



## New guidelines for alcohol consumption. Do we need warnings on the packaging?

Reading time: 19 minutes

The USA's top health official, Surgeon General Vivek Murthy, recently published his new guidelines on alcohol consumption, in which he says that even very small amounts of alcohol consumption significantly increase the risk of cancer. He therefore recommends that warning labels be placed on all alcoholic beverages. Similar statements and requests are increasingly being made in Germany.

Is alcohol really the new smoking? I admit it, as someone who enjoys a glass of wine or sparkling wine, I was pleased to see a recent [video](#) by Professor Vinay Prasad. He is a well-known hematology-oncology physician, medical statistician, scientist and author known for his critical analyses of medical trials, public health policy and evidence-based medicine. His early criticism of the lack of evidence for many harsh political measures during the pandemic has proven to be correct. Vaccination requirements, school closures and compulsory masks for infants were continued for far too long despite the lack of evidence, with the well-known social damage.

Prasad has taken a close look at Murthy's evidence. I will summarize Prasad's key findings. But I recommend watching the entertaining video. It's worth it even for people who don't enjoy scientific studies as much as I do.

Let me give you a little hint up front: even after reading this, you won't know whether alcohol is a direct threat to your life or whether it is a low-risk stimulant in moderation.

Alcohol consumption increases cancer in five women per 100 if they drink two drinks a day, or three more men per 100 could develop cancer if they drink two drinks a day, according to the Surgeon General. These are cancers of the mouth, pharynx, oesophagus, larynx, breast, liver and colon. The mouth, pharynx, oesophagus and larynx are cancers that are primarily associated with smoking.



Source: istockphoto.com / nadia\_bormotova

How many Americans actually drink? Many Americans don't drink at all, namely 30%. Another 10% are people who have maybe 0.02 drinks a week, people who only drink on New Year's Eve or Christmas.

The next 10% have 0.14 drinks per week, i.e. very low alcohol consumption. Then comes three drinks a week. And it's really the eighth, ninth and tenth decile that consume the most. They drink six drinks, 15 drinks or 73 drinks per week.



### **Causality is not proven**

But what interests us is the causal question: if I advise you to drink or not to drink, will you have a health benefit?

This is what the Surgeon General is trying to address by comparing drinkers with non-drinkers. However, this question cannot be answered in this way because two fundamentally different groups of people are being compared.

Murthy refers to a very large meta-analysis published in the Lancet entitled "Alcohol use and burden for 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016". That is, the authors take data from many, many observational studies conducted in many, many countries, where they have people fill out a questionnaire to find out how much people drink, and they link that to a number of outcomes, such as what cancers they get and how long they live.

If you take all these studies together and fit them with a regression line that averages the effect across all these studies, you find the following: The relative risk is standardized for people who don't drink at all, and then it shows the increased risk per drink per day, 1, 2, 3, 4 or five along the X-axis, and the risk of bowel cancer increases from 1 to almost 2 if you drink 12 (!) drinks a day.

"The epidemiologist and statistician Bradford Hill has said that when looking at observational data where the risk ratio or relative risk is less than three, you should take the results with a grain of salt.

Here we only have a doubling of the risk. So, in absolute terms, we are talking about what is probably a very modest increased risk because there are many

There are many things that kill you. Bowel cancer is just one of them, and they double the risk of any of those things, but cardiovascular disease, which accounts for the lion's share of deaths, is not highlighted."



Source: istockphoto.com / Elena Soloveva

It is easier to look at risk in smokers, where the risk increases by a factor of 20-40! The harmfulness of smoking can be established beyond doubt even in these poorly controlled observational studies. Alcohol is not the new smoking. Smoking is 10-20 times more harmful.

### **Alcohol - bad for the gut good for the heart?**

"Now let's look at cardiovascular disease, which is alcohol and ischemic heart disease: oh my God, the curve goes below the line when you go from 0 to 1 to 2 to 3 to 4 to 5, and it's only at five or six drinks a day in a woman or a man that the risk of ischemic heart disease approaches the baseline again, and it doesn't go up until six or seven or eight or nine drinks, so in other words, if you take these observational studies at face value, you could say that there is an increased risk of cancer.



For example, colorectal cancer, which is common but much less common than ischemic heart disease, but you would have to weigh that against the protective effect of alcohol on ischemic heart disease if you accept that data." Which we don't.

Prasad asked a member of his lab to take a close look at a huge American study included in the meta-analysis. "Prospective Study of Alcohol Consumption Quantity and Frequency and Cancer-Specific Mortality in the US Population".

It's a very representative study for the quality of the data that goes into the meta-analysis, and Prasad always tells people that a meta-analysis is like a juicer that only tastes as good as what you put in the juicer, and his concern, of course, is that a lot of spoiled fruit goes into the juicer. That's what happened in this study.

Prasad criticizes this study in detail. He concludes, for example, that the groups of non-drinkers and drinkers are very different.

That relevant confounders, i.e. variables that can have an influence on cancer, such as the amount of smoking, are not recorded. Former drinkers were also not considered separately.

### **Brief summary of the study problems**

- Self-completed data (without control)
- Illogical, imprecise group definitions
- Confounded (smoking poorly recorded)
- Socio-economic status not recorded

- No difference between Cabernet and MadDog (vodka, syrup, Tabasco) Like throwing 100 calories of broccoli in a pot with 100 calories of potato chips
- No mammogram coverage (breast cancer incidence is mainly driven by screening programs - leading to overdiagnosis in more affluent target groups)
- Consumption with or without food/ in company/ after sport/ time of day/ climate/temperatures, all not recorded
- Bizarre results that cannot be explained by biology

"This is extremely convoluted data, the results show that cancer and cancer death are linked to alcohol consumption. Lung cancer is also associated with light, moderate or heavy drinking. The relative risk goes from 0.79 to 0.85 to 1.3. Heavy drinkers have more lung cancer deaths than light drinkers. Does this mean that alcohol causes lung cancer? If you look at the subgroup of people who have never smoked, then alcohol consumption has nothing to do with lung cancer!"

Women had double the risk of bowel cancer - but not men!

Prostate cancer: With 1 - 2 days of alcohol consumption per week, the risk increased by 70%, with more than three days the risk fell again to 55%! But no correlation was found with the amount of alcohol consumed. This is obvious nonsense.

Prasad: "Don't get me wrong, if you have 10 drinks a day, if you wake up with a headache, if you don't get to work on time, if you yell at your kids or your spouse, that's a problem, you need to stop!"



That's not what we're talking about here, we're talking about people who drink a glass of wine a day, two glasses of wine a day. That's what the Surgeon General wanted to put a warning label on, that's something he should be proving, but he's doing it on the basis of incredibly weak, unreliable evidence."



Source istockphoto.com / jacoblund

If this had been properly investigated, Prasad would not be surprised if there was a small cancer risk with this level of alcohol consumption. He would not be surprised, but he would also not be surprised if low alcohol consumption actually led to a reduction in cancer risk. He suspects that there is probably no relevant effect on survival or cancer. He suspects that the effects of alcohol are primarily to do with how we get along with other people and how we get along with ourselves.

"This meta-analysis is hopelessly muddled, it's completely unreliable, it's really not suitable for drawing any conclusions. An honest arbiter of science would say I just don't know, I'm not saying it's good for you, I'm not saying it's bad for you, I'm just saying we really don't know, we haven't invested in the knowledge, and the fact that 1,000 modest observational studies point in the same direction doesn't prove anything, it just reflects the bias and opinions of those in the field."

### **The mechanistic view**

Prasad then briefly discusses the mechanistic view of the effects of alcohol, which many prominent health influencers, including in Germany, cite as proof of its harmfulness. And the Surgeon General also uses these mechanisms as justification. The four ways in which alcohol consumption is said to promote cancer:

1. Alcohol is broken down into acetaldehyde, which damages DNA in many ways and increases the risk of cancer
2. Alcohol triggers oxidative stress, which increases the risk of cancer by damaging DNA, proteins and cells and increasing inflammation
3. Alcohol alters the level of hormones, including oestrogen, which can increase the risk of breast cancer
4. Alcohol increases the absorption of carcinogenic substances

These are very crude notions of bio-plausibility. The problem with bio-plausibility is that every single successful drug and all the hundreds of thousands of failed drugs have bio-plausibility.

### **The endpoints of a good study**

Prasad then talks about what we would actually need to make an informed recommendation for action on alcohol, and I like his end points because they include quality of life as an end point. Air travel is not healthy, but great vacations are really good for us.

1. How long will I live?
2. How well I will live (mortality / impairments)



3. How happy will I be, how will I feel
4. How happy will the people around me be / How will they feel.

I like his view. He thinks it's wrong to reduce alcohol only to esophageal cancer and ignore cardiovascular disease. It's wrong to look at cardiovascular disease and esophageal cancer and ignore mental health.

And it's too easy and tempting to say that alcohol only makes you feel bad and that the people around you only feel bad.



Source: istockphoto.com / insta\_photos

You can counter that alcohol as a social lubricant has led to many relationships, it has led to many great dinners, it has led to stronger friendships. There is a reason why so many societies have independently developed a culture around alcohol.

I think there is a great appetite among the public to know the answer to this question. Prasad sets the right requirements for such a study: randomized and controlled. With controlled experiments - structurally identical groups who are given prompts to change their behavior, for example to drink 1 drink more per day and groups who are asked to drink 1 drink less per day.

Then we follow them for the above endpoints, over 10 or 15 years. We track them for cancer incidence, for cancer complications, how often they get divorced, how often they lose custody of their children and so on, we can track these kinds of harmful effects of alcohol through a plethora of different endpoints.

The costs are likely to be in the region of 200 million dollars.

If Prasad were a betting man, he would wager that an increase of one or a decrease of two of these drinks will probably have minimal or no effect on mortality, but he suspects that some of these other social aspects will be affected. He doesn't know if an increase from 0 to 1 will improve or worsen marriages, but he suspects there is some signal when it comes to divorce. That's the only way to resolve the issue. We should have done this 30 years ago. We wouldn't rely on retrospective observational studies that have infinite multipliers and analysis plans that are filtered through people's perceptions and cultural beliefs about alcohol.

The public health fields are full of people trying to spoil our pleasure. We all know that's not the best way to get to the truth. The randomized trial is the only way to know the truth.

Prasad takes issue with doctors: "I think they often don't have much of an idea of the underlying evidence structure of medicine. That's what Dr. Rachel Bedard wrote in the New York Times about Murthy's proposals: *Even though the recommendation is based mainly on observational studies rather than randomized controlled trials, the link between alcohol and cancer has been so consistently demonstrated that we can have confidence that it is reliable, a recurring sign that can be heard through so much noise.*



Prasad: "It's stupid to say that. It overlooks the fact that if you have extreme analytical flexibility, the fact that many of the published papers come to the same conclusion says nothing about the truth of the scientific relationship. But only about what the opinions in the field are, which shapes the selective reporting process that determines which studies are printed, which articles are favourably reviewed. It just says the experts believe it. It says nothing about the truth, it's little more than an opinion poll or a self-fulfilling prophecy if it doesn't understand the nature of observational studies.

That's why we get dietary recommendations based on poor quality observational studies that keep changing: 'eat blueberries', the next year: 'don't drink coffee', the next year: 'coffee is poison', uh, butter is good for you, oh, bad for you oh good for you oh eggs - just one a week. That's because it's not about a real causal relationship, it's just about what the attitude was at the time.

We know that alcohol is a poison, but water is also a poison, if you drink six litres of water a day you will die of hyponatremia, which is not really a useful argument. Some people might say what about science, we can't ignore what it does to mice, and I said if you get a mouse drunk, I don't know what that has to do with a human, you can cure mice of cancer since 1972, but we still haven't managed to do it for humans."

### **Concluding remarks**

I certainly don't want to motivate anyone who doesn't drink to consume alcohol!  
Why would I?

But I don't want activists with their 'every

drop is too much' story to take away the enjoyment of this pleasant social booster. Our studies show that the experience of loneliness in Germany increases noticeably after corona. I will leave these two pieces of information uncommented.

I've been drinking alcohol since I was 16. So I do enjoy decades of experience. I count myself in the three drinks a day group. And I'm very health conscious. And I also take a break for one to two months every year. But I don't notice any relevant difference. I do extensive blood work every year.

My liver values, for example, are very good, regardless of whether I take the test directly after the drinking break or during the normal time. This is anecdotal, but it shows me that my body has adapted well to my consumption of alcohol.

The effect is called hormesis. This is one explanation why bio-mechanistic considerations can fail in reality. The body can adapt when it is confronted with low levels of irritants. This is why children from the countryside have fewer allergies than children who grow up in the city in particularly hygienic contexts.

The demonization of alcohol reminds me strongly of my time as Senior Vice President at ViagInterkom / O<sup>2</sup>. Around the turn of the millennium, the use of cell phones began to increase rapidly. At that time it was still for making calls and texts, not yet for surfing. There were massive warnings about radiation and long-term physical damage. This did not happen.

Cultures have long experience with alcohol. Yes, there are borderline cases who can't handle alcohol, but should everyone be denied the pleasure? I am clearly against the current trend of establishing a nanny culture of more and more state bans. Freedom and personal responsibility simply taste better to me.



## Book recommendation

By Ralph Ohnemus, Uwe H. Lebok, Florian Klaus:

### Context marketing

The key to consumer behaviour to [order](#).



#### Feedback, suggestions or criticism about this article:

[braincandy@ka-brandresearch.com](mailto:braincandy@ka-brandresearch.com)

#### The author

**Ralph Ohnemus, CEO.** Board member of K&A BrandResearch since 2001. Previously a client of K&A BrandResearch for 15 years. National and international marketing and sales experience in senior management positions, including FMCG, fashion, media and telecommunications - most recently as SVP Consumer Sales responsible for marketing, sales and chain stores at Viag Interkom O2.

Contact: [r.ohnemus@ka-brandresearch.com](mailto:r.ohnemus@ka-brandresearch.com)

