

Ask Dr. Stephan Moll

These questions have been submitted by folks on the [mailing list](#) and answered by Dr. Moll, Director of the Thrombophilia Program at the Carolina Cardiovascular Biology Center, Department of Medicine, Division of Hematology-Oncology, UNC Chapel Hill (North Carolina, USA). [Why am I doing this?](#)



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80. Cranberry juice, Grapefruit juice and warfarin (Coumadin®)

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"I have heard that one should not drink cranberry juice while taking Coumadin®. Is this true? If so, what is the connection between the two?"

It is currently not known whether cranberry juice interacts with Coumadin®, but it may. By inhibiting and slowing the breakdown of Coumadin®, cranberry juice potentially increases the INR in some people, thus further thinning the blood.

Grapefruit juice

Grapefruit juice likely has no influence on warfarin levels and the INR. It is, therefore, fine to drink for patients on warfarin.¹ However, there is a story about grapefruit juice that is interesting, because it highlights that there may be interactions between juices that we drink and medications that we take. Grapefruit juice has been shown to inhibit a major enzyme in the intestine (the CYP3A4 enzyme of the cytochrome P450 enzyme complex) that breaks down certain medications. Grapefruit juice contains chemicals called furanocoumarins that cause many of these interactions.² Medications sensitive to the effects of grapefruit juice include some immunosuppressants, blood pressure lowering drugs, and cholesterol lowering drugs (e.g., the "statins"). Drinking of grapefruit juice has been shown to increase the levels of these drugs in some people, leading to potentially dangerous drug levels. Recommendations have therefore been made to avoid drinking grapefruit juice when taking drugs such as cyclosporine (Neoral®), felodipine (Plendil®), sirolimus (Rapamune®), simvastatin (Zocor®), and lovastatin (Mevacor®).³

Cranberry juice

Early single case reports suggested that there may be an effect of cranberry juice on the INR in individuals taking warfarin.⁴⁻⁸ These reports prompted the United Kingdom's CSM (Committee on the Safety of Medicines) and MHRA (Medicines and Healthcare Products Regulatory Agency) to advise the public against taking warfarin with cranberry juice. The US FDA later approved labeling changes that caution patients about consuming cranberry juice/products while taking warfarin.⁹ Four controlled studies have indicated that there is no clinically important interaction between cranberry juice, when consumed in moderation, and warfarin.¹⁰⁻¹³ These studies and their results have been summarized in recent publications.^{9,13,14} Thus, it seems fine to drink cranberry juice (8 oz, or 240 mL, per day or less) if one is on warfarin.

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Comment

This Q/A was prepared in collaboration with Mary F. Paine, PhD, pharmacist in the Division of Pharmacotherapy, Eshelman School of Pharmacy, the University of North Carolina, Chapel Hill, NC.

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