

MODERATE DRINKING – HEALTH FOOD OR HAZARD?

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We constantly hear almost universal lifestyle recommendations from both conventional and alternative medical sources: Eat vegetables, don't eat too much, get your sleep, exercise, don't smoke, and alcohol in moderation.

There's no contention that excess alcohol kills people in many ways, destroys families and careers, and causes a plethora of disabling health problems.

What about moderate drinking? Study after study, mostly epidemiological or case controlled, some prospective but not randomized, show that moderate drinkers have less heart disease, diabetes, etc. than non-drinkers, and have lower overall mortality. How valid is this view that drives conventional wisdom?

What is moderation? Usually, 1-2 drinks a day are commonly understood as moderate, and less than 1 drink per day as light. What is a drink? Usually it is 12 oz of beer, 6 oz of wine, or a shot (1 ½ oz) of liquor.

Over 100 studies show that moderate drinkers have lower rates of cardiovascular disease than teetotalers, and some show even all cause mortality to be lower in moderate drinkers than in non-drinkers. A majority of these studies do not account for confounding variables such as people who are too sick to drink being counted as non-drinkers, or recovering alcoholics and former drinkers who stopped because of problems with alcohol. Those studies that do purport to adjust for "confounding variables" say that the correlation still exists, however less strong.

Why is there this logical disconnect between theory and results? How is it that a known toxin, carcinogen, intoxicant, and addictive substance could have major health benefits? How could a "junk food" with empty calories be a "health food?" How can a substance that depletes the body's detoxifying enzymes help us live longer? How is it that a substance that has never been used as a treatment for any disease (except as an antidote for methanol poisoning or as an emergency analgesic in remote areas where nothing else is available), could be used as a preventive for cardiovascular disease? Any drug-like substance that is not a food is usually used for treatment first, and then it is considered for prevention if the long-term risks are low. The recommendations for good health sounds a little like, "Eat your vegetables, exercise, get your sleep, and eat 2 donuts and have a sugary drink every evening!"

A major cause of concern is a dose-related increased risk for cancer with any ingestion of ethanol, highest risk for excessive drinking, but for even light consumption, the increase in risk is not negligible.

Several mechanisms may explain ethanol's promotion of cancer. Breast cancer can be clearly related because alcohol interferes with the elimination of estradiol from the body,

raising estrogen levels, which are correlated with breast cancer. It can raise estrogen levels in men, raising risks of prostate cancer. Ethanol is metabolized to acetaldehyde, which can damage DNA. Ethanol competes with other toxins for detoxification in the liver, depleting glutathione, which is needed to remove them. Toxic pollutants are known to cause cancer.

The National Toxicology Program of the U.S. Dept. of Health and Human services declared alcohol to be a human carcinogen. The American Institute for Cancer Research stated that alcohol is a tumor promoter and a carcinogen in its 1999 book. The Canadian Medical Association Journal July 11, 2011, reported that the WHO International Agency for Research on Cancer, and joint evaluation by the World Cancer Research Fund and the American Institute for Cancer Research, that there is no level of alcohol consumption for which the cancer risk is nil.

Some other concerns: Most people do not know their genetic predisposition for alcoholism, and they don't discover it until it's too late to prevent it, once they've started drinking. Moderate consumption can impair judgment in deciding how much is too much. Old Japanese proverb: First drink, man drinks wine. Second drink, wine drinks man. Third drink, wine drinks man. These are some of the risks for a non-drinker to start drinking, if encouraged by the health recommendations for moderate drinking. Another risk is that cognitive function is impaired with just one drink, enough to decrease ability to think quickly to avert a motor vehicle accident if an unusual situation occurs. Usual automatic driving skills are not impaired, so this falsely reassures the driver. One or two drinks can interfere with some health promoting activities such as meditation, exercise, sleep, prayer, clear thinking, and healthful choices. It may help in falling asleep but causes rebound wakefulness a few hours later. Alcohol has never been known to promote integrity, commitment, ethics, or long-term spiritual growth, and other values that strengthen culture, society, and good health. Athletes know they optimize their performance and reduce risk of injuries and dehydration by refraining from alcohol. Would you want your health care provider to have a drink before a consultation? Sexually transmitted infections and date rape often happen concurrently with alcohol consumption.

In Neuroscience 8 November 2012, pp 202-209, animal studies with ethanol consumption comparable to humans' moderate drinking, although not at a level that impaired motor function or sensory or learning process, still showed decreased neuroplasticity, 40% fewer cells produced in the hippocampus.

In the British Medical Journal 2017; 357:2353, Topiwala et al reported that moderate drinkers, over a period of 30 years, had a more than 3-fold risk for right-sided hippocampal atrophy over abstainers.

The American College of Gastroenterology reported Nov 28, 2011 in a retrospective study that any drinking at all was correlated with small intestinal bacterial overgrowth. A study reported in PloS One 2012Apr 19, 7(4): e35008 showed that in a 3 dimensional intestinal lumen model, ethanol at levels achieved by moderate drinking increased

intestinal permeability. This permeability, also called “leaky gut,” has been associated with a number of health problems, autoimmune conditions, food sensitivities, oxidative stress, detoxification impairment, etc.

When we experience emotional pain or toxic stress, these are signals to encourage us to make some changes in our activities or attitudes. This can mean developing healthy coping strategies, reflection, getting counseling, developing creativity in problem solving, etc., to further our emotional and spiritual growth and to improve our overall lifestyles for better health. We are always learning and growing. Substances like sugar, junk food, alcohol, caffeine, and cannabis, that dull our stress temporarily, put that growth on pause. These are very seductive processes, as they may make us feel better in the short term, but worse in the long run. These substances also compete with the “intoxicating” appreciation of beauty, wilderness, being “drunk” with the love of God in worship, being inspired by inner peace that is discovered in prayer and meditation. Meditation increases focus, but alcohol diffuses or scatters the attention. Maybe that is why many religious and spiritual groups abstain from consuming intoxicating substances.

So how strong is the evidence for increased longevity and health? In the “Blue Zones,” areas of the world in which healthy centenarians are in high concentrations, some drink alcohol in moderation, and some abstain entirely. We wouldn’t tell the Seventh Day Adventist centenarians in the Blue Zone of Loma Linda, California that they would be healthier if they drank some alcohol.

Some of the mechanistic explanations for the benefits of alcohol are: decreasing inflammation, platelet stickiness, and other clotting tendencies, all associated with cardiovascular events. (Postgraduate Medicine April 1992; 91(5) 271-277, Journal of Nutritional Biochemistry Nov 1992: 3: 562-579. Resveratrol in red wine has many beneficial effects on almost all body systems, but that can be obtained from other sources. Hops have many health benefits, but they can be obtained without drinking beer. There are many foods and supplements that also reduce inflammation. Otherwise healthy people may already have low levels of inflammation and clotting tendencies. What does it gain by adding alcohol to the mix? Then people who are at high risk for heart disease, with high inflammation, etc., may gain by decreasing inflammation by taking alcohol, if indeed it does that, but they could gain more by focusing on the other healthful behaviors that they probably have been missing out on, given the dire situation their metabolism is in now. Perhaps the alcohol should then be in another category, considered to be a drug used to treat their condition, with possible adverse side effects, just like a “statin” drug, and not a “healthy lifestyle” measure.

So if the biochemical, neurological, and metabolic effects of alcohol considered by themselves have so many dangers and pitfalls, then how come there is such a disconnect from the statistics that correlate moderate drinking with better health and longevity? Could it be that we need to take another hard look at the research and its conclusions that moderate drinking is so beneficial? The medical profession does not seem to consider that to be very important, but would rather just take as proven, the 100 or so epidemiological studies that say moderate drinking improves your health.

For one thing, if a substance can have some significant toxic effects, it is usually considered to be a drug, and to make a medical recommendation for it as a single agent, it requires a prospective randomized, double blind, placebo controlled study. For other safer lifestyle choices and non-toxic nutritional supplements, such a rigorous evidence base is not needed because they are safe to begin with, and they do not preclude other effective treatments.

The National Institute On Alcohol Abuse and Alcoholism in the NIH issued a state of the science report on the effects of moderate drinking, Dec 2003. In its conclusions it stated that government dietary guidelines commonly indicate a minimum daily requirement necessary for good health, and this may be confused with the low risk guidelines for alcohol use. Thus, “moderate alcohol use” should not be construed as “healthy alcohol use,” meaning that everyone needs to have 1-2 drinks a day in order to be in optimum health. It further noted that alcohol can increase some diseases and decrease others, and it varies with the individual, depending on family history, medical history, genetic makeup, and lifestyle. A statistical conclusion about benefits of moderate alcohol consumption across the population does not apply to every individual, as opposed to “eat your vegetables, get your exercise, sleep, etc., which apply to almost everyone. It also mentions many confounding variables that can affect the outcome.

Many of the studies showing the benefits of moderate drinking report that they took into account the confounding variables, but I question whether they considered or were even aware of the plethora of confounders. They may have considered age, socioeconomic status, previous drinking, health status, etc., but there may be many more that have not commonly come to awareness. Some of these variables I came across in my reading are that: Abstainers generally have fewer close friends, lower socioeconomic status, less physical activity, lesser quality of friend support, are less likely to be married, are more likely to be obese, have prior alcohol problems, smoke, have depression, have avoidance coping skills, have smaller vegetable intake, do less monitoring of blood pressure and teeth, have fewer mammograms, are older, poorer, more religious, disabled, in poorer health, than moderate drinkers. Confounding variables become very important when doing observational studies. A closer look at these studies casts doubt about the results when we are missing so much data that could change the outcomes.

A review of 87 studies by Chikritzh, Stockwell, et al at the Alcohol Policy Research Team at Australia’s National Drug Research Institute reported in [The Journal of Studies on Alcohol and Drugs](#), March 2016, that a majority of the studies did not take into account such variables as abstainers’ poor health and prior alcohol problems. The 13 studies that did correct for that, showed no benefit from moderate drinking. Chikritzh said, “It is becoming clearer that it is much more likely to be the case that the low or moderate drinker in middle age or older is a marker of good health, not the cause of it.” She stated, “...for most folks, drinking less is better.” The authors pointed out that other researchers had previously noted that when taking former drinkers out of the equation, the benefits of moderate drinking disappeared. Also they noted that moderate drinking is also linked to reduction in deafness, hip fractures, the common cold, cancers, birth complications, dementia, and liver cirrhoses, all of which do not make a lot of sense.

A prospective study of 7735 British men aged 40-59 years reported in The International Journal of Epidemiology, Vol. 26, #3, 1997 concluded, “overall there is no convincing evidence that consumption of alcohol has a protective effect on all cause mortality or overall cardiovascular mortality in this representative cohort of middle-aged British men.”

At www.ncbi.nlm.nih.gov/mmc/articlesPMC5463030/, a study compared the alcohol-attributed adverse health events with increasing consumption of alcohol. Among the most economically deprived, the least educated, and manual laborers, for a given level of alcohol intake, they had a much higher probability of an event than the least deprived, more educated non-manual workers; and for the former, the curve went more sharply up with increasing consumption than for the latter group. Eirik Degerod of the Norwegian Institute of Public Health in Oslo said that the proposed benefit of alcohol on the risk of cardiovascular disease is more pronounced among those more affluent. These 2 sources indicate to me that if poor moderate drinkers don't get the benefits of alcohol that the affluent ones do, that introduces inconsistency into the model. Should moderate drinking only be recommended to the affluent? Are the social and networking benefits of alcohol more at play with the affluent? Is it the social connections that produce the benefits? In the Journal Addiction, from the Society For the Study of Addiction, May 3, 2002, an article stated that data from the United Kingdom suggest that healthier patterns of drinking are more common among the more affluent: less drinking in excess, and less abstinence.

At the University of Oxford, with a combination of 3 studies, Professor Robin Dunbar at the University of Oxford Experimental Psychology Dept., said, “This study showed that frequenting a local pub can directly affect people's social network size and how engaged they are with their local community, which in turn can affect how satisfied they feel with life.” Alcohol, “like other complex bonding systems such as dancing, singing, and story telling, has often been adopted by large social communities as a ritual associated with bonding. Those without a local pub had significantly smaller social networks and felt less engaged with, and trusting of, their local communities.”

In an article by S. Peele and M. Grant, “Alcohol and Pleasure, A Health Perspective,” 1999, they quote Hunt (1990 pp. 243-244), “The use of alcohol is seen as a social cement which binds together the members of a community, thereby enhancing group solidarity.” They cite numerous articles about alcohol and social cohesion across cultures, including Greeks, Italians, Spanish, and American subcultures of Jews, Chinese, and Italians. They note the well-established J-shaped curve in most studies with health benefits and longevity with alcohol. They conclude that it is challenging to say anything about causality. The health benefits associated with moderate drinking do not likely flow directly from the pharmacology of alcohol, but must be interpreted in the context of culture and social environment. It may be a complex causal nexus, including a range of productive and healthful behaviors, a positive, health-seeking orientation to life, reinforced by social support and cohesion.

To me, this complex nexus appears like this: affluence allows time for exercise, and time to connect with successful people, and better health. Alcohol facilitates social connections and cohesiveness. Social connections enhance financial success, which allows affordability of moderate drinking. Poorer financial circumstances, with its chaotic life and high toxic stress can mean that alcohol in moderation is not affordable, except for those who drink in excess, who feel compelled to drink because of alcoholism or high stress. If alcohol in moderation helps social connections, it indirectly improves health. Social connections by themselves are very high on the list of things that most promote health and wellness. But there are other ways of improving social connections. Alcohol may be sufficient, but not necessary for social cohesion. Social connectivity by itself may encourage moderate drinking. Affluence, good health, good health habits, and social cohesion all go together, and alcohol in moderation may be just coming along “for the ride.”

Considering this complex interplay of all these variables, I think that the health benefits of alcohol are basically unproven. It would be extremely difficult to prove. It would require a study of 2 carefully matched groups of non-drinkers, in good health, with similar health habits, behaviors, personality traits, social connections, same BMI, nonsmokers, similar food, randomly chosen to consume regularly a fixed amount of beverage, so that one group would have the real alcohol, the placebo group would have non-alcohol beer or wine, with something to make a fake “fire water” feel to it. The study would have to continue for many years, before the outcomes of mortality and various health problems would have time to occur.

I don't know of any such study that is currently underway. The complacency of the health professions to accept the holy grail of the current recommendations of “alcohol in moderation” with no caveats, in the face of poor evidence for it, is either incompetence, negligence, ignorance, or maybe “addiction” to that concept, just not wanting to question the guidelines, or in other words, bias, because so many people in the health professions like alcohol, and they don't want to hear anything negative about it. See my article, “Is Society an Addict?” in the archives. We have many things that we are “addicted” to that affect our viewpoints on a lot of things. To accept the results of observational studies as reason to make recommendations for nontoxic substances such as foods or nutritional supplements is understandable, but to do that for substances that have known toxicities without proper randomized trials is irresponsible.

One more issue touched on earlier is detoxification. This planet is loaded with toxic chemicals, even in the most remote areas. Newborn babies have more than 100 industrial chemicals in their blood, many of which are carcinogenic. Our bodies make glutathione to combat the oxidative stress (free radicals) that these chemicals cause, and for conjugating them in the liver so they can be excreted in the urine, bile, stool, etc. Alcohol is also detoxified by glutathione and competes with chemicals for detoxification. That is why acetaminophen overdose is so dangerous when accompanied by drinking alcohol. One hundred years ago, when people were not so poisoned with chemicals, which are xenobiotics, (new to nature) this would not be such an issue. Nowadays and in the future, if our country continues to allow chemicals in our food, water, and air to be

released without being tested for safety, (unlike European countries), we need all the help we can get with detoxification. Why regularly add something that depletes glutathione to our diet? How did we come so far from a time when the U.S. Constitution was amended to outlaw all alcohol drinking, to now when alcohol is so mainstream and endorsed by medical people?

So I'm not saying, don't drink alcohol. Just don't be fooled into thinking that it promotes good health, and be aware of the risks. If you choose to drink for other reasons, that's up to you, and it may help you to be socially connected, which in turn can have health benefits, but I would advise working on other ways to connect with people that doesn't depend on alcohol. My perspective on social drinking is that when I'm with a group that drinks when I don't, they sound goofy to me. I find myself thinking, "Is what I'm hearing from this person authentic, or is that the alcohol talking?"

My main point, besides making the best information I know available so that people can make intelligent choices, is that medical or health resources or spokespeople need to reconsider carefully the quality of the evidence before making statements endorsing drinking alcohol, even in moderation.