

CHOLESTEROL

and Heart Disease

Should I worry about cholesterol?

RECOMMENDATION: Eat a balanced diet and maintain a healthy body weight to ensure proper blood levels of cholesterol.

What's the evidence?

For Prostate Cancer *Prevention*?

High cholesterol levels might increase the risk of prostate cancer:

- Men with heart disease might have a higher prostate cancer risk and researchers think that high blood fats like cholesterol are partly responsible.¹
 - A recent research review found that high cholesterol and triglycerides as found in heart disease are linked to a higher risk of aggressive prostate cancer.²
- Although lowering cholesterol can reduce heart disease risk, we don't know if it will also lower prostate cancer risk.
 - However, some research has shown that men without prostate cancer who take cholesterol lowering drugs called statins might have a lower risk of aggressive prostate cancer.³

For Prostate Cancer *Treatment*?

High cholesterol levels might increase the progression or recurrence of prostate cancer:

- Some - but not all - studies have shown that patients with too-high cholesterol are also more likely to develop aggressive prostate cancer.⁴
- This suggests that patients who lower their cholesterol through diet and by taking statins might slow prostate cancer growth or return.
 - Some studies have found that patients who take statins are less likely to have prostate cancer return after treatment.⁵
 - However, there is not enough research to recommend that all patients start taking statins after a prostate cancer diagnosis.

Confused by cholesterol?

Cholesterol is important for good health but having too much in your diet or blood can lead to clogged arteries, heart attack and stroke.

Cholesterol facts:

Dietary cholesterol is found naturally in all animal foods such as meat, seafood, poultry, egg yolks, and dairy products.

- Plant foods such as legumes, fruits, grains, vegetables or even high fat items like nuts or vegetable oils do not contain cholesterol.

Blood cholesterol is a natural part of our blood fats (or 'lipids') and is used by the body in many ways – such as for making vitamin D, hormones and bile for digesting fats.

- **LDL**, or **low-density lipoprotein**, is also known as 'bad blood cholesterol' because it builds-up plaque in arteries.
 - *High LDL is unhealthy.*
- **HDL**, or **high-density lipoprotein**, is also known as 'good blood cholesterol' because it carries plaque away from artery walls.
 - *High HDL is healthy.*
- **Triglycerides** are not cholesterol but are another kind of blood fat.
 - *High triglycerides are unhealthy.*

Eating balanced diets that promote healthy blood cholesterol levels might help prevent prostate cancer or reduce cancer progression or recurrence for men already diagnosed with prostate cancer.

Get your cholesterol checked!

High blood cholesterol, especially LDL is a concern because it raises heart disease and stroke risk:

- Leads to hardening and narrowing of arteries or **'atherosclerosis'**, making it harder for blood to circulate.
- Cholesterol build-up in arteries called **'plaque'** can break off and block blood flow to the heart and brain.

What causes high blood cholesterol?

- Things you cannot control, like genetics, family history and age [over 45].
- Other things you can control, like smoking, high blood pressure, being overweight, not exercising and bad diet.
 - Eating too much saturated and trans fats.

Reduce your blood cholesterol!

Eat more 'heart healthy' foods that lower overall cholesterol and LDL and raises HDL.

- Eat less food that contains high amounts of cholesterol, saturated and trans fats.
- Eat more high-fibre foods.

Statins

Are drugs that lower cholesterol and other blood fats and can reduce the risk of heart attack or stroke.

- Common statins used in Canada are Lipitor (atorvastatin), Zocor (simvastatin), Mevacor (lovastatin), Lescol (fluvastatin), Pravachol (pravastatin) and Crestor (rosuvastatin).

Red Yeast Rice extract - a natural statin?

Red Yeast Rice extract or RYR is a supplement made from fermented rice and used in China for treating heart disease.

- Contains monacolin K, a natural statin identical to lovastatin.
 - RYR supplements are unregulated and the amounts of monacolin K in them vary considerably and might have serious side-effects, so they are not recommended by Health Canada.
- Although shown to lower cholesterol and slow the growth of prostate cancer cells in some lab studies, we don't know if RYR will reduce heart disease or slow prostate cancer growth or return in patients.

Heart healthy foods are also prostate healthy!

Eat more...	Instead of...
Fish, skinless poultry, lean meat, beans	Organ meats (like liver), sausages and other processed meats
Vegetable oils: corn, canola, olive, soybean; Fish oils/omega 3s, nuts and seeds	Saturated and trans fats: animal fats, butter, lard, hydrogenated margarine
Skim or low-fat milk, yogurt, sorbet	Whole milk, cream, cheese, ice cream
Steamed, baked or roasted foods	Sauces, deep-fried foods
Clear soups	Creamy soups, chowders
Whole grains, high-fibre cereals	Products made with refined, white flour
Whole fruit, vegetables	Juice, sugar
Egg Whites	Egg yolks

Can I eat eggs? Because eggs are high in dietary cholesterol, we thought eating them would raise blood cholesterol.

- We now know that the liver makes most of our blood cholesterol and dietary cholesterol is not as important as saturated and trans fats from food.
- However, it's best to eat no more than 4 eggs per week if you have high cholesterol.

1. Thomas JA et. al. Prostate cancer risk in men with baseline history of coronary artery disease: results from the REDUCE Study. *Cancer Epidemiology Biomarkers & Prevention*. 2012; 21(4): 576-81.
2. Shafique K, et. al. Cholesterol and the risk of grade-specific prostate cancer incidence: evidence from two large prospective cohort studies with up to 37 years' follow up. *BMC Cancer*. 2012; 12:25.
3. Hamilton RJ, Freedland SJ. Review of recent evidence in support of a role for statins in the prevention of prostate cancer. *Current Opinions in Urology*. 2008; 18(3):333-9.
4. Platz EA, Clinton SK, Giovannucci E. Association between plasma cholesterol and prostate cancer in the PSA era. *International Journal of Cancer*. 2008; 123(7):1693-8.
5. Hamilton RJ, et. al. Statin medication use and the risk of biochemical recurrence after radical prostatectomy: results from the Shared Equal Access Regional Cancer Hospital (SEARCH) Database. *Cancer*. 2010; 116(14): 3389-98.

This information is not meant to replace advice from your doctor or dietitian.



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