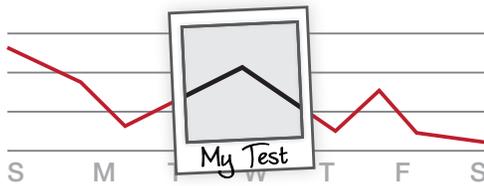


Factors that Influence Your Lipid Test Results



Your lipid test results are constantly changing. A test result one day might be higher or lower than your previous or next test result. Why? Your lipid test results are a snapshot of your body's varying cholesterol level. Variation is normal and can be expected on a day-to-day and seasonal basis. On top of that, many factors—from what you eat to your exercise habits—can affect your cholesterol level.

Short-Term Factors

Fasting

Fasting is recommended for 9 to 12 hours before testing to avoid misleading triglyceride and LDL results.

Lifestyle

Strenuous exercise can cause triglyceride and LDL levels to decrease and HDL levels to increase. Avoid strenuous exercise 24 hours before your lipids are tested.

High stress can result in up to a 10% decrease in HDL levels.

Sitting for 15 to 20 minutes after standing for a period of time can reduce triglyceride levels as much as 10%.

Health Conditions

Infections and inflammations can cause triglyceride levels to increase and total cholesterol and HDL levels to decrease.

A **heart attack or stroke** within the past three months can cause total cholesterol and LDL levels to decrease. After a heart attack or stroke, wait at least three months before testing lipids.

Long-Term Factors

Diet

Eating habits can significantly change lipid profile results. A balanced diet full of fruits and vegetables can improve lipid results.

If you significantly change your dietary habits, wait 3 to 6 months before retesting your lipids.

Lifestyle

Regular exercise can contribute to lower LDL and triglyceride levels.

Smoking can decrease HDL levels as much as 13%.

Increased **alcohol consumption** can reduce LDL and HDL levels, and increase triglyceride levels.

Health Conditions

Diabetes and obesity indicate a higher risk of coronary heart disease. Diabetes is associated with higher triglyceride levels and lower HDL levels. Obesity is associated with higher triglyceride and total cholesterol levels, and lower HDL levels.

Weight fluctuations can result in lipid variations.

Expected Variation

The following percentages represent average day-to-day variation for lipid test results:

| | |
|--------------------------|-------|
| Total Cholesterol | 6.9% |
| HDL ("Good" Cholesterol) | 12.4% |
| Triglycerides | 27.8% |
| LDL ("Bad" Cholesterol) | 9.5% |

Learn More:

American Heart Association www.heart.org

Preventive Cardiovascular Nurses Association www.pcna.net

References:

- Deeg, M. Variations in Lipid Values, TB003. 2006; 1(3). Available at: <http://www.cardiochek.com/why-cardiochek/medical-education/white-papers>. Accessed January 2, 2014.
- Lacher DA, Hughes JP, Carroll, MD. Biological Variation of Laboratory Analytes Based on the 1999-2002 National Health and Nutrition Examination Survey. *National Health Statistics Reports*. March 2010; 21:1-8.
- Lacher DA, Hughes JP, Carroll, MD. Estimate of Biological Variation of Laboratory Analytes Based on the Third National Health and Nutrition Examination Survey. *Clinical Chemistry*. February 2005; 51(2):450-452.
- Recommendations on Lipoprotein measurement from the working group on lipoprotein measurement. *National Institutes of Health Publication No. 95-3044*. September 1995.
- Rifai N, Warnick GR, Dominiczak MH, eds. *Handbook of Lipoprotein Testing*. Washington: AACC Press; 1997.