

Wine into Water

Anyone reading this issue of Wine World will be familiar with the sinking feeling that goes with drinking alcohol – yet another trip to the loo. We all know by now that you need to drink plenty of water along with your wine but the big question is how much?

Alcohol causes dehydration through its effect on the kidney. It inhibits the release of a hormone called Anti Diuretic Hormone (ADH). This hormone allows water to be reabsorbed into the body from urine, reducing the volume produced. If ADH is inhibited by alcohol, the urine remains dilute and copious, (hence all those trips to the facilities) and unless you drink plenty of water to replace it, you will become dehydrated.

Of course, most alcoholic drinks contain significant amounts of water – wine is around 85% to 90% water – but this doesn't appear to be enough to counteract the alcohol. One kidney expert has calculated that 1 millilitre of ethanol inhibits ADH to the extent that we lose an extra 10ml of water, so a drink at 9% alcohol should be neutral as far as the kidneys are concerned (which sounds like good news for lovers of German wine). However, we lose water through sweating and breathing too, so it would have to be very low strength stuff (probably under 2%) for a net gain in water.

Pat Farrell M.D. and Master of Wine reckons that it's blood alcohol concentration (BAC) that would correlate better than actual volume of alcohol consumed. The point at which the dehydrating effect of alcohol kicks in will depend on various factors such as how well hydrated you were to start with, metabolic rate and body size. External conditions like sunny weather can make a difference too. Drinking outdoors at a summer barbeque seems a sure recipe for a hangover, as sweating increases dehydration, causing your BAC to go up, causing more inhibition of ADH and even more dehydration.

Drinkers of wine seem to be in for a bit of a double whammy. Wine (particularly whites from cool climates) has been used by physicians for centuries as a diuretic (before modern drugs) as it also contains significant levels of tartaric acid – another diuretic.

While none of this really solves the "How much?" question, experience suggests matching alcohol and water glass for glass, and increasing that to two water for each one of wine when you are outside. If you can't manage all that, at least remember a pint of water before bed.

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