

THE GLOBE AND MAIL

Why pinot noir is good for your heart

Producers and scientists are focusing on the health benefits of a substance -
resveratrol - in red wine

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It's not often I get solicited for medical advice. As the absence of a German luxury sedan in my driveway will attest, I'm no doctor. So, by way of disclaimer, I want to underscore my lack of med cred as I attempt to answer an unusual but interesting letter that recently arrived in my inbox.

"My doctor's recommendation has aroused my interest in red wine," Lisa Tang of Toronto wrote. "My cholesterol is higher than normal, but not so high for me to take medication. As a result, she recommended that I take one to two ounces of red wine a day. However, she as well as I know too little to say which kind or brand of wine is best for me. So I will really appreciate it if you can suggest something."

By now, most assiduous Globe readers will have heard about the purported link between red wine and cardiovascular health. Slightly more than a decade ago, scientists began noting there is a substance found in wine, resveratrol, that could reduce the risk of heart disease and even cancer.

A naturally occurring substance produced in the skins and seeds of grapes as well as a few other plants, including pomegranates, resveratrol has sparked a mini-industry in grape-extract dietary supplements. If you prefer pills to pinot noir, you can buy the alcohol-free formulations over the counter from such brands as Jamieson, the Windsor, Ont.-based vitamin company.

A couple of theories have been kicked around as to why resveratrol is good for you. Some researchers believe it can help mimic the effects of a low-calorie diet, which has been shown to curb changes associated with aging. Dr. Jeff Stuart, a professor in the biology department at Brock University in St. Catharines, Ont., who has studied the substance extensively, believes one key effect of resveratrol is "probably through its ability to slow the rate of cell division."

Why red wine more than white? Though white grapes contain resveratrol, too, whites are typically made by separating the pressed juice away from the skins prior to fermentation. Red wines, by contrast, are fermented on the skins, allowing much more of the substance to transfer to the glass you may have with dinner tonight.

Resveratrol is produced by vines to combat pathogens, which offers a clue to which wines you should look for. Cooler and more humid climates set up conditions in which vines are more susceptible to fungal attacks, prompting the vines to produce more resveratrol.

That's good news for fans of such regions as Niagara and New York State. A study conducted at Cornell University, for example, found that red wines from New York State in particular contained higher levels of resveratrol than comparable samples from other regions around the world, including Argentina, Australia, France Italy and South Africa. (Cornell, perhaps not coincidentally, is located in New York State.) California, which usually enjoys dry, sunny weather in most of its vineyards, ranked low on the list.

But that finding should simply be taken as a vague generalization. Individual wine-producing countries, particularly in Europe, tend to boast significant diversity in weather. Burgundy is more humid than Alsace, for example. So is Piedmont compared with Sicily. Even within a given region, climate conditions can vary from one vineyard to another, says Dr. Gary Pickering, a professor of wine science at Brock. A vineyard close to a water source may be more humid than one, say, on an elevated ridge.

Conditions also can vary greatly from one growing season to the next. Niagara enjoyed an exceptionally dry 2007, for example, likely a year of relatively low resveratrol compared with, say, 2008. The upshot: Look for wines from "difficult" - which is to say rainy - vintages. But that's putting health way ahead of flavour, which, as a wine critic rather than a doctor, I'd be hard-pressed to recommend.

If you're not a strong student of wine geography, there's a simpler, though hedonistically more limiting, indicator to seek out: the words pinot noir. "All else being equal... pinot noir is a variety that has very high resveratrol," Dr. Pickering notes. That conclusion is underscored by the Cornell research, which cited pinot above all other varieties in the study.

From there, things get more complicated. Vinification can play a huge role. Some winemakers prefer to leave skins in contact with the juice for long periods as a way to extract more colour and flavour, while others prefer a more abbreviated fermentation. Generally speaking, the more extended the contact, the higher the wine's resveratrol level.

This may be one reason pinot noir is the resveratrol king. Often, the thin-skinned grape is subjected to an extended maceration in tanks, where the juice soaks up extra goodies from the skins prior to the main fermentation. But it remains unclear as to whether pinot's high resveratrol levels have more to do with the grape itself or the vinification technique. "My guess is that it's a bit of both," Dr. Pickering says. Unfortunately for consumers, there's usually no way to tell how long any wine was left in contact with the skins unless you consult the winery (a phone conversation I'd love to hear).

And I'm happy to report promising news on the resveratrol front. Dr. Pickering has just completed a study, scheduled to be published next week in the Australian Journal of Grape and Wine Research, perhaps the wine world's most respected scientific periodical, in which he added extra resveratrol to the fermenting juice of both red and white wines - 30 times more than found naturally in the average red wine and 400 times higher than in white.

After two years of age, he found no significant difference in the wines' chemical or flavour profiles. The work could help open the commercial door to a development that would make connoisseurs recoil: resveratrol-enhanced wines. In fact, independent of Dr. Pickering's research, one small wine producer in Australia, claiming to be the first, has already released two such wines, a chardonnay and a shiraz, but they're not available in Canada.

That should be especially welcome news to white-wine lovers, who till now have been forced to sit on the sidelines of the wine-health craze but who may eventually get a boost from resveratrol-enhanced chardonnays and sauvignon blancs.

Until such wines become widely available, consumers should sip their pinot with a big caveat. Even if you and your doctor believe red wine could be the key to surpassing 100, you can't take it as licence to guzzle your way better health. More than a glass or two a day and you could expose your bodily parts to too much alcohol, erasing what salutary benefits you might get from resveratrol. I may be no doctor, but I do know there's value in something called moderation.