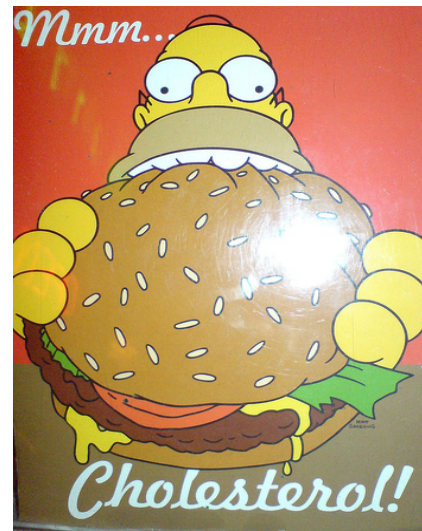


*The Silent Deadly Duo*



Most of us are aware that heart disease is the number one cause of death in the United States; there are many reasons for that (not the least of which is that we all die of something), but two very important reasons are “The Silent Deadly Duo”:

**High Blood Pressure**  
*and*  
**Elevated Cholesterol**

Let’s examine each of these health issues.

## Hypertension (High Blood Pressure)

At least 95% of people with hypertension have “essential hypertension”, which means that there is no known cause.

Blood pressure is a measure taken when the heart pumps (systolic pressure) and when the heart rests (diastolic pressure).

Normal blood pressure is a systolic pressure of 120 and diastolic pressure of 80, usually expressed as:

120/80

Any reading greater than:

140/90

is considered high blood pressure, or hypertension. Readings between those two are borderline or “pre hypertension”. Increased pressure in the blood vessels damages the lining and is the most common risk factor for heart attack and stroke.

There are many risk factors for hypertension that should be considered:

1. Race
2. Salt intake
3. Excessive alcohol intake
4. Obesity
5. Personality trait
6. Birth control pills
7. Sleep apnea
8. Kidney disease
9. Other rare factors

Fortunately treatment is not only available but also proven to be valuable in preventing the consequences of hypertension.

Treatment has been shown to reduce the incidence of stroke by 40%, heart attack by 25% and heart failure by 50%. Treatment can include:

1. Diet and exercise
2. Smoking cessation
3. Relaxation therapy
4. Medications
  - a. Diuretics
  - b. Beta blockers
  - c. ACE inhibitors
  - d. ARB's
  - e. Calcium channel blocker
  - f. Alpha blockers
  - g. Aldosterone antagonists

## Hyperlipidemia (Elevated cholesterol)

Cholesterol is one of the fats in your blood. It is an essential building block of many cells and hormones in the body. But too much cholesterol can build up in the blood vessels and block the flow of blood and thus oxygen to vital organs of the body. Just like high blood pressure, this damage to the blood vessels causes no symptoms at all, until it's too late and a stroke or heart attack occurs.

The main cause of high cholesterol is heredity: basically your body just makes too much. Diet, primarily saturated fat, does play a role as does obesity, age and gender, but the primary cause is genetics.

Cholesterol is composed of several different parts, the most important of which are:

1. Total cholesterol
2. Low density lipoprotein (LDL)
3. High density lipoprotein (HDL)
4. Triglycerides (TG)

The LDL is the BAD cholesterol that clogs the arteries and the HDL is the GOOD cholesterol that helps to prevent the buildup. Triglycerides are not as well understood but can increase the risk of heart disease and pancreatitis.

The first step in evaluating your cholesterol is to get a fasting lipid profile.

Optimal levels are:

TOTAL CHOLESTEROL	<200
LDL	<100
HDL	>60
TG	<150

Borderline levels are:

TOTAL CHOLESTEROL	200 - 240
LDL	100 - 160

But one's personal health determines what your goals should be. For example, someone with no risk factors for heart disease might be considered normal with an LDL of 160 but someone with multiple risk factors, such as diabetes, smoking, hypertension, family history, age etc. may have a goal below 100. Treatment has definitely been shown to decrease the risk of heart attack and consists of:

1. Diet – Low in saturated fat and trans fat as well as cholesterol
2. Exercise – Raises HDL and lowers LDL
3. Weight loss- Especially for those with large waist measurements (40 inches or more in men, 35 inches or more in women)

4. Medications –
  - a. Statins can reduce LDL by 60%
  - b. Nicotinic acid
  - c. Ezetimibe – use in combination
  - d. Bile acid sequestrants



## Summary

Treatment is available for two major causes of 500,000 deaths in the United States annually – the Silent Deadly Duo of hypertension and elevated cholesterol. Although medications can cause side effects, usually a treatment can be found that works and is side effect free. All of us need to be checked!

## References:

Up to date  
National Institute of Health  
National Cholesterol Education Program