consumption of any type or amount.

Once You have
Fatty Liver



No
Alcohol

What should I know about my diet for fatty liver?

Tips

- Maintain body weight
- Do regular exercise
- Never skip meals
- Eat small frequent meals.
- 12-15 glass water intake/day.

- **Avoid the following foods in your diet:**
 - o Foods rich in carbohydrates: e.g., white bread, white rice, sugar, high calories fruits like banana, mango, grapes, chikoo, custard apple, vegetables like roots and tubers like yam, arbi, potato.
 - o Foods rich in fat: e.g., butter, ghee, margarine, groundnut, coconut and all fried foods, etc.
 - o Foods high in cholesterol: Like egg yolks, red meat, shrimps, prawns, liver, cheese, and processed meats.
 - o Junk food: Carbonated drinks, fried food or fast food like burgers, pizzas.

Remember: -Breakfast like a king, lunch like a common man and dinner like a beggar

Eat small frequent meals. Usually it is best to have 5 meals a day with 3 larger meals such as breakfast, lunch and dinner and 2 smaller ones (as we call them – snacks). Of course, you should adjust this rule to your personal lifestyle. Just make sure you have at least 4 meals a day. Drink plenty of water (12-15 glass intake in 24 hour). It is best to drink water in between your meals



Please suggest me a complete diet plan for fatty liver

Early morning	6-7AM	Green Tea/ Lemon tea/ Black tea/ Coffee Biscuits 2nos (non-cookie)
Breakfast	8.30AM-9.30AM	Roti with Sabji / Daliya or Oats Upma with Green chutney / Sprouts salad/ brown bread stuffing (no butter) With whole fruits 100gm With Egg white / chhena (prepared with toned milk) Oat porridge/suji porridge No flavored musseli Skimmed milk 200 ml+ 2 boiled egg white
Lunch	1.30PM-2PM	Chapatti (Rice once/weekly) With Dal, vegetable curry, salad and curd Fish (smaller, preferably fish size of Less than 1kg) / lean chicken (weekly twice/100gm)
Evening	4PM	Green Tea/ Lemon tea/ Black tea/ Coffee Biscuits 2nos (non-cookie)
Late Evening	6PM	Sprouts salad/ brown bread stuffing/ wheat flakes with Toned milk etc....
Dinner	8.30PM-9PM	Chapatti with vegetable/Rajma/ cholle/ soyabeen etc....
Bed Time	10.30PM	Double toned milk 1cup

- ✓ 500ml oil used monthly and 15ml/day
- ✓ Non-veg: better options include fish and egg white but in limited quantity
- ✓ Add more fiber in regular diet like green vegetable, leafy vegetable, salads, sprouts, negative calories fruits like whole apple, whole guava etc.



What should I do on my activities?

Physical fitness is the most important preventive approach to obesity and in similar way, for fatty liver too. When you're obese, exercise feels harder -- every step puts excessive pressure on your joints. Once you've lost about 10 percent of your weight with dietary intervention, add light- to moderate-intensity exercise.

When you first start exercising, even just 20 to 30 minutes every day

of low-intensity movement will help. Break this up into 10-minute intervals, if needed. Eventually, do up to 90 minutes daily and 5-6 days a week is needed to lose weight, but this amount daily may take several months or even years to achieve.

Brisk walking, water exercise (swimming) and cycling are appropriate forms of exercise. Talk to your doctor about when you can safely add regular strength training, which helps build muscle to assist in weight loss.



Decision is Yours



The Resource Personnel Training, BBSR



The Resource Personnel Training, Gurgaon



Corporate Awareness



State Level Meeting of Core Group



ILPF Annual Day



ILPF Office

ILPF SLOGANS



Let the Fight Against
LIVER DISEASE
Start Today

ILPF Focuses on

1. Promoting healthy life style, nutritional advice and obesity prevention
2. To eliminate viral hepatitis by promotion of safe injection, mother –baby screening, vaccination for all and prevention of high-risk behavior.
3. Support for de-addiction support, creating awareness against alcohol abuse and consequences.
4. Organ donation awareness

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