

# ALCOHOL: ARE WE JUST DRUNKEN MONKEYS?

As many of us give up alcohol this New Year, *Hatty Willmoth* asks whether boozing is truly bad for us, or just in our nature

**A**fter the seasonal celebrations, many of us enter the New Year swearing to give up ‘the poison’ — if not forever, then at least for ‘Dry January’. After all, alcohol may be fun — and sometimes quite tasty — but its health implications make it a common target for New Year resolutions.

But is alcohol really that bad? Haven’t we been boozers since the dawn of time? And isn’t it true that a glass of wine here and there could actually be good for us?

## Pre-dating humanity

Alcohol consumption may pre-date humanity. California-based biologist Robert Dudley set out his ‘drunken monkey’ theory back in 2014, in his book *The Drunken Monkey: Why We Drink and Abuse Alcohol*.<sup>1</sup> He pointed out that some fruits known to be eaten by primates have a naturally high alcohol content of up to 7%. Perhaps, he suggested, “the taste and odour of [alcohol] might stimulate modern humans because of our ancient tendencies as primates to seek out and consume ripe, sugar-rich, and alcohol-containing fruits”.<sup>1</sup>

And, as of last year, there is evidence from the urine of spider monkeys in Panama that primates consume fermented, alcoholic fruit and utilise the alcohol for energy.<sup>2</sup>

Christina Campbell, who led the study, said: “For the first time, we have been able to show, without a shadow of a doubt, that wild primates, with no human interference, consume fruit containing ethanol [alcohol].”

Because alcohol is highly calorific, Campbell said that primates (including humans) may have a “deep-rooted affinity” for seeking it out as a source of energy.

She said: “Excessive consumption of alcohol, as with diabetes and obesity, can then be viewed conceptually as a disease of nutritional excess.”

According to Rod Phillips, an alcohol historian, wine writer, wine judge and the author of *Alcohol: A History*,<sup>3</sup> drinking alcohol was almost a constant throughout the course of human history.

“The evidence is that as soon as

## IN BRIEF

- Humans may have been consuming alcohol since the dawn of time, and using it as energy.
- For much of western history, alcohol has been considered healthy; even medicinal.
- Some limited evidence suggests that drinking red wine — and even beer — might come with benefits.
- Strong evidence exists to say that alcohol is generally bad for health.
- There are ways to drink sensibly.

people learned how to make alcohol, they made alcohol,” he says. “And probably before they learned how to make alcohol, then, like the drunken monkey, they found naturally fermenting fruit and enjoyed that.”

There are a very few places, says Phillips, where no evidence of ancient alcohol consumption has been found (for example, in much of North America and Australia); almost everywhere else, people made alcohol from apples, grapes, rice, cactus, millet, honey — whatever was available.

## Beer for breakfast

Sometimes, it was also safer to drink alcohol. “At least from after the Middle Ages into the early modern period, a lot of the water was polluted and not safe to drink,” says Phillips. “The process of fermentation kills off some bacteria. So on the whole, wine and beer were safer than water in many, many cases.”

For those who could not afford to drink alcohol (he estimates up to 40% of the European population), Phillips says this “probably contributed to low life expectancy and waterborne diseases”.

That doesn’t mean that the middle and upper classes were constantly drunk, he clarifies. The alcohol that they were drinking — depending on what was available locally, probably wine, beer, cider or mead (in Europe) —



would have contained a lot of water and been “fairly low in alcohol”.

Also, people would have drunk little and often, alongside eating and doing physical work.

“People would probably be drinking all day, so they would have beer for breakfast, and then drink some beer all day, so they weren’t drinking a lot at once,” says Phillips. “They may have been a little bit tipsy, but probably not noticeably.”

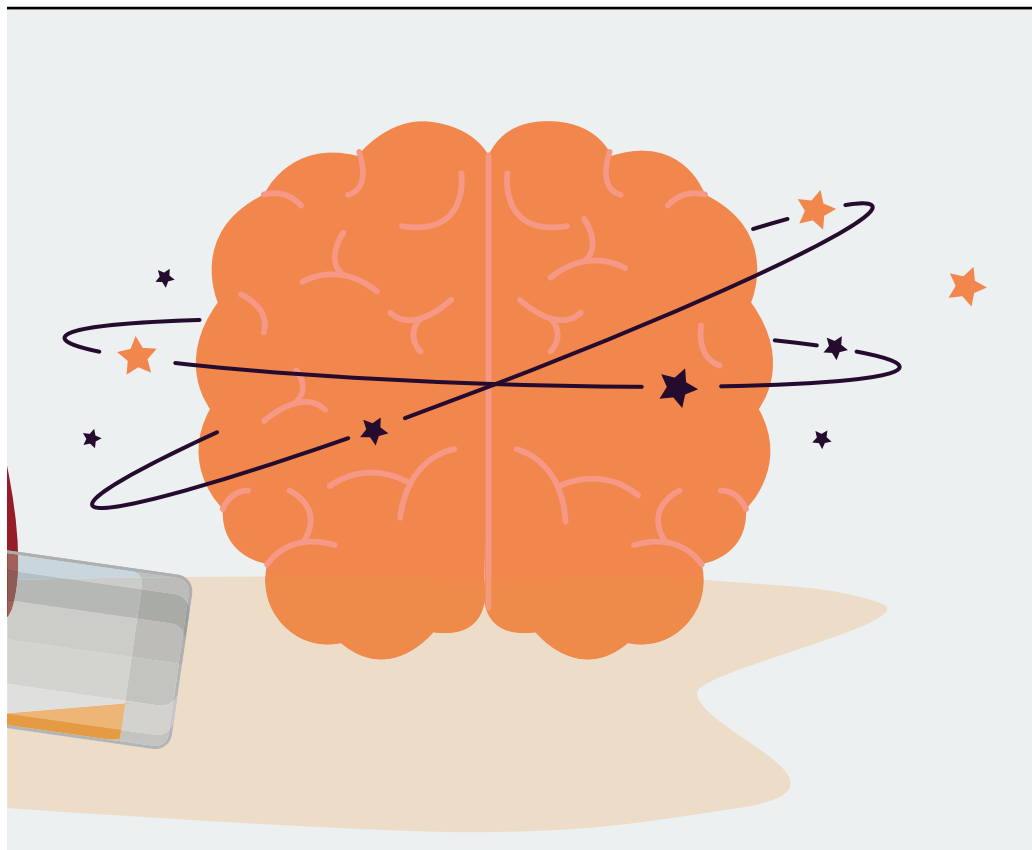
## Prescribed poison

For much of western history — until the latter half of the 20th century, says Phillips — alcohol was considered healthy; even medicinal. Wine in particular, he says, was thought of as “good for you, part of a healthy diet, and especially good for digestion”.

When high-alcohol distilled spirits came onto the market — such as brandy, whiskey and rum — they were used therapeutically, for good health. Brandy, for instance, was believed to slow or reverse ageing processes such as declining memory, greying hair, wrinkling skin and fading hearing.

The medicinal use of alcohol was so ingrained that, when prohibition came into effect in 1920’s America, doctors

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expressed fears that restricting access to alcohol could harm or kill their patients, even though it remained legal to prescribe it in small amounts.

Meanwhile, fears about the negative effects of alcohol throughout history were largely about excess consumption and drunkenness, and tied up in anxieties about the behaviour of women and the working classes.

### The French paradox

More recently, it's been quite common to believe that moderate drinking — specifically of red wine — benefits health.

This can be traced back to the 1980s, after scientists investigated why there appeared to be lower rates of coronary heart disease (CHD) in France than in similar countries.<sup>4</sup> According to contemporary views about the dangers of saturated fat for heart health — since called into question — the French taste for cheese, full-fat dairy, and all-butter patisserie (as well as smoking) should have been a recipe for disaster, but this was not reflected in their heart attack statistics; apparently half as frequent in France as in the US.<sup>4</sup>

The French also drank more red wine. This, scientists proposed,<sup>5</sup> might have a protective effect on the heart, partly attributed to a compound called resveratrol, an antioxidant.

### RESVERATROL: WHAT DOES IT DO?

Resveratrol is a type of compound called a polyphenol. These are found in many foods including various fruits and vegetables, dark chocolate, green tea, olive oil, chickpeas, sesame seeds — and red wine. They can act as antioxidants, which means they can neutralise free radicals: volatile by-products of chemical reactions that cause damage to cells. And polyphenols are thought to reduce inflammation, improving longevity and lowering the risk of multiple chronic diseases.

Follow-up studies supposedly confirmed that non-drinkers were more at risk of diseases such as CHD than moderate drinkers.<sup>6</sup> There seemed to exist a sweet spot at which alcohol could positively influence health.

However, the so-called 'French paradox' has flaws. For one thing, there was no evidence that wine caused the lower rates of CHD in France any more than a food culture that valued cooking from scratch with fresh ingredients.<sup>7</sup>

It has been suggested, too, that French heart attack statistics are skewed due to a national reluctance to attribute ambiguous-cause deaths to 'cardiac arrests'.<sup>8</sup>

As for follow-up studies, results

were affected by the fact that 'non-drinking' categories included people who had given up alcohol due to health conditions or alcoholism, whilst 'moderate drinking' could mean 'drinking very rarely'. Later, researchers addressed this discrepancy by removing groups such as alcoholics from the 'non-drinking' category. With this correction, some studies now found non-drinking to be most beneficial,<sup>9</sup> although others didn't.<sup>10</sup>

Finally, antioxidants are present in red wine in relatively small amounts; it has been suggested that positive effects would only be noticeable by drinking an absurd — potentially fatal — quantity of wine.<sup>11</sup> Since the same protective compounds are in fresh fruit and vegetables, we might be better off eating grapes!

### Beer: the new kombucha?

Still, there is some limited evidence that moderate consumption of red wine could be beneficial to heart disease risk, and the same might be true of beer.<sup>12</sup>

This could be due to the positive effects of beer on the gut. In 2022, a small study on 19 healthy men linked drinking one lager a day with increased gut bacteria diversity, which is associated with lower risk of various major chronic diseases.<sup>13</sup> Results were consistent regardless of the beer's alcohol content.

A separate 2020 paper also explored beer's health-boosting potential,<sup>14</sup> arguing that under the right conditions (slow fermentation with specific yeasts), brewers could adapt beer to be extremely healthy. Beer is already a source of minerals such as iron, zinc and manganese. It's also a source of vitamin B12 — although it's unclear to what extent our bodies can utilise this. However, the paper's authors wrote that beer could potentially have antioxidant, hormone-balancing, probiotic and even prebiotic qualities (good for cultivating gut bacteria). In future, they speculated, brewers might sell low-alcohol beers as gut-supporting 'health drinks' like kombucha or kefir.

### Alcohol is bad for you

That said, despite any potential benefits to drinking beer or wine, plenty of evidence suggests alcohol is detrimental to health.

Sometimes called 'liquid calories', alcohol makes up about 11% of the UK's daily sugar intake. A pint of cider, for instance, can contain five teaspoons of sugar<sup>15</sup> — nearly the maximum daily

amount advised for an adult — and the stronger stuff is often paired with sugary pop. Alcohol can also have a dramatic impact on blood sugar levels and, long term, can impair insulin function and elevate the risk of developing diabetes, overweight and diseases related to poor metabolic health.

As a significant toxin, alcohol puts pressure on the liver and can lead to various related problems such as fatty liver disease, alcoholic hepatitis, cirrhosis and fibrosis. According to the National Cancer Institute in the US, there is also “strong scientific consensus that alcohol drinking can cause several types of cancer”.<sup>16</sup> It is estimated that one alcoholic beverage per day could increase a woman’s breast cancer risk by as much as 9%,<sup>16</sup> and heavy drinking by up to 50%.<sup>17</sup>

Alcohol can also disrupt sleep. Nicola Moore, a registered nutritional therapy practitioner, explains: “Even though alcohol impacts our nervous system evoking sedative effects, there is an ironic twist, because it has been shown to negatively impact sleep quality. This may in turn impact our stress resilience the next day, and may even drive the decisions we make about food, leading us to crave sweeter, fatter ‘comfort’ items.”

Our gut health may also be affected, says Moore. “A binge-drinking episode, which is common and probably easier achieved than you might think, has been shown to damage the cells in

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our stomach that produce protective mucus, and induce an inflammatory response. Additionally, chronic alcohol consumption has been shown to result in negative changes to the gut microbiome.”

Alcohol has been linked to over 200 afflictions, from diseases such as pancreatitis to injuries related to risky behaviour, as well as mental illness and weakened immunity.<sup>18</sup>

**How we drink matters**

Phillips’ professional life revolves around alcohol; it is not unusual for dozens of bottles of wine to be delivered to his house at once, for tasting. Yet, when asked whether people should drink, he exclaims: “No! No! It’s not good for you!”

That doesn’t mean he’ll quit. “If you look at people holistically,” he muses, “then you say, ‘if you’re enjoying life, then that counts towards your health’. If I deprived myself of all the things that I shouldn’t eat or drink, then I would feel my life had shrunk a little bit, and I wouldn’t enjoy life. That in itself could lead to a shorter life. So, you know, we make these choices.”

And Moore says that those who choose to drink can do so sensibly. “When it comes to alcohol, context is really important. How we drink is just as important as what we’re actually drinking.

“While it’s true that there have been some health benefits associated with alcohol, these are largely linked to small amounts, often red wine, and when consumed as part of a traditional Mediterranean diet, which in itself is widely regarded as a healthful way of eating.

“Alcohol is best consumed with food, and in small amounts, just as taken in the Mediterranean diet.” Pairing food with alcohol, she explains, slows down its absorption into the bloodstream, tempering the strain it puts on the body.

Moore’s “small amounts” recommendation reflects evidence that quantity is key when it comes to alcohol. A 2022 study by the University of Pennsylvania, USA, found that alcohol-related brain damage was far worsened by each extra drink a person consumed on an average evening. So, going from not drinking at all to an average of one drink a day didn’t make

much difference to brain health, but every added drink had an even worse effect; two drinks a day was linked to changes in the brain similar to two years of ageing, researchers said, and four drinks did as much damage as a whole decade of cognitive decline.<sup>19</sup>

This suggests that minimal alcohol consumption comes with lower risks, but the opposite is true of higher quantities.

**Changing times?**

Phillips wants more information to be available to help drinkers try to keep to sensible limits. Servings, ingredients, and health warnings, he says, should all be displayed on alcohol containers by law.

“I know people regard this as the nanny state and everything,” he says, “but we do it on everything else. On your breakfast cereal, it’s got all that information, and there’s no reason why something as potentially dangerous as alcohol shouldn’t have it.”

That said, Phillips has noticed that his students are drinking less than previous generations anyway, and tending to choose quality over quantity — that, he says, and using cannabis instead.

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SUGAR IN YOUR DRINK <sup>15</sup>		
ACCORDING TO DRINKAWARE'S UNIT AND CALORIE CALCULATOR		
	<b>RED WINE</b> 175ml glass	<b>157.5</b> calories
	<b>WHITE WINE</b> 175ml glass	<b>157.5</b> calories
	<b>BEER</b> pint (568ml)	<b>244.2</b> calories
	<b>CIDER</b> pint (568ml)	<b>249.9</b> calories
	<b>GIN &amp; TONIC</b> double shot	<b>224</b> calories
	<b>RUM &amp; COLA</b> single shot	<b>194.5</b> calories