

The VAP Test

By Donna DiMarco, CN, LNC.

The Standard American Diet has paved the way for increases in dysglycemia (hypoglycemia, insulin resistance and diabetes). Obesity is more prevalent, even among children. The correlation between these conditions and cardiovascular disease is obvious and results in CVD remaining our nation's number one killer even with constant monitoring of standard lipid tests.

Most doctors monitor total cholesterol, HDLs, LDL, routinely, yet not a dent is being made in the mortality rates of cardiovascular disease. We still get blocked arteries, need by-passes, and lose lives due to infarcts. In fact, more than half the people with normal cholesterol tests have had heart attacks. We must be missing something; there is more to the picture than a cholesterol panel, which has only a 40% predictive value for coronary heart disease (CHD).

Maybe it is time for a change. Maybe we, the practitioners, have a responsibility to educate our patients a step further, here is my challenge to you: **Teach all your patients the importance of the VAP® (Vertical Auto Profile) Test.** This battery of 15 lipid components identifies up to 90% of the patients at risk for CVD, which is more than twice as many as the standard cholesterol tests. By identifying the components of LDL we can more accurately assess the risk.

But what exactly is a Low Density Lipoprotein (LDL)? Lipoprotein particles are comprised of apolipoproteins, phospholipids, triglycerides and cholesterol surrounded by a thin shell which allows it to float throughout the body in the bloodstream. Free fatty acids taken up from the bloodstream by the liver create the majority of triglycerides. When the cholesterol and triglycerides are coated by a thin protein shell they become VLDLs. This occurs in the liver. As the VLDLs leave the liver they are affected by lipoprotein lipase which breaks the triglycerides in the VLDL down to fatty acids and glycerol, which are released into the bloodstream leaving the remaining parts of the VLDL to become the more dense LDL, which is primarily comprised of cholesterol. This LDL, or "bad" cholesterol is known to be an important risk factor for CVD. For this reason we have measured the total level routinely and if the number was acceptable we considered the risk minimal.

Here's an example: a person whose LDL cholesterol value is 140 mg/dL may not be flagged as a high risk, but with the VAP test that LDL value is broken down further into its components: Intermediate Density Lipoprotein (**IDL**), which is an inherited risk factor for heart disease and is elevated with a family history of diabetes, **Lp(a)** cholesterol, a high risk factor for heart disease that does not respond to the typical LDL lowering drugs, and the **LDL-R (Real)**, which is the remaining part that does respond to statins.

When armed with this information one can choose a more strategic attack on how to reduce the CVD risk based on the specific condition of each patient.

Don't forget about the HDLs, which are the most dense due to the highest protein content. HDLs are mostly produced in the liver and intestines but then circulates in the blood stream picking up cholesterol from dying cells and other sources and either donated the cholesterol to other lipoproteins for transport back to the liver or is travels directly back to the liver to release the cholesterol for excretion. HDLs also blocks the oxidation of LDLs so we still want a healthy number here as well.

In addition, the VAP also helps identify the risk for metabolic syndrome by identifying the risk factors : **elevated triglycerides, low HDL/HDL2 and small LDL particles.** Since more than 55 million adults in the US are affected by metabolic syndrome and the risk of CVD increases with it, this information becomes an important tool to identify the need for lifestyle modification.

Tell your patients the facts and routinely replace the standard cholesterol tests with the VAP test. This test is relatively inexpensive and 90% effective in saving lives. Will you take the challenge?

For more information on the VAP test and professional pricing, call Professional Co-op Services at 866-999-4041. Due to their high volume of testing, Professional Co-op provides reduced pricing for you and your patients.