

Q&A with Stephen Cherniske
Chief Scientific Officer
Univera, Inc.

Reviewed by: Jeffrey Johnson, M.D., Cardiology Board Certified

Topic: Blood Thinners and Natural Products

Question: It seems that half of my baby boomer friends have been prescribed Coumadin to thin their blood. Many are advised not to eat green vegetables because these foods might interfere with the drug. Is there a natural alternative to blood thinning drugs that will allow people to eat the kind of diet you recommend (e.g. 70 percent of total calories from plants)?

SC: Yes there is, but first let me remind you that this is an issue for your friends to discuss with their doctor. We never want to suggest that people disregard the advice of their physician or stop taking prescribed medications.

Importantly, the discussion needs to start with accurate information. Patients and doctors alike need to have reliable evidence for the efficacy of any alternative or complimentary therapy. The good news is that in the arena of blood clotting (and thickness or viscosity), the medical literature is abundant.

Blood thinners are prescribed to make it easier for the heart to circulate blood through roughly 50,000 miles of blood vessels and/or to prevent abnormal clots. So there are two issues here: the tendency of blood platelets to clump (known as platelet aggregation), and whole blood viscosity. Diet and nutritional supplements can have a remarkably beneficial effect on both factors.

Just eating less meat and more fish has been shown to help normalize blood clotting and viscosity, as well as reduce risk for fatal arrhythmias.^{i,ii} The drug companies that make blood thinners acknowledge that these measures should be tried first, but that is rarely done in clinical practice.

Q: Has the utilization of fish or fish oil been shown to be effective in controlled scientific studies published in peer-reviewed medical journals?

SC: Yes. A systematic review of 14 randomized clinical trials reported that omega-3 fatty acid supplementation produced a clinically-significant reduction in overall mortality in patients with coronary heart disease.ⁱⁱⁱ This landmark review followed on the heels of other important studies demonstrating the value of omega-3 fatty acids in men and women in a wide age range.^{iv,v,vi}

Please understand that I am not denying the usefulness of blood thinners in cases where a cardiologist determines they are required. What alarms me is that these drugs are increasingly being prescribed as “prevention” for anyone with risk factors for cardiovascular disease (CVD). No one has a clotting disorder due to a deficiency of Coumadin, the active ingredient being the same as rat poison. The only REAL prevention is diet, lifestyle, and nutritional supplements.

What’s more, Coumadin has been described as a “bad drug” because of its narrow safety window. Use too little and you could die of a clot. If the dose is too high, you can die of a hemorrhage. As a result, it is estimated that the drug is responsible for thousands of deaths each year?^{vii}

Omega-3 fatty acids, on the other hand, have an enormous safety window because they have been part of the human diet since the beginning of time. In addition to prevention, omega-3 fatty acids from fish have also been shown to be effective in the *treatment* of blood clotting disorders.^{viii,ix,x} What’s more, they have, in my opinion, a mechanism of action that is superior to drugs.

Warfarin works by interfering with vitamin K, which is essential for normal blood clotting. In doing so, it reduces the risk of abnormal clots but can also interfere with *normal* clotting, thus increasing the risk for hemorrhage. Moreover, vitamin K is essential for the maintenance of strong bones, so long-term use of warfarin is associated with increased risk for osteoporosis. This highlights a particular problem associated with many drugs, which is that they may help in one area but cause problems (often more serious problems) in another.

The natural products solution in this case does not interfere with vitamin K but reduces risk for abnormal clots by restoring balance to the various clotting factors, including triglycerides, platelets, thrombin, and fibrinogen.^{xi,xii}

Summary:

I am always amazed that people, in general, know the viscosity of the oil in their car's engine, but they do not know anything about the blood that is flowing through their arteries and veins. In fact, I believe that whole blood viscosity testing will be the next breakthrough in preventive medicine. Some forward-thinking doctors are already performing these tests, and the practice will be common in the next five years. In the meantime, here are research-proven steps that you can take to improve your cardiovascular health:

1. Eat a highly-varied natural foods diet with about 70 percent of calories coming from plants.
2. Eat a wide variety of proteins – not just red meat. These should include beans, nuts and seeds, and two or three servings of fish each week.
3. If you do not like fish, or have been advised not to eat fish (pregnant women are sometimes asked to limit fish intake to avoid ingesting mercury), you can take fish oil capsules. Just make sure they are certified to be free of lead and mercury.
4. Ask your doctor about whole blood viscosity testing. At the very least, have your prothrombin time (INR) measured at your annual physical.
5. Maintain ideal weight, normal cholesterol, and triglyceride levels.
6. Enjoy regular exercise. For heart health, intensity is not as important as duration and consistency. For most people, brisk walking is ideal.

ⁱ Breslow JL. n-3 fatty acids and cardiovascular disease. *Am J Clin Nutr.* 2006 Jun;83(6 Suppl): 1477S-1482S. Review.

ⁱⁱ Cuevas AM, Germain AM. Diet and endothelial function. *Biol Res.* 2004;37(2):225-30. Review.

ⁱⁱⁱ Studer M, Briel M, Leimenstoll B, Glass TR, Bucher HC. Effect of different antilipidemic agents and diets on mortality: a systematic review. *Arch Intern Med* 2005; 165:725-30.

^{iv} Vanschoonbeek K, de Maat MP, Heemskerk JW. Fish oil consumption and reduction of arterial disease. *J Nutr.* 2003 Mar; 133(3):657-60. Review.

^v de Maat MP, Heemskerk JW. Fish oil consumption and reduction of arterial

disease. *J Nutr.* 2003 Mar;133(3):657-60.

^{vi} Taddei S, Ghiadoni L, Virdis A, Versari D, Salvetti A. Mechanisms of endothelial dysfunction: clinical significance and preventive non-pharmacological therapeutic strategies. *Curr Pharm Des.* 2003;9(29):2385-402. Review.

^{vii} Runciman WB, Roughead EE, Semple SJ, Adams RJ. Adverse drug events and medication errors. *International Journal for Quality in Health Care* 15:i49-i59 (2003).

^{viii} Panchenko VM, Karabasova MA, Liutova LV, Togojev AM, Ershov AA, Chernova GI, Isaev VA. Influence polyunsaturated fatty acids omega-3 on coagulation and fibrinolysis systems in patients with NIDDM. *Klin Med (Mosk).* 2002;80(2):40-3.

^{ix} Michalsen A, Dobos GJ. Effects of nutritional factors on haemostasis. *Hamostaseologie.* 2005 Feb;25(1):13-7.

^x Bhatnagar D, Durrington PN. Omega-3 fatty acids: their role in the prevention and treatment of atherosclerosis related risk factors and complications. *Int J Clin Pract.* 2003 May;57(4):305-14.

^{xi} Vanschoonbeek K, Feijge MA, Paquay M, Rosing J, Saris W, Kluit C, Giesen PL, de Maat MP, Heemskerk JW. Variable hypocoagulant effect of fish oil intake in humans: modulation of fibrinogen level and thrombin generation. *Arterioscler Thromb Vasc Biol.* 2004 Sep;24(9):1734-40.

^{xii} Demaison L, Moreau D. Dietary n-3 polyunsaturated fatty acids and coronary heart disease-related mortality: mechanism of action. *Cell Mol Life Sci.* 2002 Mar;59(3):463-77.