

## LAB REPORT

**101-125 = Borderline**

**GLUCOSE** - goal 70-100 yours \_\_\_\_\_ (diagnosis of diabetes is when 126 or above is seen 2 times)

When your body digests carbohydrates, it's broken down into glucose. Glucose is the same thing as blood sugar. The American Diabetes Association changed the top end to 100 instead of the older 110 because 15% of people with fasting sugars between 100-110 will go on to become diabetic.

**HbA1c** (Glycosylated hemoglobin) -goal < 5.7% yours \_\_\_\_\_

Imagine doing 100 blood sugar readings a day for three months. HbA1c is an average of all these readings without having to do all the pokes. The test actually measures the amount of sugar that attaches to protein in the Red Blood Cells. Because red blood cells live about 3 months, the test shows the 3 month average. HbA1c is analyzed as a percentage. Here's a chart comparing % to glucose.

**Sugar over 200  
 impairs wound  
 healing!**

4%	60	in control
5%	90	in control
6%	120	in control
7%	150	in control – for damage prevention only
8%	180	out of control – damage starting
9%	210	out of control
10%	240	out of control
11%	270	out of control
12%	300	out of control
13%	330	out of control

**15 gm carb  
 ↑ blood sugar  
 30-45 pts**

Reducing your Alc by just 1% greatly reduces your risk of diabetes complications. For example, decreasing your Alc from 8% to 7% reduces your risk of eye, kidney, and nerve damage by 35%.

**TRIGLYCERIDES (TRIG)**- goal <150 yours \_\_\_\_\_

Triglycerides are made when the body isn't using all of the fats and carbohydrates you eat. When glucose floating around in the blood meets up with free fatty acids floating around, they combine and are called a triglyceride.

Think of this as a "bad match" which you'll want to break up. Alcohol causes matchmaking too (which increases triglycerides). This lab will bounce around quickly. Exercise and fiber lower TRIG.

Total **CHOLESTEROL (CHOL)** goal <200 yours \_\_\_\_\_

You may even see the goal as <180 if there are other heart disease risk factors or strong genetic disposition.

Total CHOL= HDL + LDL + VLDL

Most vegetarians have a cholesterol <150.

**LDL** -Low-Density Lipoprotein Cholesterol goal <130 (or <100 if other risk factors and <70 if at high risk) yours\_\_\_\_\_

This is the "bad" cholesterol. Think Loser, Lowlife, Lousy and you want Less of them. These are the globules that stick to arteries and clog them. We can lower the losers by increasing soluble fiber. Unfortunately, exercise doesn't decrease these but if you lose weight (via diet and exercise) they should come down.

**HDL**- High-Density Lipoprotein Cholesterol goal over 50 (45 for men) yours\_\_\_\_\_

This is the "good" cholesterol. Think Hero, Happy, Healthy, and you want them Higher. HDL's act like the video game PacMan. They try to keep arteries clean by preventing LDL from sticking. Exercise will increase these. The threshold is 7 (15 minute) segments of aerobic activity per week. Every 15 minute segment above and beyond this will increase HDL by 0.4 points.

**VLDL** -Very low density lipoprotein is a globule more in transition and is not a factor yet. It's usually 20-30 points of your total cholesterol. Yours \_\_\_\_\_

**RATIO**- What percentage of your total cholesterol is made up of HDL (Hero's)? goal <4.0 yours\_\_\_\_\_

This is calculated Total Cholesterol/HDL

example total 200, HDL 50  $200/50 = 4.0$

Sometimes people have such a high HDL that it skews the total to be higher pushing it over the 200 mark, to this is when ratio is important.

**HOMOCYSTEINE**- goal < 11.4 yours \_\_\_\_\_

This is an amino acid (broken down protein) normally found in the blood however sometimes the levels become excessive. High levels of homocysteine may damage the arteries or make blood more likely to clot. Low intakes of folic acid, vitamin B12 and B6, seemed to be linked with higher levels of homocysteine.

**CRP, CCRP or C-Reactive Peptide**- goal < 1.0 yours\_\_\_\_\_

This is a lab that shows inflammation in the arteries. A higher level may indicate unstable plaques in the arteries which could break off and cause blockages, or collect more of the "pieces" floating around. This would cause a growth in thickness, which would decrease the amount of blood flow through arteries. Omega-3 fatty acids are believed to decrease inflammation, such as fish and flax. High fat animal products may increase inflammation.

**BLOOD PRESSURE** goal  $\leq 120/80$  yours\_\_\_\_\_

The top number signifies the pressure in your artery when your heart beats and pushes blood away. If you're really dehydrated and blood is viscous (thick) it'll back up at the pump (heart) and the top number may be raised because of this. It will also be elevated if the blood is having a hard time moving through the artery due to plaque being in the way. The bottom number is the pressure in the artery in between beats. This shows how much the artery is "being squeezed". Smoking and stress causes it to constrict. Lack of exercise and aging decrease the elasticity in the artery which will also make this number go up.