

SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Doctors/Readers,

Look beyond COVID 19 and think for general health matters. We hope that you all are well both physically and mentally. We are all shivering in the fear of COVID 19 and many of us have been waiting for Covaccine in India. Few countries have already started vaccination. But at the same time we cannot ignore our overall health matter. That is why we have decided to discuss a very important area of human health in this issue - Lipid and more precisely lipid profile tests.



What is Lipid and lipid tests?

Lipids are a group of fats and fat-like substances. They play a significant role in the constituents of cells and sources of energy. Most of the energy required by us in our body is provided by carbohydrates and lipids. Aiding digestion, lipids act as insulators as well.

A lipid panel or test measures the level of specific lipids in the blood. There are two prominent lipids - cholesterols and triglycerides. They are carried in the blood lipoproteins particles. So, by lipids testing doctors are interested in knowing the total cholesterol present within these lipoprotein particles.

Cholesterol

At present every common people are familiar with cholesterol and talk about it. Cholesterol is present in every cell of the body and has important role or natural functions when it comes to digesting foods, producing hormones and generating vitamin D. The body produces it but people also consume it through food. It is waxy and fat-like in appearance. There are two types of cholesterol, low density lipoproteins (LDL) or bad cholesterol and high-density lipoprotein (HDL) or good cholesterol. Actually cholesterol is both good and bad. At normal levels, it is an essential substance for the body. But if the concentration of it in the blood get too high, it becomes a great danger that puts people at risk of heart attack. Some of the root causes include diet, family history, unhealthy & idle lifestyle and consumption of alcohol & cigarettes.

Why is regular testing of cholesterol important? This is because having high cholesterol does not usually produce any symptoms. Therefore, one has to take precautionary measures about controlling cholesterol in his/her blood. In the next story there has been a detailed discussion on matters relating to testing of lipid profile.

Wishing you a very safe and happy new year 2021!

With thanks,

Sanjib Acharya

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High cholesterol produces no symptoms - regular testing is the only way

Who should go for cholesterol test?

The American Heart Association recommends that adults should have a cholesterol test done every four to six years, starting at age 20. But people with high cholesterol levels or other chronic health conditions should get tested more often. Importance of testing remains in knowing whether the different types of cholesterol considered normal, potentially risky or high. But person with diabetes may need to aim for even lower number.

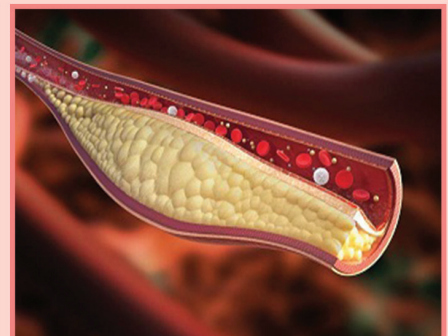
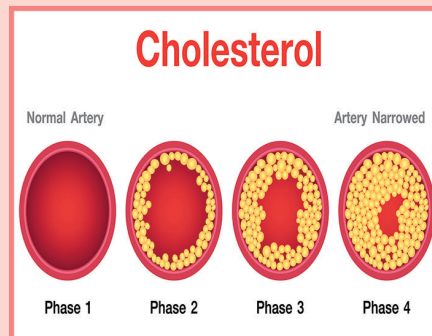
Does one need to fast before giving blood for lipid profile test?

It depends. Cholesterol can be measured without fasting. Earlier experts believed that fasting ahead of time produces accurate results as one's LDL may be affected if she/he has recently eaten. Even triglycerides (another type of fat in blood) may also be affected by recent meal. But recent guidelines, published in the Journal of the American College of Cardiology, say that people who are not taking statins (cholesterol lowering medicines) may not need to fast before having their blood tested for cholesterol. But one should take doctor's advice before testing.

How one should read test results?

Total cholesterol is the overall amount of cholesterol found in blood. Acceptable: below 200 mg/dl (milligram per decilitre), borderline: 200 to 239mg/dl, High: 240 mg/dl or higher

GGT		
HbA1C		
FBS/Glucose		
Lipid Profile		
- Cholesterol	175	mg/dL
- Triglyceride	40	mg/dL
- HDL-C	89	mg/dL
- LDL-C	76	mg/dL
Total protein		g/dL



LDL (bad cholesterol):

Acceptable: Below 70 if coronary artery disease is present. Below: 100 mg/dl if at risk for coronary artery disease or have a history of diabetes. Borderline: 130 to 159 mg/dl. High: 160 mg/dl or higher. Very high: 190 mg/dl and above.

HDL (good cholesterol):

Acceptable: 40 mg/dl or higher for women. Low: 39 mg/dl or lower for men and 49 mg/dl or lower for women. Ideal: 60 mg/dl or higher.

What are the next steps as a precaution?

One should change his/her lifestyle to lower cholesterol levels by quitting tobacco and limit alcohol consumption, avoid high-fat and high-sodium foods and maintain a balanced diet. Additionally, one should eat variety of vegetables, fruits, whole grain products, low-fat dairy products and lean sources of protein. Exercise regularly. One should keep in mind that obesity is also a risk factor for high cholesterol and heart disease.

A new invention of mask with special acoustic effect

Use of mask has been a part of life almost everywhere in the world in the pandemic phase. Almost every one feels while talking also creates corresponding problems of listening of others. In this regard University of Illinois Urbana-Champaign, has recently been in the news. A team led by Professor Andrew Singer at the University studied audio signal processing, especially for listening devices like hearing aids. Recently a report has been published in the Journal of the Acoustical Society of America about the team's new study that evaluates the acoustic effects of face masks on speech.

The first problem arose in the education sector, particularly, in teaching in the USA. A famous science journal Science Daily reported that Rayan Corey, a research scholar who also teaches at a school found the problem in communicating with her students in classroom as some students have problem in hearing. She went to the university with a hope of having a solution of the problem, but after the discovery it is expected that the new device will help crores of people in talking and listening talks in their work. So, it is really a revolution in this respect. So the newness of the invention is that, earlier no one had looked at the acoustic effects caused by using different kinds of fabric face masks.



The method of research

The researchers used a special loudspeaker built by a School of Arts and Design and shaped like a human head so that sound radiates as it would come from a human mouth. Then the researchers put different masks onto the head-shaped loudspeakers and played the same sound for every test. And it was also placed at the speakers onto a turntable to add a directional component to their data or information. The team collected data from a mask wearing human speaker as well. The data showed that all mask muffle the quiet, high frequency sound generated when a person pronounces consonants. Masks also block visual cues like facial expression and lip motion. So, speech reading is no longer an option when wearing most masks. It has been a challenge for those without hearing loss with or without masks and even become a challenge for those without hearing loss when you throw a mask into the mix.

Conclusion

The good thing of the invention has been that most masks do not completely block sound. They simply deflect it away from mouth. This means that simple amplification devices can make masked speech more accessible to everyone. But the question remains how far it can reach even to common people of the developing countries so that a large section can reap the benefits of this invention.

The Journey of SERUM throughout December, 2020



Dec 5: Organises Blood Donation Camp & remembers Soumitra Chatterjee with the film-screening of "Apu Katha" Concepted & Directed by Sri Sanjib Acharya

Annual Sales Meeting, 2020 - 21



Dec 12: Siliguri Meeting



Dec 16: Malda Meeting



Dec 19: Jharkhand Meeting



Dec 20: Bhagalpur Meeting



Dec 24: Silchar Meeting



Dec 26: Patna Meeting



Dec 23: Organises Health Check-up Camp in association with All Friends Club



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