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# Sowkhyा

Magazine™

## Alcohol

Isn't It Time To  
Cut Down?

## Fish

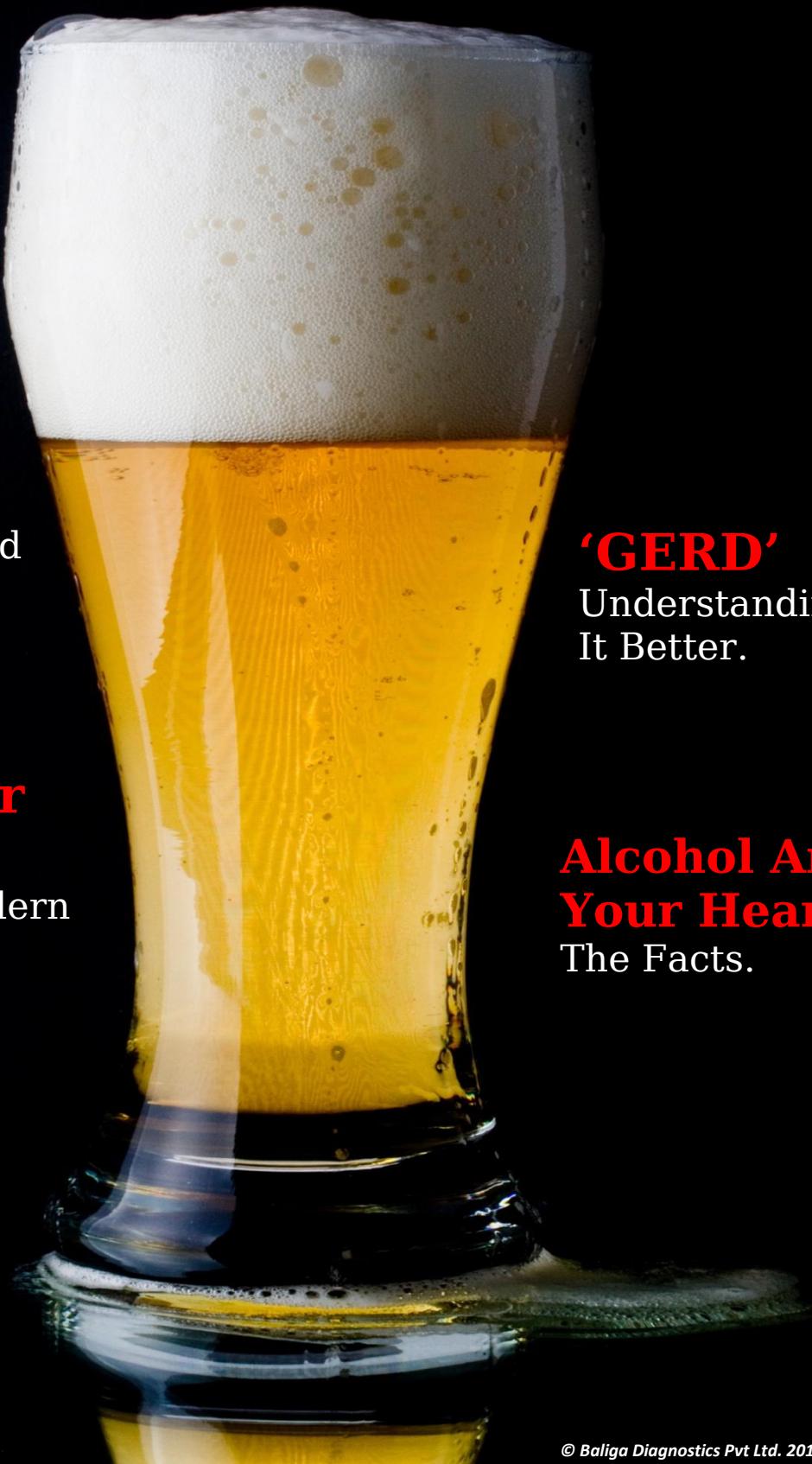
Important Facts and  
Health Benefits.

## Sir Alexander Fleming

The Saviour of Modern  
Medicine.

**'GERD'**  
Understanding  
It Better.

**Alcohol And  
Your Heart**  
The Facts.



## Welcome To the April Edition of Sowkhy Magazine™.

In our practice, we encounter a large number of patients who enjoy a drink once in a while to help them relax. This practice is frowned upon by certain cultures, while in some it is embraced with open arms and full glasses! In this edition of Sowkhy Magazine™, we have talked in detail about alcohol and the effects it has on the body.

The practice of alcohol consumption dates back thousands of years all the way to our ancestors and Gods. The consumption of alcohol was observed by the Indus valley civilization between 3000 and 2000 BC. Lord Indra is believed to have enjoyed partaking in *Sura*, an alcoholic beverage. *Sura* is brewed from wheat, rice meal, grapes and sugar cane juice, and was also enjoyed by the Kshatriya warriors. Alcohol consumption has also been described in the Ramayana and Mahabharata, more so in the former.

Alcohol has both benefits and risks, though this depends on how much is consumed. This knowledge dates back to the when Ayurvedic medicine was written, with texts describing benefits in moderation and toxic effects and liver damage in excessive amounts. This knowledge has not changed for hundreds of years; though our current knowledge has regarding alcohol is now a lot more advanced due to scientific research. European cultures believe that small amounts of red wine everyday can protect the heart, but it is clear that large amounts can damage different organs. Of course, it is not advisable to take up drinking alcohol just because it has certain benefits!

We have also discussed some interesting facts about fish in this edition. We have kept it light hearted, and I hope you find some of the facts discussed interesting and enlightening!

I hope you enjoy this edition of Sowkhy Magazine. I look forward to any comments or suggestions you have. If you would like to see a particular topic discussed, please do not hesitate to write! To your good health.....

**Dr B G Baliga**

**MD FRCP FICC**

Editor, Sowkhy Magazine  
Director, Baliga Diagnostics Pvt. Ltd.



## Alcohol - It's Time To Cut Down.

It's been a long hard day in the hot weather of India, and all you want to do is have a nice meal with the family and relax. While this appears to be the norm with many of us here in this great nation, some of us prefer to reach for a bottle of beer or a peg of whisky every evening.

There has been a great deal of controversy over the years about alcohol. Some schools of thought advocate regular consumption in moderation, while some advise complete abstinence. The amount that we consume depends on our personal preference, and what we feel is right for us to get us in the mood and relax us.

The fact of the matter is that alcohol in the short term may provide a sense of relaxation, over time regular consumption can become a problem and can damage a number of our vital systems.

### Effects of Alcohol on the Human Body

- 1. Brain** - Reduced cognitive function and ability to make decisions. Over time, it can reduce memory and alter coordination of the body. There is a high chance of developing a stroke.
- 2. Heart** - High intake of alcohol in binges or long term can affect electrical conduction within the heart and cause irregular heart rhythms and sudden cardiac death. The heart can enlarge and become weak, making it prone to heart attacks.
- 3. Liver** - Liver failure and cirrhosis are well known effects. Initial stages include increased fat deposition on the liver, which then progresses to thickening of the liver texture. The former is reversible on stopping alcohol, while the latter isn't.
- 4. Cancer** - High alcohol consumption can cause cancer of the mouth, esophagus (food pipe), throat, liver and even breast cancer.
- 5. Pancreas** - Alcohol is a well recognised cause of inflammation of the pancreas, called acute pancreatitis. If not treated urgently, this condition can be fatal.
- 6. Immune system** - High alcohol intake can weaken the body's immune system, increasing the chance of the person developing infections such as pneumonia and tuberculosis.

### But I enjoy a drink once in a while - how much can I have?

This is a common question we are asked a lot in our practice. There do not appear to be any specific guidelines on what is permissible and what is harmful, but the following information should help. In general, one standard size drink, which could include a can of beer, a peg of whisky or a small glass of wine, is calculated as 1 unit. In men, it is recommended that 21 units a week is safe (and no more than 4 units a day), as long as they observe 2 days free from alcohol. In women, 14 units is the maximum permissible, not exceeding 3 units a day with 2 alcohol free days. **Avoid drinking alcohol during pregnancy, before driving (against the law) or before operating heavy (and dangerous) machinery.**

One unit of alcohol amounts to 8g of pure 100% alcohol. In terms of quantities, it is equivalent to 25 ml of whisky (and spirits), half a glass of 12% strength wine or half a pint of regular beer. As you can see, these are small amounts, and the more you have, the more the units add up! Be aware of how much you drink, and if you feel you have exceeded the limit, it's time to cut down! If you wish to calculate how much you drink, check out our website and use our free alcohol calculator tool.

## Alcohol and Your Heart

We are all well aware of the damaging effect that alcohol has on our body. In a nutshell, excessive consumption of alcohol can damage our liver, cause memory loss, skin changes, weight loss and even cancer. But did you know that alcohol intake can also affect the function of your heart? Let's take a closer look at this here.

### Alcohol can increase cardiovascular risk factors

One of the primary disadvantages of consuming alcohol on a regular basis is that it can increase the chances of developing cardiovascular risk factors such as high blood pressure and diabetes. It can also elevate the levels of triglyceride fats in the blood. Alcohol is high in calories (1gm = 7 kcal), so it must come as no surprise that regular intake of high amounts of alcohol can cause obesity, which is a recognised risk factor for heart disease.

### Effects on the heart

It is a common misconception that drinking alcohol once in a while is better than drinking regularly. In fact, binge drinkers are more prone to developing conditions such as heart disease and stroke, especially if large amounts are consumed in that sitting. An excessive binge can also cause an irregular heart rhythm (called atrial fibrillation), and this is sometimes called 'holiday heart syndrome' (as people tend to binge drink when on holiday).

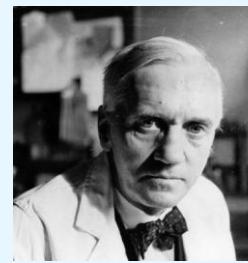
Long term consumption of alcohol can cause enlargement and weakening of the heart muscle - a condition called dilated cardiomyopathy. This can cause breathlessness and a reduced exercise capacity, and can over time be life threatening. Stopping alcohol consumption can prevent progression of this condition.

Finally, long term consumption of alcohol is associated with sudden cardiac death. This is due to the effect it has on the heart muscle and the electrical conduction of the heart. Patients can die without warning.

The effects described above are just tip of the iceberg! Cut down your alcohol intake today and live a healthy life.

## The Discovery of Penicillin - The Dawn Of A New Era In Medicine

For hundreds of years, humans have been affected by a variety of organisms causing infections such as gonorrhoea and rheumatic fever.



Up until the early 1800's, there was little doctors could do to treat infections in patients other than hope and pray their patients would get better. But on 28<sup>th</sup> September 1928, Sir Alexander Fleming (b. 1881) discovered Penicillin, and changed the face of medicine as we know it. The story of its discovery is rather remarkable. Read on.....

While conducting research in a laboratory at St. Mary's hospital, the Scottish scientist, who was suffering from a cold, discovered 'lysozymes' (a natural enzyme in the body) when a small drop of his nasal mucus dripped into a bacterial culture and killed the bacteria. This lysozyme was later found out to be a natural antibiotic.

In 1928, following a short break away with his family, Sir Fleming returned to his lab to reconvene his research. Upon his return, he found that a mold had grown on one of the bacterial cultures he had left outside. This mold was identified as *Penicillium notatum*, and this had killed the bacterial colonies around it. He called the substance released from this mold as 'mold juice', which he then later called 'Penicillin'.

This was no doubt a landmark in medical science, and dawned a new era of treating infections and healing patients. "I certainly didn't plan to revolutionize all medicine by discovering the world's first antibiotic, or bacteria killer. But I suppose that was exactly what I did" said Sir Fleming. The discovery won him the Nobel Prize.

To this day, medical professionals rely on penicillin to treat bacterial infections effectively in patients.

## Acidity? Indigestion? You Probably Have 'GERD'

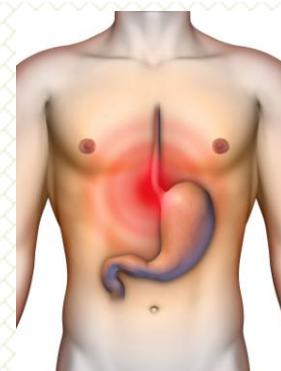
The food that we eat is broken down within our body through a complex digestive system. Our stomach forms an essential part of this system, and releases acid into its cavity when food is consumed to break it down into small molecules. The stomach acid has a pH of 1-2, making it a rather acidic solution. Along the lining of the stomach is a protective mucus layer that prevents the damage of the stomach from this acid. The junction where the food pipe (called esophagus) joins the stomach i.e. the gastro-esophageal junction is composed of muscle fibres that form a sphincter and prevent acid from flowing in an upward direction from the stomach into the esophagus. However, this upward flow may happen in some cases, resulting in gastro-esophageal reflux disease, sometimes called 'GERD' or 'acid-reflux disease'.

### Symptoms

Patients complain of pain in the upper abdomen and central chest discomfort. Excessive bloating and burping are common. Hiccups may also occur. Advanced cases of GERD can cause ulcers in the stomach or food pipe that bleed. Patients may vomit blood or pass jet black stools. This requires urgent treatment.

### Treatment and prevention

The best treatment is lifestyle changes. Stop smoking, cut down alcohol, reduce body weight and perform regular exercise. Avoid large meals and sleep propped up. Cut down spicy food intake. Any culprit medications will be stopped by the doctor. If acidity is a problem, patients can use over the counter antacids such as Mucaine gel to help relieve symptoms. Proton pump inhibitors (like pantoprazole and rabeprazole) are excellent treatments. In patients who do not respond to treatment, further tests such as an endoscopy and assessment of Helicobacter pylori (an organism that causes increases acid production) status may be needed. Other specialist tests exist but are only performed if needed.



### Causes and Risk Factors for GERD

1. Drugs - Aspirin, NSAIDS
2. High intake of spicy foods
3. Obesity
4. Smoking, alcohol and excessive coffee
5. Pregnancy
6. Lying down immediately after a heavy meal
7. Foods such as tomato, chocolate, mint and citrus fruits.

If you suffer from GERD and have vomited bright red blood or are passing jet black stools, seek medical help immediately.

# Fish - Some Interesting Facts and Health Benefits

Fish is an important part of the Indian diet, particularly along the coast. They are aquatic vertebrates that reside in the sea and in fresh water. They are broadly classified into different groups depending on their skeletal characteristics. One type has a cartilaginous frame that is tough yet flexible, and can grow into an incredible size (e.g. sharks). Another type includes fish with a bony skeleton that includes salmon, cod and herring. Another type includes fish with paired lobed fins, which are believed to be the ancestors of the four legged land vertebrates. Fish were the first vertebrate on the planet, and provided a basic body plan, which through millions of years of evolution has resulted in the human being. In fact, around 400 million years ago, fish looked like worms!

Fish swim around for a lifetime, and demonstrate specific migration patterns. Some fish migrate from sea to the fresh water (like salmon) and others from fresh water to sea (like eels). As cold blooded animals, their body temperature is similar to the surrounding water.

Humans have been catching and eating fish for thousands of years. They are also farmed in artificial ponds as early as 3500BC in China. Sadly, fish stocks have dropped due to over-fishing, and fish farming is growing rapidly. In the US in 1970's, 5% of the fish came from these farms, but this number has risen to 50% in the recent years. It is projected that by 2048, stocks of all sea food will have collapsed. Commonly farmed fish include salmon, cod and trout.

## Dietary benefits of fish

Fish are a good source of protein in the diet. They are particularly low in saturated fats, high in omega-3 fatty acids, vitamins D<sub>3</sub>, B and riboflavin. It is also rich in calcium, phosphorus and minerals such as iron, zinc and iodine. The American Heart Association recommends consumption of fish at least twice a week as the nutrients within fish can prevent stroke and heart attack.

Our body does not produce omega-3 fatty acids. Omega-3 fatty acids are essential to keep the heart and brain healthy. Good sources are oily fish such as salmon, herring, sardines and mackerel. Omega-3 fatty acids can reduce the blood pressure, and therefore prevent heart attacks, abnormal heart rhythms, sudden cardiac death and stroke. In addition, it can promote vision and brain development in infants during pregnancy. It may reduce the risk of depression and memory loss, along with the risk of inflammatory arthritis.

## Problems with fish intake

While the problems with fish consumption are minuscule, it is important to bear in mind certain harmful effects of fish on the body. Consumption of fish can increase uric acid levels in the blood, causing the deposition of uric acid crystals in the joints (such as the toes) resulting in a clinical condition called gout. They can also produce uric acid stones. Of course, these problems do not occur in everyone.

## Interesting facts

The regular consumption of fish and the benefits that it brings have been clouded by certain schools of thought that advocate the onset of mercury poisoning from eating fish. While this may be true with certain kinds of contaminated fish, one must have to consume a large amount to in fact develop this poisoning. Consuming oily fish 2 to 3 times a week has a low risk of mercury poisoning, as these fish have low mercury content. Fish with high mercury content include shark, swordfish and some tuna. These must be avoided in pregnant women, as mercury poisoning can cause mental retardation in infants.

Fish (though smelly!) is good for health, there is no doubt. Vegetarians can get their omega-3 from supplements that are now available.



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## April is Cardiac Care Month

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## Thought For The Month

'The mind is everything. What you think you become.' **Lord Buddha**