



## LDL Cholesterol - Protocol & Procedure

### Policy:

The Keep Canada Slim program for decreasing high levels of serum LDL cholesterol is to decrease both the amount of cholesterol consumed in the diet, and the amount created by the liver in response to detrimental fats in the diet. In addition we encourage the consumption of foods that increase HDL cholesterol levels, and high-fibre foods that help block the absorption of cholesterol.

Cholesterol is generally divided into two types: LDL or "bad" cholesterol that leads to arterial deposits, and HDL or "good" cholesterol that actually reduces the risk of arterial plaque build up.

Cholesterol is a waxy, fatlike substance that is naturally present in cell walls or membranes everywhere in the body, including the brain, nerves, muscles, skin, liver, intestines, and heart. The amount produced by the liver is influenced by the fat content of the diet, specifically saturated fats. These include beef, pork, veal, milk, eggs, butter, and cheese. Additionally, packaged foods that contain coconut oil, palm oil, or cocoa butter often have a lot of saturated fat, as do many stick margarines, vegetable shortening, and most cookies, crackers, chips, and other snacks.

Too much LDL cholesterol in the bloodstream may lead to deposits in arteries, including the coronary (heart) arteries, where it contributes to the narrowing and blockages that cause the signs and symptoms of heart disease.

### Procedure:

The Keep Canada Slim program is slightly more stringent than the dietary recommendations of the **Therapeutic Lifestyle Changes (TLC)** diet for high cholesterol created by the **National Cholesterol Education Program (US)**.

Specifically we educate patients on the benefits of:

1. Reducing fat to less than 20% of the total calories consumed
2. Avoiding saturated and hydrogenated fats
3. Increasing the intake of monounsaturated fats such as olive oil, canola or peanut oils
4. Increasing the intake of Omega 3 fats (from tuna, salmon, almonds, walnuts and flax seed)
5. Increasing the intake of complex carbohydrates which contain fibre

Additionally we offer an optional supplement program featuring key nutrients which help control cravings for fats and sweets. The TLC program was designed for cholesterol level maintenance. The KCS program is designed first to create weight loss. Losing weight is one of the best treatments for high cholesterol readings.

People who have high cholesterol because they eat too many fatty foods may be able to lower their cholesterol 5% to 20% with diet changes alone. Those who are most successful using diet changes to lower their cholesterol are those who lose excess weight. KCS also has a strong focus on counting calories, a key to successful control of cholesterol.

Sources: *eMedicineHealth.com*; *National Cholesterol Education Program, U.S. National Institute of Health*; *webmd.com*  
*Grundy SM, et al. (2001). Executive summary of the third report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). JAMA, 285(19): 2486-2497.*