



PinotFile

The First Wine Newsletter Exclusively Devoted to Pinotphiles

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Pinot Noir: Not Too Much, But Not Too Little

Wine in Moderation as Part of a Healthy Lifestyle

Brief Abstracts and a Review of the Scientific Research on Potential Health Benefits of Alcohol and Wine in 2012

Prologue

***"God gave the grape, the wine, to make to please both great and small
But little fools then drink too much and big ones not at all"***

Anonymous

There are probably more papers published in the scientific literature on alcohol than on any other singular subject and the word moderation appears over and over in referencing healthy alcohol consumption. The importance of moderation in alcohol intake has been realized since antiquity. Hippocrates, the Father of Western Medicine, advocated the use of wine to treat practically every illness he had identified: "Wine is fit for man in a wonderful way, provided that it is taken with good sense by the sick as well as the healthy." Paracelsus, a German physician in the Middle Ages, considered the Father of Pharmacology, invented the word alcohol and stressed the tonic value of wine: "Whether wine is nourishment, medicine or poison, is a matter of dosage."

The praise for and urging for moderation in alcohol consumption has been a refrain for centuries. Albert de Sallengre wrote in 1714 in his book, *The Praise of Drunkenness*, "Do not force someone to drink; do not drink too often; always drink good wine in good company at the right time; and, last but by no means least, know your limits." Abraham Lincoln noted, "It has long been recognized that the problems with alcohol relate not to the use of a bad thing, but to the abuse of a very good thing." Herrmann "Jackrabbit" Smith-Johannsen, a Norwegian-Canadian who was one of the first people to introduce the sport of cross country skiing to Canada and North America, died at age 103 in 1987. When asked what the secret to his longevity was, he said, "The secret to a long life is to stay busy, get plenty of exercise and don't drink too much. Then again, don't drink too little."

It is clear from the quotes of those who preceded us that they were aware of a boundary between the health benefits of wine and hazardous imbibing. The term, hormesis, applies here, meaning a biological phenomenon in which the favorable effect of moderate dosage of a substance is toxic in higher doses.





The current (2010) United States Dietary Guidelines for Americans emphasizes moderation:

1. Don't begin drinking or drink more frequently on the basis of potential health benefits.
2. If you do choose to drink, do so in moderation. This is defined as up to 1 drink a day for women or 2 for men.
3. Don't drink at all if you are under age 21, pregnant or may be pregnant, or have health problems that could be made worse by drinking.

The National Institutes of Health Guidelines (2011) are similar:

1. Moderate or “low-risk” drinking for men is no more than 4 drinks on any single day AND no more than 14 drinks per week, and for women no more than 3 drinks on any single day AND no more than 7 drinks per week.
2. Heavy or “at-risk” drinking for adults means consuming more than the single-day or the weekly amounts listed in above.

To understand “moderate drinking,” which is frequently referenced in this issue and in the following abstracts of research studies, a few definitions are in order. In the United States, a standard drink (or unit) contains 17.7 ml or 14 gm or 0.6 ounces of ethanol which is equivalent to 12 ounces of beer, 5 ounces (150 ml) of 12% ABV wine, and a shot (1.5 ounces) of 80-proof distilled spirits or liquor. A full bottle of wine contains 750 ml or 25 ounces which is 5 to 7 standard drinks depending on the alcohol percentage. To determine the number of drinks in a bottle, multiple 750 ml by the alcohol percentage and divide by 17.7. A bottle of 16% alcohol will have about 1 more drink than a bottle of 13% alcohol, the point being that alcohol percentage does make a difference when you are looking to drink in moderation. The amount of alcohol consumed rises more rapidly per unit volume ingested as the alcohol percentage goes higher. One would want to scale back the volume of drinking when imbibing a wine with a higher alcohol percentage or reach for a lower alcohol wine to insure that you stay within the confines of “moderation.”

STANDARD DRINK EQUIVALENTS	APPROXIMATE NUMBER OF STANDARD DRINKS IN:
BEER or COOLER 12 oz.  ~5% alcohol	<ul style="list-style-type: none"> • 12 oz. = 1 • 16 oz. = 1.3 • 22 oz. = 2 • 40 oz. = 3.3
MALT LIQUOR 8-9 oz.  ~7% alcohol	<ul style="list-style-type: none"> • 12 oz. = 1.5 • 16 oz. = 2 • 22 oz. = 2.5 • 40 oz. = 4.5
TABLE WINE 5 oz.  ~12% alcohol	<ul style="list-style-type: none"> • a 750 mL (25 oz.) bottle = 5
80-proof SPIRITS (hard liquor) 1.5 oz.  ~40% alcohol	<ul style="list-style-type: none"> • a mixed drink = 1 or more* • a pint (16 oz.) = 11 • a fifth (25 oz.) = 17 • 1.75 L (59 oz.) = 39 <p>*Note: Depending on factors such as the type of spirits and the recipe, one mixed drink can contain from one to three or more standard drinks.</p>

Many drinkers believe a standard drink is of greater volume than it is. This is termed the “over-sizing effect” and leads to a false sense of drinking within the confines of moderation. Drinkers have trouble pouring standard drinks and the norm is to over pour. According to *BBC News* (October 7, 2011), the Office of National Statistics in the UK found that 82% of adults claim to know what a unit of alcohol is, but 77% don’t know how many units are in a typical large glass of wine and only 13% kept tabs on the number of units they drank. To use a common measure, a 4 ounce pour is 120 ml or ½ cup, the standard U.S. drink of 5 ounces is about ¾ cup, and a 6 ounce pour (common in restaurants) is ¾ cup. It is very easy to pour 10 ounces into a Burgundy glass, thinking it is one standard drink. A table showing the cumulative consumption of alcohol in ounces per number of 5 ounce pours of wine is below:

**Cumulative Consumption of Alcohol in oz. per
Number of 5 oz. Pours of Wine**

Alcohol % by Vol.	1	2	3	4	5
10	0.5	1	1.5	2	2.5
10.5	0.525	1.05	1.575	2.1	2.625
11	0.55	1.1	1.65	2.2	2.75
11.5	0.575	1.15	1.725	2.3	2.875
12	0.6	1.2	1.8	2.4	3
12.5	0.625	1.25	1.875	2.5	3.125
13	0.65	1.3	1.95	2.6	3.25
13.5	0.675	1.35	2.025	2.7	3.375
14	0.7	1.4	2.1	2.8	3.5
14.5	0.725	1.45	2.175	2.9	3.625
15	0.75	1.5	2.25	3	3.75
15.5	0.775	1.55	2.325	3.1	3.875
16	0.8	1.6	2.4	3.2	4
16.5	0.825	1.65	2.475	3.3	4.125
17	0.85	1.7	2.55	3.4	4.25
17.5	0.875	1.75	2.625	3.5	4.375
18	0.9	1.8	2.7	3.6	4.5
18.5	0.925	1.85	2.775	3.7	4.625
19	0.95	1.9	2.85	3.8	4.75
19.5	0.975	1.95	2.925	3.9	4.875
20	1	2	3	4	5



The Iowa Alcoholic Beverages Division has created a mobile site, CALCohol, that calculates alcoholic content based on the listed proof and size of drink. If the user knows the alcohol content, the app can give a serving suggestion. It is the first site of its kind that identifies the number of standard servings. It also can estimate the users blood alcohol level at any time and tells the user when they will be sober (the users weight, height, gender and age are taken into account). The app can be downloaded at www.SourceForge.net.



Another way to monitor drink and insure that you are within the confines of moderation is to use a winemeasuring glass such as the Moderation Wine Glasses offered by Mr. Picky (www.mr-picky.com/moderation-wine-glasses/). The red and white glasses are made in a Riedel factory in Germany and are endorsed by cardiologist and heart surgeon, Steven Gundry, M.D., and author of the *Sonoma Diet*, Dr. Connie Guttersen. Discrete bubbles on the glass measure 4, 6 and 8 ounces. For me, this would take some of the pleasure out of enjoying wine. I would rather just roughly estimate using a proper wine glass.



Why are we concerned with alcohol intake and the possible gains from moderation? The primary reason is that we drink plenty of alcohol in this nation and there are over 200 diseases or conditions with diagnostic codes in the International Classification of Diseases-10 caused directly or indirectly by alcohol. In 2011, Americans drank 3.7 billion bottles of wine (revealed in a 2012 study by Vinexpo and International Wine and Spirits Research or ISWR) and the United States is now the world's leading wine consumer in volume and value (although we have one of the lowest rates of drinking in the developed world, with about 20 percent of Americans consuming 96% of the wine). The ISWR predicts United States wine consumption will increase by 10 percent over the next four years, with Americans drinking about 13 liters of wine (3.4 gallons) per adult per year. The average American adult now drinks about 2.6 gallons of wine a year (a little over a glass of wine a week), less than the World Health Organization reported global average of 3.3 gallons a year. The Gallup Consumption Habits Poll from July 9-12, 2012, found that American drinkers consume just over four alcoholic drinks per week on average with 12% consuming eight or more drinks in the past week. Wine is closing in on beer as the favored alcoholic beverage of Americans.

The health benefits and risk of alcohol and wine in particular in the American diet is worth study. According to a reported released January 9, 2013, by the National Research Council and Institute of Medicine, Americans live a shorter life span and are in worse health than residents of other wealthy nations. American men had the lowest life expectancy among men in 17 countries and women had the second-lowest life expectancy, better than only Danish women. Americans are below average regarding a number of important health conditions, including obesity, diabetes and cardiac disease.

The importance of moderation in wine consumption cannot be overemphasized. Over drinking can lead to a number of very serious health problems including sudden death from high blood pressure, heart attack, cardiac arrhythmia or stroke; cardiac myopathy, cirrhosis of the liver, acute alcoholic hepatitis, osteoporosis, chronic gastritis, irritable bowel syndrome, tremors, insomnia, dementia, and cancer of the mouth, pharynx, larynx, esophagus, stomach, liver, colon and breast. One is better off not drinking at all than drinking too much.

There are many challenges to medical research on alcohol in this country and trumpeting the correct message to the American public. Lewis Purdue, who publishes the *Wine Industry Insight* and *Daily News Fetch* online has voiced his displeasure. "The wine industry is timid, apathetic, smug and doing a pitiful job of telling the story. Yes, that includes everybody from the Wine Institute to Family Winemakers to every state, local, county and other wine organization in the country." The Wine Institute, and the Federal Government for that matter, prohibit wineries from hinting at or promoting the health benefits of wine.

Currently, federal money cannot be used to support alcohol research other than the treatment of addiction, and funding is available only for viticulture studies and examination of grapes, raisins and other non-vinification topics. Jake Lorenzo, writing in *Wine Business Monthly* (December 2012) adds his view. "There is some sinful quality and a bit of guilt attached to drinking any alcoholic beverage. Alcohol, wine included, is regulated by the Bureau of Alcohol, Tobacco, Firearms and Explosives under the auspices of the Department of Homeland Security. That means wine is considered dangerous and possibly subversive by our own government."

Purdue also points out the number of "alcohol is evil" headlines he sees every day for the Daily News Fetch has been going up steadily along with the "AH-HAH! Wine's not so good for you after all" articles. I see titles like, "Daily glass of red wine might not be good for you," frequently as I review the literature. These headlines send a confusing message to the public and have a veil of Neo-prohibitionism. Rob McMillan (*SVB on Wine* at Svbblogspot.com) notes, "Neo-prohibitionism may be less visible, yet the underlying agglomeration of strange bedfellows isn't yet dead."

I can sympathize with the public's confusion about the health benefits of wine. As a medical doctor, I have read a considerable amount of medical literature and research on the relationship between alcoholic beverages and health, yet I find it exasperating to successfully decipher the conflicting reports. Practically every published research study ends with the disclaimers such as, "Further study is necessary," "More research is needed to explain the results," and "The results may be explained by biases and confounding." The word "suggestive" or the two words "interpret cautiously" are often employed.

I believe that we need more voices that are promoting the truth about the responsible consumption of wine to the public. I hope that this issue of the *PinotFile* speaks loudly to this very complicated subject. There are no absolutes presented here, and readers are encouraged to individualize the vast amount of information and consult with their personal physician for advice on lifestyle, diet and drinking. I agree wholeheartedly with Becca Yeamans, who writes the Academic Wino Blog (www.academicwino.com). "The complicated nature of both wine and the human body will make blanket statements about the health benefits of wine near impossible."

Serge Renaud and the French Paradox: The Origin of Interest in Wine and Health

“A moderate and regular wine consumption of 1 to 3 drinks per day, which is common in France, protects us.”

Serge Renaud

Serge Renaud, M.D., PhD, the “Father of the French Paradox,” passed away October 28, 2012, just weeks short of his 85th birthday. Born in the Bordeaux region of France, he was the son of a winemaker who went on to perform important research on wine and other alcoholic beverages and their relationship to cardiovascular disease and other diseases of aging. His early research was carried out in Montreal, Canada, during the 1950s, and later in Boston. Renaud returned to Lyon, France in 1973 as the Director of Research at INSERM, the French National Institute of Health and Medical Research, where much of his research was carried out.

Renaud found a relationship between the low rate of cardiovascular disease and moderate wine intake in the French population. Although the French consumed a diet high in saturated fat, smoked more, and exercised less than Americans, the French had 40% fewer heart attacks and lived on average about two and a half years longer. To their advantage, the French consumed moderate amounts of red wine regularly with meals, they ate more fresh fruit and vegetables, they took longer to eat and snacked less, they ate less red meat and more cheese, and they used more olive oil and less butter in their cuisine. Of all these factors, the link between moderate and regular consumption of wine with meals was strongest and supported by the most scientific evidence. This became known as “The French Paradox,” and unleashed a worldwide interest in the possible health benefits of wine. The idea that drinking might be good for you came as a surprise to most people.

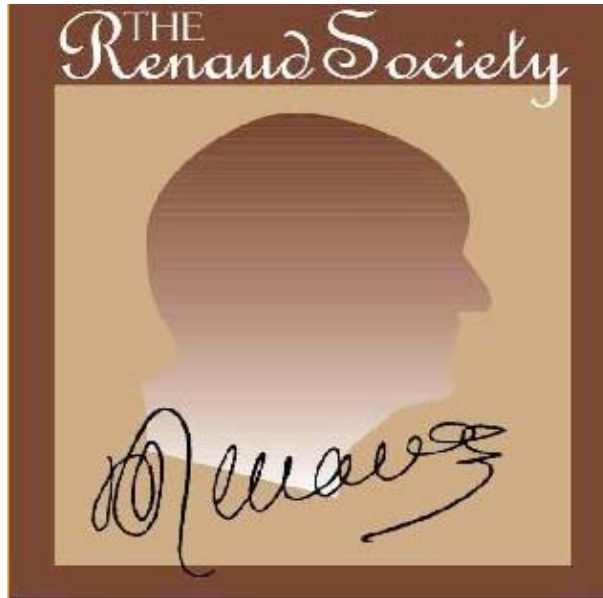
In 1991 Morley Safer ran a televised feature on *60 Minutes* about The French Paradox. Safer had consulted with Curtis Ellison, M.D., Professor of Preventive Medicine and Epidemiology at Boston University School of Medicine, and Ellison told him the secret to the longevity of the French Paradox was wine, food and lifestyle. On the now landmark telecast, Safer asked Renaud what the observed decreased mortality from cardiovascular disease in the French could be attributed to, and Renaud answered, “I think it is the alcohol.” Safer ended the show holding up a glass of red wine. The next day the demand for red wine took off in the United States and the American public’s interest in wine and health had begun. The solution to The French Paradox was in a bottle.



Renaud published his now famous paper in the medical journal, *The Lancet*, Volume 339, Issue 8808, on June 20, 1992, titled, “Wine, alcohol, platelets and the French paradox for coronary heart disease.” Renaud’s study involved 34,000 middle-age men living in eastern France. In the paper, he emphasized, “At the moderate intake of alcohol associated with the prevention of coronary heart disease, the mechanism of protection seems to be at least partly, a hemostatic effect, possibly a decrease in platelet reactivity.” It soon became clear to

Renaud and other researchers that The French Paradox might be explained by the polyphenols in the skins and seeds of grapes present in red wine which produce the blood thinning effect among others.

Renaud was the patriarch of the Renaud Society, an international group of medical professionals with a passion for wine, and an interest in health and scientific research on alcohol and wine (I am a charter member). The Renaud Society and the affiliated Desert Heart Foundation affiliated with the University of New Mexico School of Medicine is one of the few voices in this country promoting the truth about the responsible consumption of alcohol, and particularly wine, to the public (www.therenaudsociety.com).



The French Paradox is still applicable as the latest statistics show that the life expectancy between 2005 and 2010 for the French was 80.7 years, while the United States life expectancy for the same period was 78.2 years. French consumption of wine is decreasing with the French Ministry of Agriculture division FranceAgriMer reporting in 2010 that the average French adult consumed 57 liters (15 gallons) of wine. Although significantly more than United States consumers, it is much less than the 160 liters the French consumed in 1965. Only 17% of French currently have wine regularly. The decrease is said to be due to increasing health awareness, the economy, and the high unemployment rate in France. Because wine consumption has declined in France and yet the life expectancy has remained relatively constant, as pointed out by Andrew Jefford (*Decanter.com*, November 12, 2012), the The French Paradox may not be due solely to wine, but to better diet, less snacking, fresh foods, interest in exercise, plenty of vacation time, and other factors. A similar paradox has been observe for other Mediterranean countries including Spain and Italy which show the same reduced incidence of coronary artery disease. The only difference is the French consume an inordinate amount of saturated fats.

Confounders and the Confounding Array of Conflicting Studies

“Without a randomized, double-blinded, intervention trial controlled for confounding variables, the debate as to the health benefits of alcoholic beverages as part of a healthy lifestyle will continue.”

Research on wine and alcohol has been confined to *in vitro* studies on lower life forms, or *in vivo* cohort or case-control studies or meta-analyses (statistical analysis) which are epidemiological studies subject to bias and confounding factors, and lead to false positive and false negative conclusions. There have been no well executed, randomized, double-blinded, intervention trials controlled for all possible confounding variables. A confounding variable, also known as a confounding factor or hidden variable, is an extraneous variable in a statistical model that correlates positively or negatively with both the dependent variable and independent variable.

Arthur L. Klatsky, M.D., a prominent researcher on the health benefits of alcohol and wine, has explained the major flaws in much of the research to date. “The major issue is residual confounding by diet, smoking and other traits, problematic statistical modeling, and under estimation of drinking amount which lowers the apparent threshold of risk. The association of a behavioral trait such as alcohol drinking with a health outcome in any study could be due to chance, due to bias (confounding), or causal. While a chance relation is always possible, statistical evaluation can render the likelihood vanishingly small. The accepted standard for elimination of confounding and establishment of likely causality is the double-blinded randomized controlled trial. Problems in blinding and prescription of long-term behavior, plus the perceived risk of harmful effects have so far precluded this type of long-term study with chronic disease endpoints. As a result, the issue of how well we can infer causality from observational data remains a formidable challenge. While even well performed observational studies cannot completely exclude possible genetic or environmental predilections to health outcomes....criteria exist that can establish a very high probability of causality in these data.”

Beyond confounding inherent in epidemiological studies, a single study may tout a result, but the research often proves to be flawed. John P.A. Ioannidis, chief of the Stanford Prevention Research Center, works with colleagues all over the world to scrutinize treatments and has found many are costly and even worthless or harmful. He concluded in a 2005 PLoS paper, “For most designs and settings, it is more likely for a research claim to be false than true.” Joan O’Connor Hamilton, (*Stanford Magazine*, May/June 2012, “Something Doesn’t Add Up), quoted Ioannidis who concluded, “Journalists pursue stories about cures and progress but they are not likely to diligently explain the fine points of clinical trial bias and why a first splashy result may not hold up.”

A statistical analysis of 228,220 medical research trials reported in the journal *JAMA* (Volume 308 Issue 16, 2012) showed that the effect of large medical interventions rarely held up under scrutiny when other research teams tried to duplicate the findings. For example, for 75 years scientists have found that rats and mice that eat 30% to 40% fewer calories than normal live 15% to 40% longer than is typical for their species. A recent study in monkeys showed no increased longevity when calories were restricted to 30% below normal. So what might be true for rodents and other animals may not hold true for primates including humans.

Valuable critiques of currently published research is now available by members of the International Science Forum on Alcohol Research, a joint undertaking of the Institute on Lifestyle and Health of Boston University of Medicine and Alcohol in Moderation (AIM) of the United Kingdom. The forum consists of an international group of invited scientists and physicians who are specialists in their fields and committed to balanced and well-researched analysis regarding alcohol and health. The Forum provides timely critiques and comments by Forum members on emerging scientific publications and policy statements related to alcohol and health, and provides an opportunity for all to seek expert opinion on topics related to alcohol and health. Visit the website at www.bu.edu/alcohol-forum/. Some commentary by the Forum is included on a few of the abstract reviews that follow.

In the pages to follow beginning on page 12, I will summarize major, peer-reviewed, scientific studies published in 2012 and early in 2013 that contribute to our current understanding of the roles that alcohol and wine play in our health. For those wishing to seek out the studies in their entirety, visit PubMed, which offers more than 21 million citations from the biomedical literature (www.pubmed.gov), or visit the websites of the journals named.

Alcohol, Alcohol Levels in Wine, and Low-Alcohol Wines

“Plenty of people, including a lot of consumers, aren’t happy about seeing numbers in the 14% to 16% range on their bottles.”

Erika Szymanski, PalatePress.com

It has been well documented that alcohol levels in wine have increased significantly over the past 10 to 20 years (“Too Much of a Good Thing? Causes and Consequences of Increases in Sugar Content of California Wine Grapes, *Journal of Wine Economics*, 6 (2), 2011). The sugar content of California wine grapes at harvest increased from 21.4 degrees Brix in 1980 to 21.8 degrees Brix in 1990, and 23.3 degrees Brix in 2008. This 9 percent increase in the average sugar content of harvested wine grapes translates into a 9 percent increase in the average alcohol content of wine.

A number of techniques are employed to reduce the final alcohol level in wine including picking grapes that are less-ripe, adding water, reverse osmosis (dominated by Vinovation), spinning cone columns (dominated by Conetech), use of less efficient yeasts, and the removal of alcohol during fermentation. A detailed review of alcohol reduction methods is offered in the online magazine www.palatepress.com/2013/01/wine/de-alc-ing-how-wineries-put-out-their-fires/.

Harvey Steiman wrote an excellent article in the *Wine Spectator* (“Finding the Sweet Spot,” April 30, 2012) on the increasing ripeness and alcohol percentages of wines and how vintners have now tried to counter this trend. The false label claims study published by UC Davis in 2010 in *the Journal of Wine Economists* is cited in which it was found that there were substantial errors in alcohol percentages on labels with a tendency to understate alcohol content on wines over 14 percent alcohol and to overstate alcohol levels on wines under 14 percent alcohol. Steiman notes, “Winemakers are willing to err in the direction of providing consumers what they want. What remains to be resolved is why consumers choose to pay winemakers to lie to them.”

There is considerable buzz in the wine business and increasing consumer demand, at least in Australia, Europe and the UK, for lower alcohol and thus lower calorie wines. *UK News* (September 18, 2012) published an article titled, “Older drinkers raise glass to weaker wine.” The report stated that lower alcohol wine popularity was soaring with people over 55 years of age and lunchtime drinkers. Wine producer First Cape surveyed 850 customers and found that 20% of drinkers 55 years of age or older preferred wines with an alcohol content of no more than 5.5%. A number of organizations and government bodies in the UK have pushed for weaker alcoholic drinks to stem the alarming increase in binge drinking problems in that country.

A 2012 Insight Report from International Wine & Spirit Research (IWSR) found that the interest in low-alcohol wines was primarily due to increased taxes in some countries on wine, and lesser reasons including health concerns primarily by women. The report notes that Accolade Wines, Brand Phoenix, E. & J. Gallo, and Percy Fox are investing in wine programs with very low alcohol levels (5.5% or below). Wines with such a low alcohol level are not by definition wines and thus are not subject to the same taxes. The report notes some rising interest in the United States as well where considerable emphasis is placed on women’s weight and health.

ProWein, the German wine trade fair, commissioned Wine Intelligence to canvas 1000 regular wine drinkers in the United States, China, Germany and the UK. The report found a preference for lower alcohol wines in a significant percentage of those canvassed, primarily younger generations most notably in China. In the United States, 22% said their ideal wine would be 10.5% alcohol, similar to the findings in Britain and Germany.

The biggest challenge for producers of lower alcohol wines is making the wines as palatable as normal premium wines. Charles Olken, the respected editor of *Connoisseurs’ Guide to California Wine*, has no love for the new lower alcohol wines. In an editorial published February 22, 2012, Olken says, “The newfound lust for low alcohol wines is about to destroy the wine business as we know it....So, until the world invents a better grape or a useful yeast that ferments great wines at less than the normal conversion ratios or technology that will reduce the alcohol without changing body, flavor, or balance, we are stuck with that great bugaboo we call moderation. Perhaps we can get back to drinking great wine in whatever amounts our bodies and the law will allow.”

Counting Calories

“Women have fought hard to be considered equals when it comes to wine, whether professionally or in our private lives.”

Mary Orlin, WineFashionista

The press of late has been obsessed with discussions of calories in alcoholic beverages and the adverse effect of consumption on weight. The reports have targeted women, despite epidemiological studies that have not shown alcohol consumption to be a risk factor for obesity. A typical headline ran in *The Washington Post* (January 9, 2013), “When counting calories, you need to think before you drink.” The CDC has warned that alcoholic beverages may add extra calories and reported that men consume on average 150 calories worth of alcohol a day compared to a little over 50 calories for women, with younger adults consuming more than older adults (www.cdc.gov/nchs/data/databriefs/db110.htm).

Alcohol is likened to a sugared beverage akin to soda since it is similarly high in calories (one 5 ounce standard drink of Pinot Noir has 121 calories while the other most popular varietals contain between 118 and 129 calories according to the USDA National Nutrient Database), but no more than commonly ingested “healthy” juices from oranges or apples. There have been no studies published looking at the effects on weight of calories from different food sources such as wine versus apple juice.

An important study published in 2012 “Alcohol Consumption, weight gain, and risk of becoming overweight in middle-aged and older women” *JAMA Internal Med* 170 (5) found that compared with abstainers, initially normal-weight women who consumed a light to moderate amount of alcohol gained less weight and had a lower risk of becoming overweight and/or obese during the 12.9 years of followup. This was the first study to look at the risk of becoming overweight or obese among initially normal-weight individuals. See page 18 for a full description of this study.

While it is true that alcohol is a nontrivial energy source (7.1 calories per gram or slightly less than a gram of fat) that theoretically can contribute to a positive energy balance and long-term weight gain and obesity, evidence from prospective studies shows that if the energy from alcohol consumption is added to a diet high in protein, low in carbohydrates, the effect would not be as high a risk factor. Data from the first National Health and Nutrition Examination Survey (NHANES I, *American Journal of Clinical Nutrition* 42 1985)) found that even though alcohol consumers had significantly higher intakes of total calories than nondrinkers, drinkers were not more obese than nondrinkers. In fact, women drinkers had significantly lower body weight than nondrinkers. As alcohol intake among men increased, their body weight decreased. Data from the second National Health and Nutrition Examination Survey (NHANES II, *American Journal of Clinical Nutrition* 54 1991) and other large national studies have found similar results for women, although the relationship between drinking and body weight for men is inconclusive with heavy drinking possibly associated with abdominal obesity. Some studies have shown weight gain when alcohol is added to the diets of overweight persons.

A recent study published in *Nutrition Reviews* (Alcohol Consumption and Body Weight: A Systematic Review, July 26, 2011) reviewed thirty-one publications. The overall results did not confirm a positive association between alcohol consumption and weight gain. The authors concluded that light-to-moderate alcohol intake, especially wine intake, may be more likely to protect against weight gain, whereas consumption of spirits has been positively associated with weight gain.

When alcohol enters the body, it is detoxified quickly in the liver with top priority. A small amount is metabolized in the stomach, and the less than 10% that escapes metabolism is excreted through sweat, saliva, urine and breath. Alcohol and wine are processed differently than other dietary energy sources such as sugars and starch so their effect on weight cannot be strictly compared. It has been found that alcohol induces an increase in the sensitivity of muscle to insulin and down-regulates the effect of insulin on fat tissue so fat mass decreases. Alcohol does increase the production of triglycerides within the liver but it is not clear that this translates into weight gain when alcohol is consumed in moderation.

A low-calorie line of wines from Treasury Wine Estates, The Skinny Vine, has 95 calories per 5 ounce serving or about 25% to 35% less calories than traditional wine. The winery claims the wines have the taste and quality of full-calorie wines and carry names like Slim Chardonnay, Mini Moscato and Thin Zin (\$11 a bottle). Promoted by Christine Avanti, author of *Skinny Chicks Eat Real Food*, these wines are offered at

www.cellar360.com. A wine label called Skinnygirl was launched by Bethenny Frankel, a reality TV star and former Real Housewives cast member. The three wines offered, with an initial production of 200,000 cases, have 100 calories per 5 ounce serving, 12 percent alcohol and sell for \$15 a bottle. Weight Watchers has partnered with McWilliams Wines to produce a line of lower-alcohol wines that are currently available in the UK.

I believe low-calorie wine is silly since women who pursue these wines are only saving about 25 calories each time they drink a glass which is no big deal, and for reasons described above, this savings does not translate into significant avoidance of weight gain. Women should not be consuming more than one glass of wine a day anyway. That said, women are frequently buying wine on visits to grocery stores and any product that promotes less calories or weight loss grabs their attention. Sensible portions and proper food choice is unquestionably important to health, but the low-calorie wine idea is an affront to women. This was pointed out by Mary Orlin, the WineFashionista on Huff Post Food, "Would anyone make a Skinnyboy wine?"

Further research is needed toward assessing the specific roles of different types of alcohol beverages in weight gain, especially concerning consumption patterns. In the meantime, it is mindless to wring our hands over moderate wine drinking since a glass or two a day appears to have little real effect on weight in those drinkers who are not already obese.

Binge Drinking and Health Consequences

Binge drinking is an episode of excessive drinking with has a number of definitions. These include the consumption of five or more drinks in a row by men on a single occasion or four or more drinks in a row by women, or a blood alcohol concentration (BAC) over 0.08 (National Institute on Alcohol Abuse and Alcoholism). Problematic drinking is widespread among college students and may lead to alcohol dependence in later adulthood, particularly in females.

The 2011 Monitoring the Future Study found that 81% of college students have tried alcohol at least once in their lifetime, 36% reported binge drinking, and 14% reported that they have consumed 10 more drinks in a row at least once in the past two weeks

The 107th Annual Meeting of the American Sociological Association in 2012 reported a study of students from higher status groups (wealthy, male, white, fraternity or sorority members) were happier with their college social experience than their peers from lower status groups (less wealthy, female, non white, lesbian, gay and no Greek affiliation). The higher status groups were more likely to binge drink. Members of the lower status groups who were binge drinkers were happier (more social satisfaction) than those who rarely or never binged. In summary, binge drinking and social satisfaction were strongly connected.

Vital Signs: Binge Drinking Among Women and High School Girls - United States, 2011 *MMWR Morb Mortal Wkly Rep* 11 (62) January 2013. A report from the Centers for Disease Control and Prevention (CDC) in early 2013 found binge drinking to be an under-recognized problem for girls and women (CDC's Vital Signs report at www.cdc.gov/vitalsigns/bingedrinkingfemale/index.html). 1 in 8 women and 1 in 5 high school girls binge drink (defined in this report as consuming four or more drinks on an occasion). Binge drinking was most common among women ages 18 to 34 and high school age girls. It was most frequent among women in households with annual incomes of \$75,000 or higher. The concern about binge drinking in younger women is that it puts them at a higher risk for breast cancer, sexually transmitted disease and unintended pregnancy. Binge drinking during pregnancy can lead to fetal alcohol syndrome and spontaneous abortion. Binge drinking leads to about 23,000 deaths in girls and women yearly. See also **Alcohol Use and Binge Drinking Among Women of Childbearing Age - United States, 2006-2010** *MMWR Morb Mortal Wkly Rep* 20 (61) July 2012 The prevalence of binge drinking in women ages 18 to 44 was 15% among non-pregnant women and 1.4% among pregnant women.

Binge Drinking, Drinking Frequency, and Risk of Ischemic Heart Disease: A Population-based Cohort Study *Scandinavian J of Public Health* 39 December 2012. A population analysis from Denmark found that light-to-moderate drinkers who reported an episode of binge drinking did not show differences in the risk of ischemic heart disease or total mortality than did other moderate drinkers who did not report binge drinking. The results are different from many other epidemiological studies that show increased risk of heart disease associated with binge drinking. The definition of binge drinking in this study was more than five drinks per day and may account for a different result. Even so, binge drinking is not healthy.

Divergent Associations of Drinking Frequency and Binge Consumption of Alcohol with Mortality Within the Same Cohort *J Epidemiol Community Health* December 12, 2012 (ahead of print) This study assessed the associations of alcohol use with mortality in a population with a hybrid of drinking patterns, aged 20-62 years. A higher all-cause mortality in both sexes and a higher cardiovascular disease mortality in men was found with increasing frequency of binge drinking, compared with non-bingers. In both sexes, low-frequent use of any alcohol was associated with lower all-cause and cardiovascular mortality, compared with abstention. The authors point out that questions on drinking frequency and a specific question on binge drinking capture different effects of alcohol use on all-cause and cardiovascular mortality.

Heavy Binge Drinking May Increase Risk of Stroke in Nonalcoholic Hypertensives Carrying Variant ALDH2*2 Gene Allele *Acta Neurol Taiwan* 21 (1) March 2012 Two case reports suggest that heavy binge drinking increases the risk of acute stroke in hypertensives with the variant ALDH2*2 gene allele, possibly due to increased cardiovascular stress due to prolonged elevation of blood ethanol and acetaldehyde levels. The variant allele ALDH2*2 is found almost exclusively in the East Asian people and interferes the metabolism of alcohol by impairing the conversion of acetaldehyde to acetate.

Refer also to studies on binge drinking in pregnancy in that section of this issue.

Longevity, Quality of Life & Low-risk Drinking

What is Optimal Level of Population Alcohol Consumption for Chronic Disease Prevention in England? Modeling the Impact of Changes in Average Consumption Levels *BMJ Open* 2 (3) May 30, 2012

Researchers from Oxford University, as part of the British Heart Foundation Health Promotion Research Group, performed a meta-analysis of the death toll of eleven conditions known to be associated with long-term alcohol consumption such as heart disease, stroke, diabetes and five different cancers. Estimates of weekly alcohol consumption for 15,000 English adults from the 2006 General Household Survey and mortality data from the Office for National Statistics were used. The results indicated that cutting alcohol intake to half a unit a day would avert 4,579 premature deaths in England each year (primarily from cancers and liver disease) and cutting consumption would lead to 843 extra deaths each year (in part from an increase in cardiovascular mortality). The authors of the study state that current UK government recommendations for alcohol consumption (3 to 4 units a day for men and 2 to 3 units a day for women) are well above the level likely to minimize chronic disease. The researchers recommend that the English restrict their alcohol consumption to no more than a half unit a day for men and women (just a few gulps) or no more than three glasses of wine a week.

Lack of International Consensus in Low-risk Drinking Guidelines *Drug and Alcohol Review* 32 (1) June 5, 2012 This research found that the government advice on low-risk drinking varies widely among different countries and there is no international agreement about whether women should drink as much as men or only half as much. Some countries advise drinkers to avoid alcohol one or two days per week and other countries, such as the United States, make no such recommendation.

Press Release from Richard de Visser, PhD, part of a special themed issue of the journal *Drug and Alcohol Review* on low risk drinking guidelines. Secondary and college students in England completed a survey on their knowledge and beliefs of governmental guidelines on safe alcohol consumption. Most of those who responded did not have the knowledge to drink according to government guidelines. Participants underestimate the unit content of drinks and their "usual" drinks were substantially larger than one unit.

Wine Consumption and 20-year Mortality Among Late-Life Moderate Drinkers *J of Studies on Alcohol and Drugs* 73 (1) January 2012 A self-reporting study of 802 adults between 55 and 65 years of age at baseline. Three groups were studied: abstainers, high-wine-consumption moderate drinkers, and low-wine-consumption moderate drinkers. When all confounding factors are controlled, there is no difference in mortality rate between wine drinkers and other alcoholic beverage drinkers. The apparent lower mortality rate for wine drinkers is related to behavioral, lifestyle, social and health factors rather than wine consumption. The study did show that high-wine-consumption and low-wine-consumption moderate drinkers had reduced mortality risk compared to abstainers but it did not show that this effect was due to wine specifically or just alcohol. Those for whom a low amount of ethanol came from wine showed a substantially increased 20-year mortality risk of 85%, but, when controlling for all covariates, the mortality difference associated with wine consumption was no longer significant. The study did not differentiate between red and white wine and did not inquire about binge drinking.

PLoS ONE January 20, 2012 UCLA scientists found that small amounts of ethanol improved the survival of roundworm larvae (from 12 days to as long as 40 days). The dose was equivalent to one beer in a hundred gallons of water. The mechanism is unknown but the organism may be using ethanol directly as a precursor for biosynthesis of high-energy metabolic intermediates or indirectly as a signal to extend life span.

Alcohol Use Patterns and Trajectories of Health-Related Quality of Life in Middle-Aged and Older Adults: A 14-Year Population Based Study *J of Studies Alcohol and Drugs* 73 July 2012 This 14-year population-based study looked at especially persistent moderate use of alcohol in a sample of 5,404 Canadians ages 50 and older at baseline obtained from the National Population Health Survey. Persistent moderate drinkers had higher initial levels of health-related quality of life than persistent nonusers, persistent former users, and decreasing users, with rates of decline over time similar for all groups except those decreasing their consumption, who had a greater decline in their level of health-related quality of life than persistent moderate users. In summary, drinking in moderation (21 units a week for men and 14 for women using 5 ounces as 1 unit) in a consistent, responsible manner is associated with an overall improvement in health, well being and happiness. Moderate alcohol consumption did not have a measurable deleterious effect over time. The International Scientific Forum on Alcohol Research largely supports the paper's findings.

Cardiovascular Disease

Effects of Red Wine and Vodka on Collateral-Dependent Perfusion and Cardiovascular Function in Hypercholesterolemic Swine *Circulation* 126 September 2012 This study found that hypercholesterolemic pigs fed red wine (Pinot Noir) or vodka with their food for 7 weeks had significantly increased blood flow to the heart, with red wine having the most benefit. HDL (good cholesterol) was significantly increased in the two alcohol-treated groups, while total cholesterol levels were unaffected. The author concludes that moderate consumption of red wine and vodka may reduce cardiovascular risk by improving collateral-dependent perfusion through different mechanisms and that red wine may offer increased cardioprotection related to its antioxidant properties.

Wine Consumption and Risk of Cardiovascular Events after Myocardial Infarction: Results from the GISSI-Prevenzione Trial *International J of Cardiology* July 2011 (online) Among patients with established heart disease, light to moderate wine consumption was associated with lower incidence of cardiovascular events and total mortality as compared with non drinkers. The study did not prove that wine consumption decreases the risk, but suggests that moderate wine intake is not harmful, and may be beneficial, in post-myocardial infarction patients who already consume alcohol.

Long Term Alcohol Consumption in Relation to All-cause and Cardiovascular Mortality Among Survivors of Myocardial Infarction: the Health Professionals Follow-up Study *European Heart Journal* 33 (13) 2012 This study was based on 50,000 men subjects. Pre-myocardial infarction and post-myocardial infarction intakes of light and moderate amounts of alcohol were both associated with a lower risk of all-cause mortality and cardiovascular mortality among men studied compared to abstainers. Long-term moderate alcohol consumption is inversely associated with all-cause and cardiovascular mortality among men who survived a first myocardial infarction. This U-shaped association may be strongest among individuals with less impaired cardiac function after myocardial infarction. Although the study only observe men, associations tend to be similar between chronic diseases and lower quantities of alcohol in women and an association is likely to be observed for up to a drink a day for women.



Lowering the Alcohol Content of Red Wine Does Not Alter Its Cardiovascular Properties *South African Med Journal* 102 (6) 2012 Moderate, regular consumption of red wine for ten days in rats is protective against heart attack. In this study, heart attack was artificially induced by 30 minutes of ischemia followed by 30 minutes of re-perfusion. Treatment with wine improved left ventricular developed pressure function after re-perfusion compared to controls. The authors concluded that lowering the alcohol content from 12% to 6% in wine did not alter its cardioprotective and antioxidant properties. Alcohol extracts alone do not provide cardioprotective benefits, rather the polyphenols in wine probably provide this benefit. The authors reported that moderate and regular consumption of lower alcohol wines may confer beneficial effects with possibly less risks associated with traditional wines of higher alcohol content.

Dealcoholized Red Wine Decreases Systolic and Diastolic Blood Pressure and Increases Plasma Nitric Oxide *Circulation Research* September 2012 This study evaluated the effects of red wine fractions (alcoholic and non-alcoholic) on blood pressure and nitric oxide in humans at high cardiovascular risk. 67 men were randomized into three treatment periods in a cross-over clinical trial with a common background diet plus red wine, an equivalent amount of dealcoholized red wine or gin, lasting 4 weeks with each intervention. It was found that dealcoholized red wine decreases systolic and diastolic blood pressure modestly possibly through a nitric oxide-mediated mechanism. Modest decreases in systolic and diastolic blood pressure are associated with a 14% and 20% reduction in coronary heart disease and stroke respectively. Therefore, the daily

consumption of dealcoholized red wine could be useful for the prevention of low to moderate hypertension. The specific substances responsible for the observed effects were not identified.

Alcohol Consumption and the Risk of Incident Atrial Fibrillation Among People with Cardiovascular Disease *CMAJ* November 6, 2012 An analysis of the association of alcohol consumption with atrial fibrillation among subjects with various forms of cardiovascular disease. The researchers used a broad definition of 'moderate' drinkers that was not consistent with the current definition. The International Scientific Forum on Alcohol Research notes that heavy alcohol intake does increase the risk of atrial fibrillation but as far as moderate drinking, the conclusions of the authors that even 'moderate' drinking leads to an increased risk of atrial fibrillation after development of cardiovascular disease is unfounded. The association between atrial fibrillation and moderate alcohol consumption is unclear.

Heavy Alcohol Intake and Intracerebral Hemorrhage: Characteristics and Effect on Outcome *Neurology* 11 (79) September 2012 Heavy drinkers are at a much greater risk for bleeding (intracerebral) stroke. This small study of 540 French people with an average age of 71, found that people who drank three or more alcoholic drinks per day had strokes almost a decade and a half before those who didn't drink quite as much. Heavy drinkers were also more likely to be smokers. The cause of the findings is not clear but it is known that heavy drinkers are more likely to have high blood pressure which is a major risk factor for stroke.

There were two noteworthy papers published in 2012 that discounted the health benefits of alcohol and wine consumption.

The Alcohol Policy Coalition of Australia (APC) released a position paper indicating that red wine's health benefits are a myth. A press release from Kathy Bell, CEO of Heart Foundation, a member of the coalition, said, "After reviewing all the scientific evidence it appears any positive effects of alcohol in reducing the risk of cardiovascular disease have been hugely overestimated. In particular, red wine has no special protective qualities when it relates to cardiovascular disease." This caused quite an uproar since there was no new research in the coalition's statement to back their assertions. There continues to be a push by a number of anti-alcohol groups in Australia to increase the tax on alcohol to reduce consumption.

The Cardioprotective Association of Average Alcohol Consumption and Ischemic Heart Disease: a Systematic Review and Meta-analysis *Addiction* 107 (7) July 2012 From Toronto's Center for Addiction and Mental Health. The study looked at 44 international studies dating back 20 years that included 957,684 participants worldwide, and concluded that the cardioprotective association between alcohol use and ischemic heart disease could not be assured for all drinkers, even at low levels of intake. The authors believe that some research shows having one drink a day may be beneficial but anything more cancels out the positive effects. They also stated that if someone binge drinks once a month, any health benefits from light to moderate drinking disappear. Women were considered more at risk for heart disease and other ailments by drinking. This review only indicates the need for more evidence on the overall benefit-risk ratio of average alcohol consumption related to ischemic heart disease and other diseases.

Metabolism & Digestive System

Alcohol Consumption and Risk of Pre-Diabetes and Type 2 Diabetes Development in a Swedish Population *Diabet Med* 29 (1) April 2012 The findings support a “u-shaped curve” for alcohol and diabetes risk both for men and women with a lower risk of developing diabetes for moderate drinkers than abstainers and possibly an increased risk for heavier drinkers. The highest risk was found for pre-diabetes and diabetes in non drinkers. The International Scientific Forum on Alcohol Research had some concerns about this study.

Alcohol Consumption is Associated with Reduced Risk of Type 2 Diabetes and Autoimmune Diabetes in Adults: Results from the Nord-Trondelag Health Study *Diabet Med* 30 (1) January 2013 Moderate alcohol consumption adjusted for confounders was associated with a reduced risk of Type 2 diabetes in men, but not in women. The reduced risk was primarily linked to the consumption of wine. No increased risk was seen in bingers or problem drinkers. The results also showed a reduced risk of autoimmune diabetes associated with alcohol consumption

Alcohol Consumption and Risk of Type 2 Diabetes in European Men and Women: Influence of Beverage Type and Body Size: The EPIC-InterAct Study *J of Int Med* 272 (4) October 2012. Researchers at numerous medical centers in Europe examined the lifestyle habits of nearly 30,000 people. They found that moderate alcohol consumption is associated with a 13 percent lower risk of Type 2 diabetes in men and a 20 percent lower risk in women. Moderate alcohol consumption also helped reduce diabetes risk in overweight people more than those of average weight. The authors of the study theorize that overweight people metabolize ethanol at a higher rate. The effect was seen up to 50 grams of alcohol per day beyond which all categories saw an increase in risk. Better results were seen for wine drinkers probably due to other confounders such as diet, exercise and smoking.

Gastroenterologist Dr. Kevin Ghassemi at UCLA reported to DrugFree.org (August 15, 2012) that alcohol is a major culprit in heartburn. Alcohol relaxes the lower esophageal sphincter creating an opening and stomach acid can back up into the esophagus leading to the heartburn sensation.

Red Wine Prevents Cholesterol Buildup From Meat *J of Functional Foods* January 2013 (prerelease online) A research team from Hebrew University of Jerusalem found that antioxidants in wine prevented harmful compounds from meat from being absorbed. Volunteers who ate dark turkey cutlets alone had increased levels of malondialdehyde in their blood and greater levels of cholesterol that had been modified by malondialdehyde. The levels of modified cholesterol increased by 97% after four days of eating meat. When test subjects had turkey cutlets marinated with red wine, their levels of modified cholesterol either remained the same or fell. This study is support for the time honored tradition of steak with red wine.

Cancer

Comparative Risk Assessment of Carcinogens in Alcoholic Beverages Using the Margin of Exposure Approach *International J of Cancer* 121 (6) September 2012 A study comparing the different carcinogenic substances in alcohol beverages including above-trace levels of arsenic, benzene, formaldehyde and lead among a total of fifteen that were identified. The margin of exposure approach was used for comparative risk assessment. Ethanol has the highest concentration of any carcinogenic substance. The study found that light to moderate drinkers are at little risk for cancer but there is a risk above four or more drinks per day. The risk of cancer in humans is three and a half times greater in those who drink four or more drinks per day. The authors believe there is not enough evidence to conclude red wine is less carcinogenic than any other alcoholic beverage. They recommend focusing on reducing alcohol consumption in general rather than on mitigating measures for some contaminants that contribute to a limited extent if at all to total health risk.

A Meta-Analysis of Alcohol Drinking and Oral and Pharyngeal Cancers: Results from Subgroup Analyses *Alcohol and Alcoholism* 48 (1) Jan/Feb 2013 A review of all case-control and cohort studies published until September 2010. The association between alcohol and oral and pharyngeal cancers (OPC) risk was similar in men and women and type of alcoholic beverage. Among never and non-current smokers, the pooled relative risks were 1.32 for drinking and 2.54 for heavy drinking. There is a stronger association between alcohol and OPC in smokers than nonsmokers.

Decreased Oral Cancer Risk by Moderate Alcohol Consumption in Non-Smoker Postmenopausal Women *Oral Oncology* 47 June 2011 At low levels of alcohol consumption, men have a moderate risk of oral cancer, whereas women have a reduced risk of developing oral cancer. At higher levels of alcohol consumption, both men and women showed increased risk for oral cancer.

UK Change4Life launched alcohol advertisements on television in 2012 because drinking too much is a major public health issue in the UK. The ad campaign emphasized the link between excessive drinking and disease, warning that drinking two large glasses of wine triples the risk of developing mouth cancer, doubles the risk of high blood pressure, and increases the risk of other forms of cancer. Change4Life urges citizens to follow government guidelines which say men should drink a maximum of 3 to 4 alcohol units per day and women no more than 2 or 3 units (the English standard drink unit is smaller than the US unit).

Alcohol Drinking, Tobacco Smoking and Subtypes of Hematological Malignancy in the UK Million Women Study *Brit J Cancer* 107 August 2012 Alcohol consumption lowers the risk of several types of lymphoma and plasma cell neoplasms, but has little effect on the risk of myeloid tumors such as acute myeloid leukemia. Smoking is associated with an increased risk for most such cancers.

Time Pattern of Reduction in Risk of Esophageal Cancer Following Alcohol Cessation - a Meta-Analysis. *Addiction* 107 July 2012 A Swedish study showed that the alcohol related increased risk of esophageal cancer is reversible following drinking cessation, most likely requiring up to 16 years. The authors estimate that about 50% of reduction of risk of cancer may occur within 4 or 5 years. There were some limitations of this study particularly as to adjustments for smoking.

Alcohol and Tobacco Lower the Age of Presentation in Sporadic Pancreatic Cancer is a Dose-Dependent Manner: A Multicenter Study *Amer J of Gastroenterology* 107 August 28, 2012 A multicenter study found that people who smoke or drink heavily are more prone to develop pancreatic cancer at an earlier age (almost a decade earlier) than people who avoid those habits. Heavy drinking in the study was defined as roughly three or more standard drinks a day.

Alcohol Intake and Renal Cell Cancer Risk: A Meta-Analysis *Brit J Cancer* 106 2012 April 19, 2012 This analysis found that there is a lower risk of kidney cancer with as little as one drink per day with little further reduction in risk for increasing amounts of alcohol consumption. The effect is seen in both men and women and for beer, wine and liquor.

Alcohol Consumption and Colorectal Cancer in a Mediterranean Population: a Case-Control Study *Dis Colon Rectum* 55 (6) June 2012. A Greek study of self-reporting patients with the first diagnosis of colorectal cancer and controls from the community. Moderate alcohol intake (less than 12g a day or 1½ drinks) is associated with a significantly decreased likelihood of colon cancer in men and women. High alcohol intake (more than 48 g a day) was associated with an increased likelihood in men but not women. Drinking red wine was associated with reduced odds of colorectal cancer in men but not women. None of the associations

between other beverage types and colorectal cancer were significant. Adherence to the Mediterranean diet was independently associated with lower odds of colorectal cancer.

244th National Meeting & Exposition of the American Chemical Society 2012 A presentation provided the first evidence from humans on how alcohol may boost the risk of cancer. Ten volunteers were given increasing doses of vodka (comparable to one, two and three drinks) once a week for three weeks. They found levels of a key DNA adduct increased up to 100-fold in the subject's oral cells within hours after each dose and adduct levels in blood cells also rose. This tells us that alcohol is metabolized into acetaldehyde in the mouth, and the acetaldehyde, chemically resembling formaldehyde which a known human carcinogen, is attaching to DNA, forming DNA adducts which are carcinogenic. It is known that acetaldehyde can cause DNA damage and act as an animal carcinogen. People of Asian descent are more at risk since at least 30% of them have a variant of the alcohol dehydrogenase gene and are unable to properly metabolize acetaldehyde into acetate making them more at risk for cancer. So-called "Oriental flushing" after alcohol consumption, a sign of alcohol intolerance:



Cancer Prevention in Europe: The Mediterranean Diet as a Protective Choice *Eur J Cancer Prev* 22 (1) January 2013 The Mediterranean diet is associated with a reduced risk of cardiovascular disease and cancer. The biological mechanisms for cancer prevention associated with the Mediterranean diet have been related to the favorable effect of a balanced ratio of omega 6 and omega 3 essential fatty acids and high amounts of fiber, antioxidants and polyphenols found in fruit, vegetables, olive oil and wine. The Mediterranean diet involves regular, moderate consumption of wine mainly with food. This does not appreciably influence the overall risk of cancer. However, heavy alcohol drinking is associated with digestive, upper respiratory tract, liver and breast cancers, so avoidance or restricting alcohol consumption to 2 drinks per day in men and 1 drink per day in women is a global health priority.

Wine, Beer, Alcohol and Polyphenols on Cardiovascular Disease and Cancer *Nutrients* 4 (7) July 2012 A review that summarizes the main protective effects on the cardiovascular system and cancer resulting from moderate wine and beer intake due mainly to their components of alcohol and polyphenols. Epidemiological and clinical studies have pointed out that regular and moderate wine consumption is associated with a decreased incidence of cardiovascular disease, hypertension, diabetes, and certain types of cancer, including colon, basal cell, ovarian, and prostate. Moderate beer consumption has also been associated with these effects, but to a lesser degree, probably because beer has a lower phenolic content. These health benefits have mainly been attributed to an increase in antioxidant capacity, changes in lipid profiles, and the anti-inflammatory effects produced by these alcoholic beverages.

Women's Health

Women should drink less than men for several reasons. The stomach enzyme that metabolizes alcohol works less well in women because women have half as much of the enzyme alcohol dehydrogenase per unit of body mass in their stomach. The result is that more of ingested alcohol goes directly into the bloodstream. Women have less water in their body per pound than men so the same amount of ingested alcohol leads to a higher concentration in the blood. Women have more body fat which has a poor blood supply so alcohol is rapidly distributed to the organs of the body. The speed at which women can metabolize alcohol is dependent on the stage of her monthly cycle. When a period is due, she will become inebriated more easily and will have a worse hangover. After menopause, women begin to develop a distribution of alcohol dehydrogenase between the stomach and liver that is similar to men so they can drink more as a result. They have a small risk of breast cancer, especially with higher alcohol intake. The health benefits of alcohol with moderate drinking disappear at lower doses for women than men.

The North American Menopause Society points out the following general benefits of drinking in moderation based on scientific information to date. Light to moderate female drinkers have a significantly lower risk of coronary heart disease than nondrinkers which becomes apparent when heart disease risk increases at menopause and thereafter. Women who drink moderately have a lower risk of type 2 diabetes. Moderate drinkers, especially wine, have a lower risk of dementia than those who don't drink at all. Women who drink lightly or moderately have a lower risk of stroke than nondrinkers. At and after menopause, women who drink moderately have stronger bones than nondrinkers. Midlife and older women who drink lightly or moderately have a lower risk of becoming obese than nondrinkers. The downside of drinking at and after menopause is that drinking may trigger hot flashes in some women, and the consumption of one drink a day leads to a small increase in risk for breast cancer with the risk increasing the more alcohol that is drunk.

Alcohol Consumption, Weight Gain, and Risk of Becoming Overweight in Middle-aged and Older Women *Archives of Internal Medicine* (now *JAMA Internal Medicine*) March 2012 This study tracked 19,220 American women 30 and older who, at the beginning of the study, fell into the 'normal weight' category based on their body mass index. About 60% of women whose drinking habits were studied over nearly 13 years were light or regular drinkers with 40% abstainers. 41% of the women became overweight or obese with the nondrinkers gaining more weight, an average of 9 pounds, compared to about 3 pounds among regular moderate drinkers. The risk of becoming overweight was almost 30% lower for women who consumed one or two alcoholic beverages a day compared with nondrinkers. This study refutes the idea that dieters should lower their intake or cut alcoholic drinks from their diet. It suggests that for many women with weight problems, the extra calories are probably not coming from alcoholic beverages. However, once a woman is overweight, her alcohol metabolism is more efficient, and she may gain more weight from alcohol than a lean woman.

Long-Term Alcohol Intake and Risk of Rheumatoid Arthritis in Women: A Population Based Cohort Study *BMJ* 345 July 10, 2012 A follow-up of 34,000 Swedish women followed for ten years found that moderate drinkers compared with abstainers had a significantly lower risk of developing rheumatoid arthritis. Women who consumed more than three glasses of alcohol per week had a 37% lower risk of developing rheumatoid arthritis than subjects who were nondrinkers or consumed less than one drink per week. Those who drank one or two glasses per week had up to a 14 percent lower risk compared to nondrinkers. There were no differences among women who preferred wine or beer. This ten year follow-up indicates that long-term consumption is beneficial. The effect is thought to be due to a reduction in the production of chemicals that cause inflammation by alcohol.

Alcohol Consumption and Risk of Stroke in Women *Stroke* 43 March 2012 This group of subjects came from the Nurses' Health Study. The study showed that the risk of ischemic (clot-induced) and hemorrhagic stroke is slightly lower among light-to-moderate consumers of alcohol compared to subjects who drank no alcohol. The estimated risk is 17-21% lower for women who averaged up to a little over one drink a day compared to abstainers. For women who drank heavily, the risk of stroke was slightly increased, but not significantly. The results support a "J-shaped" curve for total stroke. The results are consistent with other studies showing overall lower risk for low and moderate drinkers with an increased risk for heavier drinkers, compared to abstainers. The findings suggest that lower levels of alcohol consumption have anti-thrombotic and atherogenic actions leading to decreased platelet aggregation, clot formation and increased fibrinolysis and high-density lipoprotein (HDL). The study's limitations included self-reported data and there was limited assessment of heavy alcohol consumption.

Recent Alcohol Consumption and Risk of Incident Ovarian Carcinoma: A Pooled Analysis of 5,342 cases and 10,358 controls from the Ovarian Cancer Association Consortium *BMC Cancer* 13 (1) January 2013 Studies to date on the association between alcohol intake and ovarian carcinoma are inconsistent (large numbers are needed to estimate risk association since there are many different types). This study found no evidence that recent moderate alcohol drinking is associated with increased risk for overall ovarian carcinoma, or that variation in risk is associated strongly with specific histologic types.

Do Lifestyle Choices Explain the Effect of Alcohol on Bone Mineral Density in Women Around Menopause? *Am J Clin Nutr* 95 (5) May 2012 A study of the association between alcohol intake and bone mineral density in women around menopause in the United Kingdom. The study concluded that moderate alcohol intake appears to be positively associated with increased bone mineral density independently of the type of lifestyle (smoking, exercise, and fruit and vegetable intake) led by women around menopause.

A paper was presented at the Meeting of the American Sociological Association in August 2012. A study of 5,000 Wisconsin residents over a 47-year period looked at alcohol use among different types of unmarried people (never-married, divorced and widowed). Men and women tend to converge in marriage with women's alcohol use higher due to the influence of their drinking spouses, while men's declines due to their wives' lower drinking habits. The net result, as shown in previous studies, is that married people drink less than single people. This study confirmed this relationship in men, but it showed that married women drink more on average than women who were never married, divorced or widowed. Stable marriage curbs men's drinking yet is associated with a slightly higher level of alcohol use among women. Recently divorced men drank significantly more than men in long-term marriages, while women who were divorced showed a sharp fall in alcohol consumption. The authors of the study suggest that one key to a successful marriage may be for men to follow their light-drinking spouses' lead on alcohol consumption.

Breast Cancer

***“Alcohol makes breast cancer more likely but cuts heart attack risk.
It could drive one to drink.”***

Jill U. Adams, *Los Angeles Times*, 2011

The relationship of breast cancer and alcohol continues to draw considerable commentary in the press. After the Harvard-led Nurses' Health Study was published in 2011, panic swept over the country. The widely reviewed study concluded that drinking as little as three glasses of wine or other drinks per week increased the risk of breast cancer in women compared to abstainers. The authors admitted that the increased risk for drinkers of light-to-moderate amounts of alcohol was quite small. This was an observational study and cause and effect between alcohol and breast cancer was not linked for certain. The effects of folate intake were not reported although it has been shown that folate is a potential moderator of the effects of alcohol on breast cancer risk. The study's lead author said, "What I generally tell women is to keep alcohol consumption at a few servings per week." The International Scientific Forum on Alcohol Research concluded, "An individual will need to weigh the modest risks of light to moderate alcohol use on breast cancer development against the beneficial effects on cardiovascular disease to make the best personal choice regarding alcohol consumption." Perhaps the words of Richard A. Baxter, M.D., author of *Age Gets Better With Wine*, are most reasonable, with his remark regarding wine and breast cancer emphasizing to women, "The smart choice favors having a glass of wine with dinner and not stressing over it."

Moderate Alcohol Consumption and Breast Cancer in Women: From Epidemiology to Mechanisms and Interventions *Alc Clin Exp Res* 37 (s6) January 2013 The National Institute on Alcohol Abuse and Alcoholism (NIAAA) released this review. The NIAAA said, "Existing epidemiologic evidence supporting the relationship between moderate alcohol consumption and breast cancer risk needs further study." The NIAAA analyzed recent epidemiologic studies and alcohol and breast cancer. Many of these studies use the self-reporting method (people tend to report less alcohol than they actually consume) and do not consider time course and drinking patterns. Dr. Philip J. Brooks, program officer in the NIAAA Division of Metabolism and Health Effects states the following. "In view of our lack of understanding of how and when alcohol consumption impacts breast cancer risk, and the documented health benefits of moderate alcohol consumption, it is not clear that stopping drinking would benefit the overall health of postmenopausal women who are moderate drinkers. In contrast, based on our understanding of alcohol metabolism, as well as recent epidemiologic data, binge drinking by younger women could increase the risk of breast cancer later in life. Binge drinking is unhealthy for anyone, and the possibility of increasing breast cancer risk is another reason for women in particular to avoid binge drinking."

Pre-diagnostic Alcohol Consumption and Postmenopausal Breast Cancer Survival: A Prospective Patient Cohort Study *Breast Cancer Res Treat* 136 (1) November 2012 A German study on 2,522 postmenopausal breast cancer patients aged 50-74 years found that pre-diagnostic alcohol consumption was non-linearly associated with increased breast cancer-specific mortality, and was not associated with overall mortality and breast cancer recurrence. The authors concluded that consumption of alcohol before diagnosis is non-linearly associated with increased breast cancer-specific mortality, but may be associated with decreased risk of mortality due to other causes.

Postdiagnosis Alcohol Consumption and Breast Cancer Prognosis in the After Breast Cancer Pooling Project *Cancer Epidemiol, Biomarkers & Prevention* 22 January 2013 9,329 breast cancer patients from Kaiser Permanente Northern California were studied. Alcohol intake was assessed at cohort entry using a questionnaire. Regular alcohol consumption (6 g per day or about ½ standard drink a day) was not associated with breast cancer recurrence and total mortality overall. Cohorts with high amounts of alcohol intake (24 g per day or about 2 standard drinks per day) were 34% more likely to have recurrence compared to abstainers. Recurrence risk was elevated in postmenopausal women. The association between alcohol intake and recurrence may depend on menopausal status at breast cancer diagnosis with an increased risk of recurrence (19%) in postmenopausal women who regularly consumed alcohol. Alcohol intake was not related to mortality.

Alcohol Consumption, Body Mass Index and Breast Cancer Prognosis: Results from the Search Study Presentation at the 8th NCRI Cancer Conference in Liverpool, England November 4-7, 2012. The study looked at 13,525 women diagnosed with breast cancer and recorded the women's weekly alcohol intake. Women who drank three and a half small glasses of wine each week were 10 percent more likely to survive breast cancer than nondrinkers. Women who drank seven small glasses a week upped their survival rate by 20 percent over

women who did not drink. Women were more likely to survive breast cancer with increasing current alcohol consumption with a 2% reduction in risk per unit of alcohol consumed per week. A woman with breast cancer has a 20 percent chance of dying within 10 years but researchers said this was reduced to 18 percent if she drank seven units a week and 17 percent with 14 units. The benefit was slightly stronger for women with estrogen-receptor negative breast cancers. There are no specific protocols for drinking alcohol in patients diagnosed with breast cancer but many women quit drinking. This study suggests it is reasonable to enjoy an occasional drink after breast cancer diagnosis since the study found that alcohol was only beneficial after the diagnosis of breast cancer had been made. The study also found that the prognosis of breast cancer was poorer in women who were overweight.

Alcohol Consumption Suppresses Mammary Tumor Metastasis in a Syngeneic Tumor Transplantation Model *Breast Cancer Res and Treat* 136 (3) December 2012 A study on mice found that alcohol consumption does not exacerbate tumor metastasis, moderate drinking suggests a reduction in tumor spread but is not statistically significant, and high alcohol consumption reduces tumor spread.

Effect of Resveratrol on the Metastasis of 4T1 Mouse Breast Cancer Cells *In Vitro* and *In Vivo* *Nutrition Research and Practice* 6 (4) August 2012 This Korean animal study found the efficacy of resveratrol in preventing metastasis in mice with breast cancer *in vitro* and *in vivo* was dose responsive meaning a high dose provided better protection. This is the first report that oral administration of resveratrol inhibits the metastasis of 4T1 cells to the lungs in a murine model of experimentally induced cancer. Suggests that possibly taking resveratrol supplements may help prevent or treat breast cancer and prevent the disease from progressing to an advanced stage. Studies on humans need to be done to confirm these findings.

Alcohol Consumption and Breast Cancer Risk Among Postmenopausal Women Following the Cessation of Hormone Therapy Use: The California Teachers Study *Cancer Epidemiol, Biomarkers & Prevention* 21 November, 2012 An analysis of more than 40,000 postmenopausal women showed an increase in risk of breast cancer among alcohol consumers of more than 1.5 to 2 drinks per day who were currently on hormone therapy but not among those who were ex-users of hormone therapy. There was a 60 percent greater risk for women who drink while undergoing hormone therapy compared with women who drink responsibly and are not on hormone replacement. The study concluded that concurrent exposure to hormone therapy and alcohol has a substantial adverse impact on breast cancer risk that is reduced after hormone therapy cessation. The study probably offers little if any cause for concern to women who are on natural or bioidentical hormones and consume alcohol (most women in this study received medroxyprogesterone acetate rather than natural or bioidentical progesterone).

Epidemiology and Pathophysiology of Alcohol and Breast Cancer: Update 2012 *Alcohol and Alcoholism* 47 (3) May/June 2012 A meta-analysis of 113 studies of the relationship of breast cancer risk and alcohol consumption. There was a 4% increase in risk of breast cancer at intakes of up to one alcoholic drink per day compared to nondrinkers. Heavy drinking, defined as three or more drinks per day, is associated with a 40% to 50% increased relative risk of breast cancer compared with not drinking at all. The authors estimate that 1-2% of breast cancers in Europe and North American are due to light drinking alone. The mechanisms involved are not clearly established and probably diverse. The authors of the study conclude that there is a positive dose-response relation between alcohol drinking and the risk of breast cancer. An increase in estrogen levels from alcohol seems to be the physiologic mechanism most commonly suggested for the increase in risk of breast cancer, but other possibilities include acetaldehyde effects and oxidative stress. Even among women with an average of only about one drink per day there is an increased risk. However, the authors did not discuss the protective effect of dietary folate and the benefits of moderate drinking on reducing the risk of cardiovascular disease which is a much more common cause of death than breast cancer.

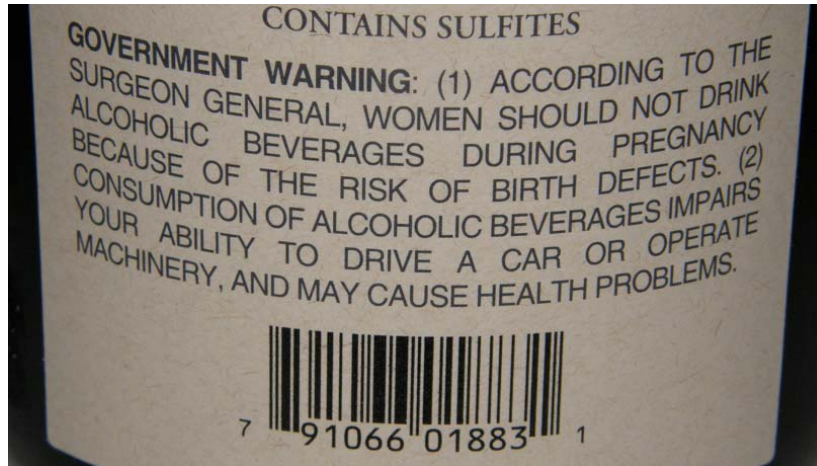
Intake of Alcohol and Folate During Adolescence and Risk of Proliferative Benign Breast Disease *Pediatrics* 129 (5) May 2012 This study followed 29,000 females from the Nurses Health Study. Women were free of cancer and proliferative benign breast disease (BDD) at the start of the study. The cohorts answered questions on alcohol and folate intake. Average followup was ten years. For each 10 g of alcohol (defined as one drink in this study) consumed each day, the risk of developing non-cancerous cells and lesions (BDD) increased 15 percent. Folate intake had no effect on BDD. Not everyone with BDD goes on to develop breast cancer but the findings are of concern. The study did not prove a cause-and-effect relationship although it uncovered an association between adolescent alcohol use and BDD.

Alcohol, Genetics and Risk of Breast Cancer in the Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial *Breast Cancer Res Treat* 133 (2) June 2012 Subjects were women aged 55-74 at

baseline. A self-administered food frequency questionnaire inquired about the frequency and usual serving size of beer, wine and liquor. The study included 1,041 incident breast cancer cases and 1,070 controls. In comparison to non drinkers, the intake of any alcohol significantly increased the risk of breast cancer, and this risk increased with each category of daily alcohol intake for women. For those women with the ADH1B gene, there were statistically significant associations between all levels of alcohol intake and risk of breast cancer. For women with the GA or AA genotype, there no significant associations between alcohol intake and risk of breast cancer. The authors concluded that alcohol intake, genes involved in alcohol metabolism and their interaction increase the risk of breast cancer in post-menopausal women. This information could be useful for primary care providers to personalize information about breast cancer risk reduction. (Note, the genetics involved in breast cancer are far too complicated to explain here. Suffice it say, individual women alcohol drinkers have different genetic makeups that are determinable by testing, and can influence their risk of breast cancer.)

Drinking During Pregnancy

There is probably no other issue in the debate about health and alcohol that is as contentious as drinking during pregnancy. Most physicians and health care agencies advise women that if they are pregnant or trying to get pregnant, they should reduce their alcohol intake much as possible and most advise eliminating alcohol completely. The American Academy of Pediatrics and the American College of Obstetricians and Gynecologists recommend that pregnant women avoid alcohol entirely. In 1982, the FDA suggested that alcoholic beverages should carry warning labels, and in 1988 Senator Strom Thurmond, who had been campaigning for a warning since 1967, introduced a bill to the Senate which in final form was signed into law in 1989.



DrinkWise Australia is partnering with The Winemakers Foundation to adopt health warnings on wine labels including risks to pregnant women of drinking alcohol. The organizations are also providing brochures to retailers that contain the message, "It is safest not to drink alcohol while pregnant."

An excellent article on the subject, "Light Drinking During Pregnancy: What Recent Studies Do - and Do Not - Tell Us," by Evan Dawson, is published in the online magazine, *Palate Press*, February 19, 2012 (www.palatepress.com/2012/02/wine/light-drinking-during-pregnancy-what-recent-studies-do-and-do-not-tell-us/).

Alcohol is able to pass efficiently and quickly through the placenta from the mother's bloodstream into the baby's bloodstream and the blood alcohol concentration (BAC) of the fetus becomes equal to or greater than the BAC of the mother. Since the fetus cannot metabolize alcohol like an adult, its BAC remains high for a longer period. For that reason, women who decide to have wine during pregnancy should consume minimal amounts and always sip it slowly with food to avoid a rapid rise in blood alcohol levels.

The University of Queensland reports that 80 percent of Australian women consume alcohol at low-to-moderate levels during pregnancy, compared to 12 percent in Sweden and 10 percent in the United States.

Moderate Alcohol Intake During Pregnancy and Risk of Fetal Death *Int J Epidemiol* 41 (2) April 2012 A large Danish pregnancy cohort was studied and it was found that even low amounts of alcohol consumption during early pregnancy increased the risk of spontaneous abortion substantially indicating the fetus is particularly susceptible to alcohol exposure early in pregnancy. There was no increased risk for fetal death after the first trimester (16 weeks) of pregnancy.

Safety Concerns Regarding Binge Drinking In Pregnancy: A Review *Birth Defects Res A Clin Mol Teratol* 94 (8) August 2012 The evidence in humans is not conclusive, but the incidence of binge exposures in pregnancy is high and women inadvertently exposed to a single binge episode of alcohol early in the first trimester before pregnancy recognition can be reassured that the risks for adverse effects in their baby are likely low if they are able to discontinue the use of alcohol for the duration of the pregnancy. There still remains some residual fetal risk.

Estimated Number of Preterm Births and Low Birth Weight Children Born in the United States Due to Maternal Binge Drinking *Matern Child Health J* June 2012 ahead of print Maternal binge drinking contributed significantly to preterm birth and low birth weight across sociodemographic groups with women

ages 40-44 with the highest adjusted binge drinking rate and highest preterm birth due to maternal binge drinking.

Fetal Exposure and IQ at Age 8: Evidence from a Population-based Birth-cohort Study *PLOS One* November 14, 2012 This report presents evidence from a population-based birth-cohort study. Data was collected from 4,000 mothers and offspring born in the 90s. Relatively small levels of exposure to alcohol while in womb can influence a child's IQ. The study used genetic variation not influenced by lifestyle or other factors to investigate the effects of moderate drinking during pregnancy. Four genetic variants in alcohol-metabolizing genes among the children were strongly related to lower IQ at age 8. Variations in the genes that encode the enzymes that convert ethanol to acetaldehyde lead to differences in the ability to metabolize ethanol. 'Slow metabolizers' may have higher alcohol levels that persist longer than in 'fast metabolizers.' No effect among mothers who abstained during pregnancy was observed, even if they had alcohol-sensitizing genes. Heavy drinkers were not included in this study. The associations between the child's genotype and outcome were only present among those whose mothers reported drinking alcohol in moderation during pregnancy. Even small amounts of alcohol in utero can affect future cognitive outcomes and the authors of the study recommend avoidance of alcohol when pregnant. This study was on white European women and used self-reporting so use of alcohol may have been underreported.

A Longitudinal Study of the Long-Term Consequences of Drinking During Pregnancy: Heavy In Utero Alcohol Exposure Disrupts the Normal Processes of Brain Development *J of Neuroscience* 32 (44) October 31, 2012 Using MRI to measure cortical volume change longitudinally in a cohort of human children and youth with prenatal alcohol exposure and a group of unexposed control subjects, this study found that the normal processes of brain maturation are disrupted in individuals whose mothers drank heavily during pregnancy.

The Effects of Low to Moderate Alcohol Consumption and Binge Drinking in Early Pregnancy on Executive Function in 5-year-old Children *BJOG* 119 (10) September 2012 This study did not observe significant effects of low to moderate alcohol consumption during pregnancy on executive function at the age of 5. Weak or no consistent association between maternal binge drinking and executive functions were observed. (Executive functions are cognitive processes such as planning, working memory, and problem solving)

The Effects of Low to Moderate Alcohol Consumption and Binge Drinking in Early Pregnancy on Selective and Sustained Attention in 5-year-old Children *BJOG* 119 (10) September 2012 This study suggested an effect of maternal consumption of nine or more drinks per week on attention functions in children, but the study detected no effects of maternal binge drinking.

The Effects of Alcohol Binge Drinking in Early Pregnancy on General Intelligence in Children *BJOG* 119 (10) September 2012 No association was found between binge drinking during early pregnancy and child intelligence compared to children of mothers with no binge episodes.

The Effects of Low to Moderate Prenatal Exposure in Early Pregnancy on IQ in 5-year-old Children *BJOG* 119 (10) September 2012 Maternal consumption of low to moderate quantities of alcohol during pregnancy was not associated with the mean IQ score of preschool children. However, the conservative advice for women continues to be to avoid alcohol use during pregnancy.

The Effect of Different Alcohol Drinking Patterns in Early to Mid Pregnancy on the Child's Intelligence, Attention, and Executive Function *BJOG* 119 (10) September 2012. 1628 women and their children sampled from the Danish National Birth Cohort. A combined analysis of estimated effects of maternal average weekly alcohol consumption, and any binge drinking, in early to mid pregnancy, showed no statistically significant effects arising from average weekly alcohol consumption or any binge drinking either individually or in combination replicating the findings from separate analyses of each outcome variable. The children of mothers who had up to eight drinks a week were just as smart as their peers born to abstaining mothers. Drinking more than nine drinks per week was associated with lower attention spans among children. Children of mothers who had a binge episode early in pregnancy (before realizing they were pregnant) performed just as well on mental tests. The authors of the study say that the results suggest that expectant mothers can have a drink now and then without serious concern. However, no safe level of drinking during pregnancy has been established.

Mental Health, Dementia, Alzheimer's & Other Neurological Conditions

Alcohol has a myriad of effects on the brain. David DiSalvo at Forbes.com ("What Alcohol Really Does to Your Brain," October 16, 2012), clearly summarized the effects:

1. Alcohol alters the levels of neurotransmitters both excitatory and inhibitory. It suppresses the excitatory neurotransmitter glutamate and increases the inhibitory neurotransmitter GABA resulting in a net depressant effect.
2. Alcohol stimulates the release of dopamine in the brain's reward center (nucleus accumbens) which makes you feel better. This effect is more significant for men than women and may account for more alcoholism in men.
3. Alcohol affects the cerebellum which is the center of movement and balance leading to clumsiness.
4. Alcohol depresses the nerve centers in the hypothalamus that control sexual arousal and performance. The sexual urge may increase, but sexual performance decreases.
5. Alcohol acts on the medulla to induce sleepiness.
6. Alcohol acts on the cerebral cortex leading to less inhibition, and delays thought processes so one cannot think clearly.

Alcohol Use Patterns and Trajectories of Health-related Quality of Life in Middle-aged and Older Adults: A 14-Year Population-based Study. *J Studies Alc & Drugs* 73 (4) July 2012 This study of 5,404 community-dwelling Canadians ages 50 and older at baseline showed a positive relationship between moderate alcohol intake and quality of life in middle-aged adults. Persistent moderate drinkers had higher initial levels of health-related quality of life than persistent nonusers, persistent former users, decreasing users, U-shaped users, and inverted U-shaped users. Those who had decreasing consumption over time had a greater decline in their level of health-related quality of life than persistent moderate users.

A Longitudinal Assessment of Alcohol Intake and Incident Depression: the SUN Project *BMC Public Health* 12 November 12, 2012 A prospective study in Spain of 13,000 adults was done to evaluate the influence of alcohol intake on incident depression. Women with moderate alcohol intake (1-2 glasses of an alcoholic drink per day) had a 38 percent lower risk of depression. A U-shaped relationship between total alcohol intake and depression risk was found among women. No association was apparent for higher intakes of alcohol or for any specific type of alcoholic beverage.

Alcohol Consumption Induces Endogenous Opioid Release in the Human Orbitofrontal Cortex and Nucleus Accumbens *Science Translational Med* 4 (116) January 11, 2012 Researchers at the University of California San Francisco were able to prove that drinking alcohol increases the release of endorphins in the brain. Endorphins produce opiate-like effects of pleasure and reward. Using imaging technology to study the effects of alcohol on brains of twenty-five people, they confirmed previous animal studies that show alcohol causes the release of endorphins in areas of the brain that produce feelings of pleasure and reward. This is the first demonstration of this response in humans to alcohol consumption. The discovery of the precise locations in the brain where endorphins are released may lead to development of drugs for treating alcohol abuse.

Moderate Drinking? Alcohol Consumption Significantly Decreases Neurogenesis in the Adult Hippocampus *J of Neuroscience* 224 (8) November 2012 The daily drinking of moderate-high alcohol alters production of new neurons in the adult hippocampus. Using rats, a moderate to heavy drinking model that reached a BAC of 0.08 percent caused brain cell production to decrease by 40 percent compared to the abstinent group of rodents. This was comparable to 3-4 drinks for women and 5 drinks for men. The hippocampus is the area of the brain where new neurons are made and is necessary for some types of learning. The changes did not disrupt basic sensory, motor or learning processes, but may lead to impaired memory.

Unlocking the Muse: Alcohol Intoxication Facilitates Problem Solving *J of Consciousness and Cognition* A University of Illinois study found that test subjects who consumed two drinks were better at solving word-association brainteasers than sober test subjects. The drinking group had the equivalent of two pints of beer before doing the tests (BAC below the legal limit). The drinking group solved nearly 40 percent more problems than the others and in less time and were more likely to rate their solutions as insightful. The author of the study believes this effect is from a reduction in the brain's working memory capacity allowing drinking participants to consider a wide range of possible solutions rather than honing in on specific details of the problem. This is the first demonstration of the effect of alcohol on creative problem solving.

Alcohol and Cognition in the Elderly: A Review *Psychiatry Investig* 9 (1) 2012 This article reviews the potential mechanisms by which alcohol may affect cognitive function and the risk of dementia. Heavy drinking is associated with an increased risk of neurological disease and dysfunction, while regular light-to-moderate drinking seems to be related to a reduced risk of neurological dysfunction, including a lower risk of Alzheimer's Disease. The specific mechanisms for the effect are unknown. It is not advisable to suggest that the elderly start moderate drinking to reduce the risk of dementia, but the elderly who are moderate drinkers would not benefit from stopping alcohol consumption. The authors emphasize the need for more well designed studies to identify the alcohol drinking pattern that will optimally protect the elderly against cognitive decline and dementia.

Alzheimer's Association International Conference 2012 Researcher Tina Hoang of the Veterans Health Research Institute in San Francisco challenged the accepted belief that alcohol is good for aging brains. Her study tracked the health of 1,300 women in their mid-60s for over 20 years. The risk of cognitive impairment including dementia was higher among those who reported drinking more alcohol. Women who switched from abstinence to drinking over the course of the study also increased their risk. Moderate drinkers were more likely to show problems with memory and brain functioning, both possible early signs of dementia. Hoang believes that brains might become more vulnerable to the effects of alcohol as we age.

Alzheimer's Association International Conference 2012 5,075 men and women were studied, and those who had at least one episode of binge drinking per month were more likely to show dementia problems. Those who reported binge drinking at least twice a month were more than twice as likely to have the greatest decline in both cognitive function and memory. These differences held up even when other factors related to cognitive decline are taken into account. Outcomes were similar in men and women. It is theorized that alcohol causes blood pressure and cholesterol to rise which can then damage blood vessels supplying the brain leading to vascular dementia.

Brain-targeted Proanthocyanidin Metabolites for Alzheimer's Disease Treatment *J of Neuroscience* 32 (15) April 2012 Mount Sinai in New York researchers gave red wine polyphenols catechin and epicatechin in drinking water to lab rats. They found that modified polyphenols were absorbed after digestion and instead of being metabolized without benefit, they accumulated in the brain when the structure of the polyphenols was altered from a polymer to a monomer. This is the first study to show that these chemicals can end up in the brain. Rats on monomer combination showed fewer symptoms of Alzheimer's and appeared to be more intelligent. There is hope that this discovery will eventually lead to a therapy for Alzheimer's.

Alcohol and Risk of Parkinson's Disease in a Large, Prospective Cohort of Men and Women *Mov Disord* 27 (8) June 2012 The results of this large, prospective study found that consumption of beer, wine and liquor was not associated with risk for Parkinson's Disease.

Eyes, Teeth, Bones

Alcohol and Age Related Macular Degeneration: The Melbourne Collaborative Cohort Study *Am J Epidemiol* 176 (4) 2012 20,963 participants aged 40-69 at baseline were examined. Alcohol consumption was determined by structured interview at baseline. Digital macular photographs were taken at baseline and follow up looking for signs of age related macular degeneration (AMD). Drinking more than 1.5 standard drinks per day (20g of alcohol) was associated with a modest 20% increase in odds of early AMD compared to those who reported no drinking at baseline, adjusted for multiple confounders. The association was found for wine, beer and spirits with no differences among men and women. The risk was almost entirely among smokers with no significant effect among non smokers who consumed any amount of alcohol. Other reports have found a reduced risk of AMD among moderate wine drinkers.

Amount and Type of Alcohol Consumption and Missing Teeth Among Community Dwelling Older Adults: Findings from the Copenhagen Oral Health Senior Study *J of Public Health Dentistry* 71 Fall 2011 Women who consumed 6 glasses of wine or more a week had a lower chance of having fewer numbers of teeth than abstainers. Women who preferred to drink wine had a lower risk of having fewer teeth than women who preferred beer or mixed preferences. There was no relationship between alcoholic beverage consumption and number of teeth for males but males who consumed more than 6 beers a week had marginally significant lower chances of having fewer teeth. Men who drank beer and women who drank wine or spirits had a lower chance of having fewer teeth than those who did not drink. It is postulated that although ethanol is damaging to teeth, other components in alcoholic beverages may be protective through lower plaque production or concentration of oral bacteria. This study had several limitations.

Moderate Alcohol Intake Lowers Biochemical Markers of Bone Turnover in Postmenopausal Women *Menopause* September 2012 A study of women in their 50s and 60s (whose rate of bone resorption exceeds formation resulting in osteoporosis) found that moderate alcohol consumption may help prevent bone loss. The women in the study consumed 1.5 drinks per day and most were wine drinkers. The subjects were tested when they stopped drinking for 2 weeks and then again when they resumed and the byproducts of bone remodeling were determined. The alcohol seemed to slow down bone turnover rate which may protect against fractures. This study should not be extrapolated to young women who are still building bone mass.

Alcohol and Bone: Review of Dose Effects and Mechanisms *Osteoporosis Int* 23 January 2012 A review from France reported that light drinking may improve bone density. The International Scientific Forum on Alcohol Research commented that there is little concrete evidence offered to support this finding in this study, but current research indicates that bone mineral density and the risk of fractures are favorably affected by light-to-moderate drinking, but adversely affected by heavy drinking and alcoholism.

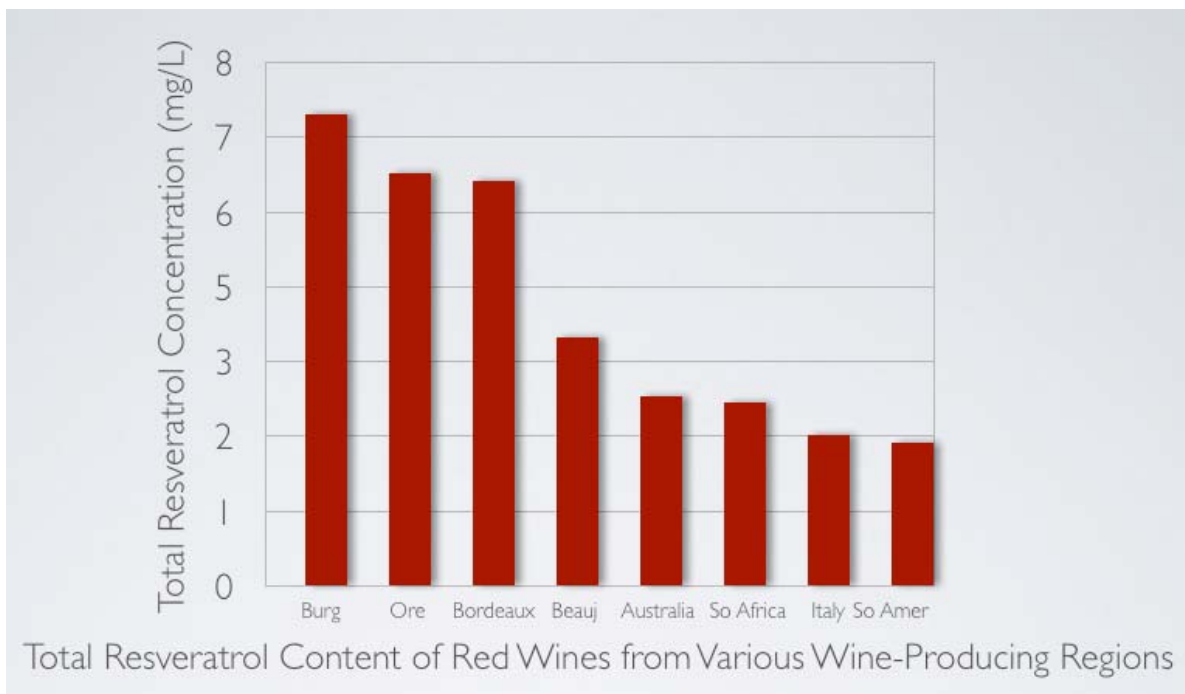
Resveratrol & Related Phenolic Compounds



Resveratrol has been called the “miracle molecule” and the “polyphenol most likely to succeed.” It has attracted attention because of a number of scientific studies suggesting that the potential health benefits of red wine are due in part to the phenolic compounds found in the skin and seeds of grapes. Although there are many studies that suggest the phenols in wine give it superior health benefits over other alcoholic beverages, this has not been completely proven.

Phenols are found in all plants and are known as phtoalexins or phytochemicals, compounds that have biological activity in the human body. Without getting too technical, there are two categories of phenolic compounds: non-flavonoids and flavonoids. There are three classes of flavonoids: flavanols, flavonols, and anthocyanins. Resveratrol is the best known phenolic compound of the hundreds found in wine, an anthocyanin occurring primarily in the skin of red grapes where it is produced in response to stresses such as fungal infection.

The levels of resveratrol vary among different grape varieties and vineyards locations. The highest levels of resveratrol are in wines from cooler climates (resveratrol disappears in strong sun). Pinot Noir produces wine with the highest resveratrol counts regardless of where it is grown. Techniques of maceration play a huge role as well (see *Washington State University Voice of the Vine Newsletter* January 25, 2012).



Much of the scientific research on resveratrol has centered on mice and *in vitro* (outside the living organism) studies with little work on human subjects. Resveratrol has been demonstrated to lower cholesterol, reduce inflammation, decrease pain, and increase life expectancy of lower forms of life in the lab. It has been shown to be protective against several cancers and therapeutic in some. It has also shown promise in the prophylaxis of heart disease and diabetes mellitus. Despite the optimism, and excitement in the press, the actions of beneficial wine compounds such as resveratrol are complex and poorly understood at this time.

In 2012, Dipak Das, a University of Connecticut professor and researcher who published studies exalting the health benefits of red wine was accused by the university of falsifying data in at least 23 publications over the years, and eventually was dismissed from the university. Much of this research centered on resveratrol and its cardiovascular system benefits. His research represented a very small number of studies among the thousands published to date on resveratrol.

Resveratrol2012, the 2nd International Conference of Resveratrol and Health was held December 5-7, 2012, at the University of Leicester in England (www.resveratrol2012.edu). Of the 65 presentations, 8 focused on the clinical effects of resveratrol. The 2012 recommendations for the use of resveratrol by the conference's scientific working group are as follows:

1. There are not yet unequivocal scientific data to support the recommendation of resveratrol for disease prevention in humans or for human lifespan extension. Although clinical trials with encouraging results have been completed in the past two years or are currently underway, there is not yet sufficient evidence to unequivocally support a therapeutic effect of resveratrol for the treatment of any specific condition. Preliminary clinical evidence has demonstrated potential benefits with regard to changes in biomarkers and or physiologic parameters that are consistent with health promotion, particularly in the area of endothelial vasodilator function. In many cases, resveratrol has the same effects in humans as have been shown previously in experimental animals.
2. No adverse effects were observed in humans receiving resveratrol as a single agent in short-term studies. Some side effects of resveratrol have been reported at doses at and above 1 gram per day whereas other studies observed no side effects up to 1.5 grams per day. The potential for adverse drug-resveratrol interactions, based in indirect evidence, needs to be evaluated further in clinical trials. In rats, resveratrol is well tolerated with no toxic effects in the range of 700-1000 mg per kg body weight per day.
3. A relevant or optimal dose for resveratrol has to be established in human studies.
4. There is sufficient evidence to suggest that resveratrol enhances vascular health and reduces hypertension, heart failure and ischemic heart disease in experimental animal models including pigs. There are promising results on the prevention of colon and prostate cancer in animals. There is sufficient evidence that resveratrol improves insulin sensitivity, reduces serum glucose levels in multiple animal models, protects against high fat diet-induced obesity, and improves diabetic kidney disease in rodents.

The conference's scientific working group overall conclusions:

1. To date, published evidence from human trials is not sufficiently strong to justify the recommendation of chronic resveratrol consumption by humans for any given indication.
2. New animal data and recent short-term clinical trials are promising and indicate the need for further long-term human clinical trials.
3. The use of resveratrol is not an alternative to maintaining a healthy lifestyle.

Resveratrol Ameliorates Aging-Related Metabolic Phenotypes by Inhibiting cAMP Phosphodiesterases
Cell 148 (3) February 2012 A well done study on mice from Boston. Resveratrol has been shown to have health benefits but its mechanism of action remains controversial. The study showed that the metabolic effects of resveratrol result from competitive inhibition of cAMP-dependent phosphodiesterases (PDEs), triggering a cascade of events which in turn increases the activity of important energy-sensing metabolic regulators AMPK, PGC-1a and SIRT 1. Inhibiting PDE4 with rolipram reproduces all metabolic benefits of resveratrol including prevention of diet-induced obesity and an increase in mitochondrial function, physical stamina, and glucose intolerance in mice. Administration of PDE4 inhibitors rolipram and resveratrol may also protect against and ameliorate the symptoms of metabolic diseases associated with aging. The biologic mechanisms demonstrated in this study could lead to new approaches for the prevention or treatment of chronic diseases in humans, especially those related to vascular and metabolic diseases and mortality. The levels of resveratrol in wine or foods are not likely high enough to produce significant health benefits or problems. Inhibitors of PDE4 offer the benefits of resveratrol without the potential toxicities arising from resveratrol's interactions with other

proteins. One PDE4 inhibitor, roflumilast, has been approved by the FDA for the treatment of chronic obstructive pulmonary disease.

Piceatannol, Natural Polyphenolic Stilbene Inhibits Adipogenesis via Modulation of Mitotic Clonal Expansion and Insulin Receptor-dependent Insulin Signaling in Early Phase of Differentiation *J of Bio Chem* 287 January 2012 Piceatannol is an analog and metabolite of resveratrol that is similar to resveratrol, but it is harder for the body to digest so it stays in the body longer and has strong antioxidant, anti-inflammatory and anti-tumor activities. Piceatannol was found to be an effective fat blocker (converting fat cells into fatty tissue or adipogenesis) in the lab. The anti-adipogenic function of piceatannol is through inhibition of mitotic clonal expansion and insulin receptor activity in the early phase of adipogenesis. Berries, grapes, passion fruit and red wine are high in piceatannol. This study was a lab simulation and more animal and human studies are needed to explore the potential for piceatannol as a modulator of the development of adipose tissue.

Endothelium-dependent Vasodilator and Antioxidant Properties of a Novel Enzymatic Extract of Grape Pomace from Wine Industrial Waste *Food Chemistry* 135 December 2012 A rat model study showed that grape seed, grape skin extract and grape pomace extracts may possess significant health benefits. Enzymatic extract of grape pomace from wine making possessed antioxidant and protective vascular properties and there is potential for this extract to be a healthy and functional food.

Resveratrol Modulates Murine Collagen-induced Arthritis by Inhibiting Th17 and B-cell Function *Annals of Rheum Dis* 71 (1) 2012. This study showed that resveratrol can prevent and treat experimentally induced inflammatory arthritis in mice. The mechanism of action is speculative. Curcumin and resveratrol are natural compounds with strong anti-inflammatory effects and could play a role in the treatment of chronic diseases like rheumatoid arthritis.

The Effect of Resveratrol on Longevity Across Species: A Meta-analysis *Biology Letters* 8 (5) June 21, 2012 A meta-analysis by researchers at New Zealand's University of Otago of 19 studies that looked at whether resveratrol extended life in various lower life forms. The effect of prolonging life was pronounced only in yeast turquoise killifish and nematodes. Mice and fruit flies longevity was unaffected. Researchers said that the take home message from the research is that people need to consider all the evidence regarding claims of resveratrol life-extending properties especially in the light of the fact that there is no proof in humans that resveratrol supplements can prolong life.

The Lifespan Extension Effects of Resveratrol are Conserved in the Honey Bee and May be Driven by a Mechanism Related to Caloric Restriction *Aging* 4 (7) July 2012 Researchers in Norway and Arizona found the behavior of honey bees was altered when they were fed diets supplemented with resveratrol. Resveratrol treatments lengthened the lifespan of wild-type honey bees by 33% to 38% and altered their gustation (they regulated their intake of sugar better) and compared to controls, ingested fewer quantities of food. It is not known if the results will translate to humans.

Resveratrol Supplementation Does Not Improve Metabolic Function in Nonobese Women with Normal Glucose Tolerance *Cell Metabolism* 16 (5) October 2012 A study of healthy, non-obese post-menopausal women in their 50s and 60s who took resveratrol supplements for 12 weeks showed no change in factors linked to developing diabetes and heart disease. Resveratrol supplementation increased plasma resveratrol concentration, but did not change resting metabolic rate, LDL, HDL, and total cholesterol. To get the equivalent amount of resveratrol from wine used in this study, women in the resveratrol group would have had to drink 8 liters of red wine a day. This suggests that resveratrol supplements do not benefit healthy people. Sales of resveratrol supplements are now about \$30 million a year. The researchers emphasized that resveratrol may be involved in health-boosting benefits of red wine even though resveratrol in pill form does not appear to benefit healthy people. Exercise, proper diet, and managing stress are more important than a pill.

Dietary Factors and Lung Function in the General Population: Wine and Resveratrol Intake *Eur Respir J* 39 March 2012 This research was conducted in the Netherlands and assessed the impact of wine and resveratrol on lung function. The dose of resveratrol in the study was at a level expected from moderate wine consumption. Resveratrol intake is associated with a higher forced vital capacity (FVC) levels and white wine intake with higher forced expiratory volume and lower risk of airway obstruction. Genetic factors were not related. The International Scientific Forum on Alcohol Research criticized this study in that resveratrol may not be the key factor and there are probably many compounds in wine that are responsible. The study did not prove resveratrol was the direct cause and effect since the researchers studied white wine as well. Many

studies have shown that moderate wine intake has a favorable affect on lung function but the source of the effect is unknown.

High-dose Resveratrol Supplementation in Obese Men: An Investigator-initiated, Randomized, Placebo-controlled Clinical Trial of Substrate Metabolism, Insulin Sensitivity, and Body Composition *Diabetes* 28 2012 24 obese, but otherwise healthy men, were randomly assigned to one month of resveratrol supplements or placebo treatment. Extensive metabolic examination before and after treatment found that insulin sensitivity, endogenous glucose production, turnover rate of glucose, blood pressure, and other metabolic factors were unchanged in those receiving resveratrol supplementation. This lack of effect disagrees with persuasive data from rodent models and raises doubt about the justification of resveratrol as a human nutritional supplement in metabolic disorders.

Red Wine Could Mask Testosterone Levels *Science Daily* January 8, 2013 Researchers found in a test tube experiment that the polyphenol quercetin in red wine partially blocks the action of UCT2B17 which searches for testosterone and signals the kidneys to excrete it in the urine. The upshot of this is that red wine might boost athletes' performance by increasing the level of the hormone testosterone in their bodies. Red wine could also potentially distort the findings of drug tests taken from urine samples since the wine might reduce the amount of testosterone secreted. Athletes are prohibited from taking testosterone since it can boost muscle mass and stamina and speed recovery. Green and white tea can also inhibit testosterone excretion. There are no human trials yet.

A Possible Role for Perforin and Granzyme B in Resveratrol-enhanced Radiosensitivity of Prostate Cancer *Journal of Andrology* 33 (4) July-August 2012 Researchers from the University of Missouri School of Medicine found that resveratrol makes prostate tumor cells more susceptible to radiation treatment at least in part due to increased apoptosis (cell death). When resveratrol was introduced into the prostate tumor cells, 97 percent of them died, a higher percentage than with treatment with radiation alone. The dosage of resveratrol was so high that humans would experience side effects. Resveratrol helps increase the activity of perforin and granzyme B, proteins needed to kill tumor cells. Previously it has been found that resveratrol made tumor cells more susceptible to chemotherapy. Animal studies and then clinical studies are planned looking at delivery methods to deliver resveratrol to the tumor site.

Influence of Red Wine Polyphenols and Ethanol on the Gut Microbiota Ecology and Biochemical Biomarkers *Amer J of Clin Nutrition* 95 (6) May 2, 2012 A Spanish study followed 10 healthy middle-aged men who were given one of three beverages to drink: 9 oz of Merlot, 9 oz of low-alcohol-content red wine, or about 3 oz of gin. The results indicated that the balance of intestinal bacteria shifted in the men in a similar way whether they drank Merlot or low-alcohol red wine showing a larger percent of certain beneficial bacteria typically found in the colon. Presumably this effect was due to polyphenols in wine. This suggests that possibly there are prebiotic benefits associated with the inclusion of red wine polyphenols in the diet. This was the first *in vivo* study to show regular moderate consumption of red wine could have a significant affect on the growth of select gut microbiota. This could be implicated in the reduction of C-reactive protein and cholesterol also observed in the study.

The Red Wine Study. 26 medical centers in the United States are participating in this study. Researchers are studying whether resveratrol can stop the progression of Alzheimer's Disease. Doctors believe that resveratrol can activate a gene associated with aging of the brain. In the study, patients will take pills containing a concentrated form of resveratrol with a gradually increasing dose until they are taking the resveratrol equivalent of 1,000 bottles of red wine. Stay tuned.

224th National Meeting & Exposition of the American Chemical Society August 19, 2012 (reported at www.medicalxpress.com). Cal State Los Angeles researchers studied young and old lab mice which were fed a diet containing resveratrol for 8 weeks. They periodically tested their ability to navigate a steel mesh balance beam. Initially, the older mice had more difficulty maneuvering on the obstacle, but by week 4, the older mice were on a par with the young mice. This study was the first of its kind. The theoretical mechanism proposed is that resveratrol mitigates the damage done by oxygen free radicals generated by the breakdown of dopamine and activates protein signaling pathways that appear to promote cell survival. The problem is that resveratrol is poorly absorbed in the body so investigations are looking at man-made compounds that mimic the effects of resveratrol and have more bioavailability. A preliminary study of resveratrol supplement versus a blueberry diet found that the fruit was more effective at reversing age related motor deficits. Even if the effects of resveratrol in brain are minute, a small margin potentially could be enough to help older people remain steady on their feet and avoid falls.

One-year Consumption of a Grape Nutraceutical Containing Resveratrol Improves the Inflammatory and Fibrinolytic Status of Patients in Primary Prevention of Cardiovascular Disease *Amer J Cardiology* 110 (3) August 2012 An investigation of the effects of a dietary resveratrol-rich grape supplement on inflammatory and fibrinolytic status of subjects with high risk of cardiovascular disease. 75 patients were studied in a triple-blinded, randomized, parallel, dose-response, placebo-controlled 1-year follow up trial. The 1-year consumption of a resveratrol-rich grape supplement improved inflammatory and fibrinolytic status in patients who were on statins for primary prevention of cardiovascular disease and at high risk for cardiovascular disease. This study shows for the first time that dietary intervention with grape resveratrol could complement the standard therapy in primary prevention of cardiovascular disease. No adverse effects of the supplement were observed.

A large number of studies have shown that resveratrol inhibits cancers. A South Korea study found resveratrol stopped progression of fibrosarcoma, a connective tissue cancer. An Israel study found resveratrol inhibited the growth of colon cancer cells. An Italian study found resveratrol and related plant polyphenols inhibited skin cancer growth caused by ultraviolet radiation. A US study found resveratrol inhibited the growth of breast cancer by stopping stem-like cells that form into breast cancer tumors. Spain researchers found resveratrol inhibited the growth of breast cancer. Other studies have shown an inhibitory effect of resveratrol in multiple myeloma, lung, prostate, pancreatic and thyroid cancer. It has been noted that to achieve a minimum ability to affect gene expression of potential or already-forming cancer cells, at least 20 milligrams per day are needed. It would require 41 glasses of typical red wine to achieve this minimum effective dose of 20 milligrams.

Allergies & Intolerance

Allergies

Substances in wine may produce allergies or intolerance. The two are similar, except that allergies usually come on suddenly, can be triggered by a small amount of wine and are potentially life-threatening. Wine intolerance usually comes on gradually, may happen only when you drink generous amounts of wine or if you drink wine often, and is not life-threatening. Allergies express themselves most often by urticaria, wheezing, and asthma, while intolerance is often expressed through headaches and migraine although symptoms may overlap.

Sulfites

UK Mail Online June 5, 2012 (www.dailymail.co.uk) <http://www.dailymail.co.uk/health/article-2154693/Never-mind-sore-head--just-glass-wine-asthma-attack.html>. Up to 10% of people are sulfite sensitive, according to Professor Hassan Vally in Melbourne, Australia, and asthmatics may be more prone. Reactions vary from flushed skin and urticaria, to elevated blood pressure, nausea, wheezing, asthma, and even fatal anaphylactic shock. Headaches, often attributed to sulfites, do not occur from sulfites. The highest levels of sulfites are in wine, beer, dried fruit, pizza, potato chips, jam, and processed meats. It is theorized that sulfites might interact with saliva to form a gas in the mouth which tightens airways or the inability to convert sulfites in the liver due to a lack of sulfite oxidase enzyme in sensitive individuals may elevate levels of sulfites in the body. A blood test, known as a CAST test is about 50% reliable in diagnosing the condition. A definitive diagnosis requires a challenge test in a hospital setting where the patient is sprayed with sulfur dioxide or given a solution of sulfite to drink. Individuals can test themselves with dried apricots. If they react after ingestion, they probably have a sensitivity, but this self-test should be avoided outside of a hospital setting if someone is highly sensitive. Mass produced wines tend to have higher sulfite concentrations since the wineries use generous sulfur dioxide on large production lines. Organic wines have the lowest sulfite levels. Those who are possibly sensitive to sulfites should check all labels for sulfite content.

Gluten

Wine is considered a gluten-free product and there are no laws requiring labels indicate if a wine contacts gluten. The TTB does allow wineries to put "gluten free" stamp on their labels if they qualify. The Celiac Disease Foundation and Celiac Sprue Association lists wine as a gluten-free food, but some products with gluten are used to produce wine (fining agents such as hydrolyzed wheat gluten, milk protein, gelatin, egg whites are used to soften tannins and reduce oak flavors), but there is no trace of these agents left in wine. Some people, however, with allergies have reported reactions to wine that they attribute to fining agents. However, allergies to milk or egg products are common in children, but very rare in adults who are the target wine drinkers.

Since 2002, wineries in New Zealand and Australia have been required to put an allergen warning on wines fined with egg or milk products whether there is residual or not. The European Commission introduced the system last year, yet many wines are fined with egg or milk products but do not have any residue in the finished wine. Many wineries have turned to using other fining agents as a result.

When barrels are manufactured, some coopers coat the recessed part of the barrel that the top and bottom heads are secured to with a paste made from wheat or rye flour to create a seal. When the barrel reaches the winery it is washed out with water so it is unlikely for the flour to contact the wine. In spite of this, some people with gluten allergies report reactions to wines that they think is due to barrel aging. If in doubt, one with gluten allergies should drink wines that are unfined and aged in stainless steel.

Substances Used in Wine Clarification as Potential Allergens *Dtsch Arztebl Int* 110 (3) 2013 Potential allergens include fish gelatin or isinglass, protein from chicken eggs, milk products, rubber arabicum, lysozyme, pectinase, cellulose, glucosidase, urease and aroma enzymes. Moulds as well as insect proteins can contaminate the must and play a role. Phenolic flavonoids in the skin of grapes (anthocyanins and catechins) can also trigger allergic intolerance reactions leading to headaches or migraine. Other non-organic ingredients, such as ethanol metabolites acetaldehyde and acetic acid, also play a role in wine intolerance,

often expressed as urticaria. Declaring allergens in wine has become mandatory in Europe since 2012 (sulfites or sulfur dioxide more than 10 mg per kg and lysozyme or ovalbumin or casein from cow's milk).

Intolerance

Prevalence of Wine Intolerance: Results of a Survey from Mainz, Germany *Dtsch Arztebl Int* 109 (25) 2012 This is the first study of its kind to provide data on frequency of wine intolerance in a general population. Researchers found that about 7 percent of adults suffer from an intolerance to wine (similar to another study of adults in Copenhagen which showed a prevalence of hypersensitivity reactions after alcohol consumption, especially red wine, to be 8%). 4,000 people ages 20-70 filled out a questionnaire about alcohol intake and reported intolerance or allergy symptoms. 9 percent of women self reported wine intolerance compared to 5.2 percent of men. Allergy-like symptoms were more common after consumption of red wine (skin flushing and itching, nasal congestion, intestinal cramps, diarrhea, and rapid heart rate). About a fourth of people in the study with wine intolerance also reported a general intolerance to alcohol. Those with allergy to red wine but not white wine may have an allergy to the lipid transfer protein present in the skins of grapes, but further research is needed to find the multiple reasons for wine intolerance. The results suggest wine intolerance is fairly common in a general population comparable to intolerance to other foods. This was a self reported study that may not be valid and the study also had other limitations. It was suggested in correspondence that reactions can be avoided by not drinking wine and alcohol or changing to a wine that is more easily tolerated.

54th Annual Meeting of American Headache Society in Los Angeles. A presentation from Brazil was reported to WebMD June 20, 2012. This small study suggests that some types of red wine are more likely to trigger headaches than others. The researchers said that the more tannin a wine has, the more likely it can trigger migraine headaches. Tannins may boost the production of brain serotonin which can trigger migraines in susceptible people.

Biogenic Amines

Biogenic amines are ingested in foods such as wine, beer, cheese and sauerkraut. Histamine is the best known member of this group of substances. The concentration of biogenic amines in wine is relatively low compared to other foods such as cheese, but the effect on sensitive people can be intensified when wine is ingested with other foods that contain biogenic amines. The biogenic amines can cause intolerance manifested by nausea, cold sweats, hot flushes, palpitations, rash, headache, gastrointestinal upset, shortness of breath, reduced blood pressure, cardiac arrhythmia, and even unconsciousness in severe cases. Alcohol can increase the sensitivity to biogenic amines. There is ongoing research in Germany and elsewhere to find measures to identify and reduce biogenic amines in wine. Some preventive measures include tested starter yeast cultures, early detection of bio amine-forming bacteria, and procedures to prevent their growth (flash pasteurization or bentonite). Some countries are reviewing whether to establish upper limits for histamine in wine. See www.laboratoryequipment.com/news/2012/11/measures-make-safer-wine.

Biogenic Amines in Wine - What are They, What is Their Impact and How Do We Control Their Formation? Washington State University Viticulture & Enology June 30, 2011. Pascal Herr, a French researcher, did a 3-year-long study on biogenic amines. He found that biogenic amines are formed by a wide range of yeasts and lactic acid bacteria. The most important biogenic amines in wine are histamine and tyramine. Various approaches to reducing biogenic amine content of wine have been taken: thermovinification combined with flash pasteurization for Pinot Noir, lysozyme and MLF strategies for white wines, and absorption of amines by bentonite and cell hull preparations. The management of pH is important since a pH of above 3.5 promotes growth of lactobacilli and pediococci. Spontaneous MLF may have higher levels of biogenic amines than inoculated MLF starter.

Take Home Message

“For an American wine culture to flourish, the industry must actively embrace education - not only terroirs and wine’s role in a healthy lifestyle, but also the risks and the need for responsible consumption”

Richard Mendelson, *From Demon to Darling: A Legal History of Wine in America*

Many years of scientific research supports the notion that red wine, if consumed in moderation regularly with food and combined with a healthy lifestyle that includes adherence to the Mediterranean diet and exercise, can offer significant health benefits. The scientific community believes that it is a combination of alcohol and various polyphenols that give red wine its healthful properties, and that red wine can best exert its effects over the course of an adult lifetime, that is, through regular, daily consumption in moderation with meals. The pattern of drinking is important.

Good wine challenges our human frailties, because if it tastes good, we want to drink more of it. However, over drinking or binge drinking (more than 4 drinks on a single occasion for men and more than 3 drinks for women) should be avoided as it can lead to a number of serious health problems including sudden death from high blood pressure, heart attack, cardiac arrhythmia, or stroke. You are much better off not to drink wine at all than to drink too much wine. Constant heavy drinking can result in cardiac myopathy, cirrhosis of the liver, acute alcoholic hepatitis, osteoporosis, chronic gastritis, irritable bowel syndrome, tremors, insomnia, nightmares and night sweats, dementia, and cancer of the mouth, pharynx, larynx, esophagus, stomach, liver, colon and breast.

The following are considered by the medical community to be generally accepted truths:

1. Binge drinking is not healthy at any age, but is particularly risky for high school and college age girls in whom this activity can lead to an increased risk of breast cancer later in life.
2. Any health benefits from light-to-moderate alcohol intake disappear with regular binge drinking.
3. Moderate wine drinkers are more protected against cardiovascular disease with much of the effect coming from alcohol.
4. Moderate drinkers have a lower risk of developing type 2 diabetes in men and women.
5. Moderate alcohol consumption is associated with a lower incidence of certain types of cancer (colon, ovary and prostate), but a modest increase in risk of other cancers (breast in women, and oropharyngeal and digestive especially in smokers).
6. There exists a modest risk of breast cancer from more than 1 drink a day in women (which must be weighed against the beneficial effects of light-to-moderate alcohol use on cardiovascular disease).
7. It is safest not to drink during pregnancy, although an occasional drink after the first trimester, preferably consumed slowly with food, seems of little serious concern. No safe level of alcohol consumption during pregnancy has been determined and there is a small margin before there is increased risk to the fetus.
8. Bone density and the risk of fracture are favorably affected by light-to-moderate drinking in women.
9. Resveratrol supplements are of no proven health value
10. Resveratrol holds potential as a preventive and therapeutic modality for cancers.

As an informed physician, I am with the majority of health experts who are confident that wine in moderation is good for you, especially for middle-age to older people. If nothing else, it provides gustatory pleasure and relaxation. As Julia Child remarked, “The fact that people drink wine to relax and enjoy life is, in itself, enough a health benefit for everyone.” There is no optimal level of alcohol consumption My prescription is 5 ounces of wine for women and 10 ounces of wine for men, preferably red and Pinot Noir, to be enjoyed most days and consumed with food. That said, wine drinking may not be advisable for everyone, and one should consult with their doctor about the effects of wine consumption on their health as well as lifestyle and diet advice and choose a personalized course. Those under 21 years of age should not consume alcohol.

For more reading on alcohol, wine and health, consult the following sources.

Biomedical literature: www.pubmed.gov

Evaluates of emerging scientific publications and policy statements: www.bu.edu/alcohol-forum/reviews/

Relevant medical articles on alcohol and health: www.french-paradox.net

In depth reviews of selected scientific publications: www.academicwino.com

Informative websites: Distilled Spirits Council of US - www.drinkinmoderation.org, US National Institute on Alcohol Abuse and Alcoholism - www.niaaa.nih.gov, US Centers for Disease Control and Prevention (CDC) - www.cdc.gov/alcohol/, UK National Health Service - www.nhs.uk, and US Department of Agriculture Dietary Guidelines - www.cnpp.usda.gov.

Books: *Age Gets Better With Wine: New Science for a Healthier Better & Longer Life*, Richard A. Baxter, M.D.; *Drinking Diaries: Women Serve Their Stories Straight Up*, Leah Odze Epstein & Caren Osten Gerszberg editors; *DRINK: A Cultural History of Alcohol*, Iain Gately.

Journal: *Drug and Alcohol Review*

Meeting: WineHealth 2013 will be held in Sydney, Australia July 18-21, 2013. This conference brings together world experts for an exchange of scientific information and ideas on the impacts of wine consumption on human health, and to explore the epidemiological evidence of the effect of wine as a unique alcoholic beverage. Registration opens February 4, 2013, for scientists, researchers, healthcare professionals, medical practitioners and public health professionals. Members of the Renaud Society are cordially invited. Visit www.winehealth.com.au/.

Website: WineAmerica and Health Communications, Inc (HCL), provider of the Training for Intervention ProcedureS (TIPS) program, announced in January, 2013, a partnership that will promote responsible consumption of wine among wineries in the United States. WineAmerica is the only trade association with national membership and the only organization dedicated to advancing the social responsibility of the American wine industry. HCL is a nationally recognized expert in the field of alcohol server and seller training. The TIPS program can train WineAmerica members to prevent the misuse of alcohol through the prevention of intoxication, underage drinking, and drunk driving. There are TIPS-certified trained people in all 50 states and over 40 foreign countries. WineAmerica will be launching a web page that will be dedicated to providing members with the resources they need to encourage social responsibility and implement TIPS at their wineries. Visit www.wineamerica.org and www.gettips.com.

Second Generation Pinot Noir Winemakers Carve Out Their Own Success: Masút & Coattails

The first wave of successful vintners of Pinot Noir in California and Oregon that achieved notoriety over the last thirty years are now giving way to the second generation of winemakers. Two prime examples are Masút Vineyard and Winery in Mendocino County of California and Coattails Winery in the Willamette Valley of Oregon.

Masút Vineyard and Winery

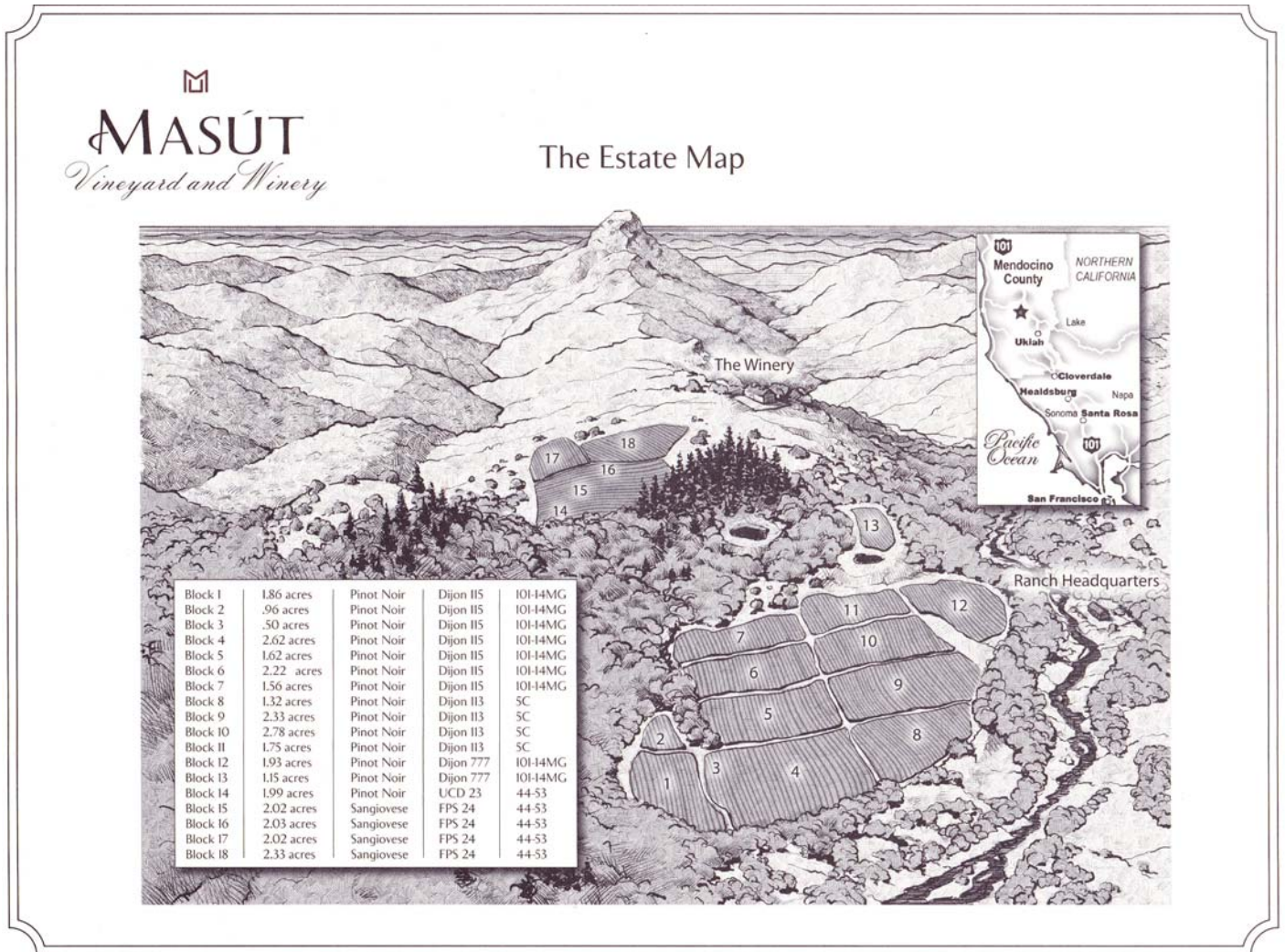
Ben and Jake Fetzer, the sons of Bobby and Sheila Fetzer grew up on a vineyard, the Home Ranch developed by their grandparents Barney and Kathleen Fetzer who had eleven children. Barney and Kathleen bought their 720-acre ranch in Redwood Valley, Mendocino County and produced their first red wine in 1968. Ben was born in 1979 and Jacob in 1981. They spent considerable time at the winery's crush pad and began working in the vineyards when they were in the fifth grade. By the eighth grade, they were making wine from a blend of Cabernet Sauvignon and Sangiovese, largely based on the guidance from their father.



The Fetzer family sold the winery to Brown-Forman Corporation in 1992 but Bobby Fetzer had a vision of pioneering a new region for Pinot Noir. He bought a 1,500-acre ranch adjacent Home Ranch and named it Masút, meaning “dark, rich earth.” Bobby and his sons planted the 33-acre Masút vineyard in 1997. Initially, grapes were sold to DeLoach and Paul Hobbs. Bobby Fetzer passed away in a river rafting accident in 2006, and Ben and Jake decided to launch their own project dedicated to his memory. They converted a barn Bobby built into a winery for small production of Pinot Noir in 2008, and started the Masút Vineyard and Winery in 2009 with the assistance and blessings of their mother.

Masút focuses on estate grown Pinot Noir from their certified organic Masút Vineyard located west of, and outside of, the Redwood Valley AVA. A petition has been submitted by Ben, Jake and local winegrowers for a new AVA known as Eagle Peak, Mendocino County (named after the most prominent peak in this mountainous region). The 22.6-acre vineyard is located on a hillside planted to Dijon clones 113, 115, 777. A separate vineyard (not in the estate blend) is planted to 8 acres of Sangiovese and a small amount of Pinot Noir UCD 23

(Mariafeld). The soil is fast-draining, and the site has desirable sun exposure and marine influenced winds. Located along a gap in the coastal mountains at the headwaters of the Russian River, cool, moist air flows from the Pacific Ocean during summer nights.



All farming is done by hand including pruning, thinning, canopy management and harvesting. After harvesting at night, the cool grapes only need to travel a mile to the estate winery. The winery is constructed from old, recycled redwood and contains modern processing equipment including a delicate whole berry destemmer, small lot stainless steel tanks, and a stainless basket press.

The winemaking regimen is a result of what the two brothers have learned from their father, many hours of study and sleepless nights, and other industry friends including Greg La Follette who helped them get Masút started. Destemmed fruit goes into small, open top fermenters. Hand punch downs are employed during fermentation and the wine is pressed off into French oak barrels (35% new for the Estate Pinot Noir). Primary fermentations, many involving natural yeasts, and malolactic fermentation finish in barrel where the wines age sur lie for 10 to 14 months. The wines are racked once, just before bottling.

The inaugural bottling of Masút Pinot Noir was produced from the 2009 vintage and was poured at the World of Pinot Noir where I first encountered the wine. The first two vintages showed tremendous promise as the brothers refined their winemaking techniques and in 2011, their third vintage, they have nailed it. Along with the flagship Estate Vineyard Pinot Noir, they have identified several blocks in the winery that they decided to bottle separately. Each block-designated Pinot Noir is made from a single clone, aged in 100% new French oak from Cadus, and intended to reveal the uniquely different terroir within the hillside vineyard. I found the wines consistently enjoyable and the block-designate bottlings definitely unique and apart from each other. A day or two later after opening, the wines were beginning to show more oak imprint and I would recommend early rather than later consumption. All the 2011 wines were released January 15, 2013.

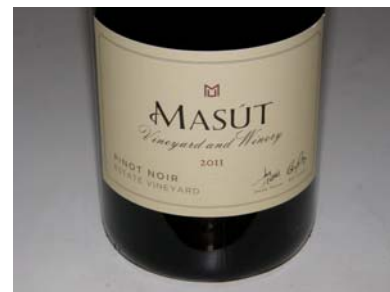
Ultimately, the Fetzer brothers plan to build the Masút brand to 3,000 cases. The wines are available through the winery's online store at www.masut.com. Private tours and tasting are available by appointment. Look for them at this year's World of Pinot Noir Friday Focus Tasting in Shell Beach, California, March 1-2.



2011 Masút Estate Vineyard Mendocino County Pinot Noir 14.3% alc., 1,041 cases, \$40. Low yields, about 2.5 tons per acre. Native and selected yeast fermentations. Aged 11 months in 35% new French oak barrels from several coopers. Bottled unfiltered and unfiltered.

Moderately light reddish-purple color in the glass. Nicely perfumed with aromas of black cherries, dark raspberries and a hint of toasty brioche.

Very fruity and fragrant. Mid weight flavors of black cherries and raspberries with a touch of spice and a subtle earthy, savory note. Good energy, with mild tannins, bright acidity, and a raspberry-infused finish that slips off the back of the tongue with a lasting impression. Terrific!



2011 Masút Estate Vineyard Block 1 Mendocino County Pinot Noir

14.3% alc., 115 cases, \$55. From a 1.86-acre block of 1690 vines of clone 115 planted in 1997 on 104-14 rootstock. Aged 11 months in 100% new Cadus French oak. *Moderately light reddish-purple color in the glass. Aromas of earthy dark red fruits with a touch of red rose floral scent in the background. Impressive attack of mouth coating, silky and well-spiced cherry fruit complimented by perfect oak integration and supple tannins. A dreamy wine of great flavor that displays impeccable balance. Clone 115 is one of the few clones that can make a great stand-alone wine.*



2011 Masút Estate Vineyard Block 7 Mendocino County Pinot Noir 14.3% alc., 115 cases, \$55. Clone 115 planted in 1997 on 101-101 rootstock. 1.56 acres and 1,417 vines. Aged 11 months in 100% new Cadus French oak. *Medium reddish-purple color in the glass. Veers to the darker side of fruit with more plum and a touch of herbs and oak. Mid weight flavors of black plum sauce and dark berries with a hint of spice and tea leaf, supported by mild tannins, and finishing with some notable fruit presence. Seems a bit closed now and should benefit from more time in bottle. Very good.*

2011 Masút Estate Vineyard Block 11 Mendocino County Pinot Noir 14.3% alc., 115 cases, \$55. From a 1.75-acre block of 1,590 vines planted to clone 113 in 1997. Aged 11 months in 100% new Cadus French oak. 113 is seldom bottled as a stand-alone clone so this wine is unique. *Medium reddish-purple hue in the glass. Inviting nose, but brooding and needs time to open in the glass. Aromas of cherry pie glaze, mixed berry preservers, brioche, mocha and spice. Appealing flavors of dark red cherries, cranberries and raspberries with a savory, spicy underpinning. Crisp and juicy, with soft tannins. I like this wine but it does not have the mid palate impact or finish of the other block-designate Estate Vineyard Pinot Noirs. Good (+).*

2011 Masút Estate Vineyard Block 12 Mendocino County Pinot Noir 14.3% alc., 115 cases, \$55. From a 1.15-acre block of 1,041 clone 777 vines planted on 101-14 rootstock in 2003. Aged 11 months in 100% new Cadus French oak. *Medium purple color in the glass. Muted nose that arrives over time with scents of dark berries, black cherry, black currant and dark chocolate. Fresh, with impressive fruit presence on the palate, softly textured, finishing with good power. The most sap and tannin of the block-designated wines but retains a velvety mouth feel and appealing drink ability. Very good.*

Coattails Winery

Jared and Mike D. (Mikey) Etzel, the two sons of Beaux Frères' winemaker and co-owner Mike Etzel, produce small lots of Pinot Noir from select vineyards in the Willamette Valley under the Coattails (age worthy) and Horsetail (early drinking) labels at the Beaux Frères winery. The first vintage was 2007.

Mikey and Jared are the family's second generation of winemakers and grew up at the winery. They recall riding their dirt bikes around the property and sitting as a sidekick on tractors. They began working in the vineyards at a young age for a small allowance, with father Mike tendering their work with their abilities. Their summers were spent spreading compost, pruning and doing trellis work. It wasn't until they graduated from high school and spent time in Europe that they decided to commit to the winemaking field.

Both Mikey and Jared completed the Oregon State University Enology and Viticulture Program. Mikey Etzel previously worked in the vineyards at WillaKenzie Estate Winery and is now the vineyard manager at Brick House Vineyards. Jared Etzel lives in St. Helena, California, and works with Denis and May-Britt Malbec who are the winemaking consultants to Kapcsandy, Blankiet and Capture wineries. Jared and his brother are developing a very small project producing Cabernet Sauvignon from a vineyard on Mt. Veeder in the Napa Valley. The first vintage in 2010 will be called Lis Chu Vineyard by the Etzel Brothers. Jared Etzel will also be the new winemaker for a yet unnamed Dundee Hills Winery being established by Robert Roy, the co-owner of Beaux Frères. The photo below, courtesy of www.avalonwine.com, shows Nathan (the oldest brother and studying electrical engineering), Jared and Mikey from left to right.



The Etzel brothers' wines are available through a mailing list and the winery's online store at www.coattailswine.com, and at www.avalonwine.com.

2010 Horsetail Willamette Valley Pinot Noir 13.8% alc., 150 cases, \$28. Sourced from Zena Crown, Broadley and Sunny Mountain vineyards. 100% destemmed. Aged in 60% new Francois Frères and Taransaud French oak barrels for 14 months. *Moderately light reddish-purple color in the glass. Aromas of cherry, oak, biscuit (yeasty), stem and coffee becoming more pronounced the following day from a previously opened and re-corked bottle. Soft in the mouth with vibrant acidity, featuring cherry and raspberry fruit with a hint of tarry, coffee-scented oak in the background. A racy wine for early drinking. Decent.*

2010 Coattails Willamette Valley Pinot Noir 14.0% alc., 90 cases, \$74. Sourced from Sunny Mountain Vineyard in the southern Willamette Valley owned and farmed by Steve Price. A co-fermented blend of 85% Pommard and 15% Mariafeld. 100% destemmed. Aged in 80% new Francois Frères and Taransaud French oak barrels for 15 months. No chemical adjustments, racking, fining or filtering. *Moderately dark reddish-purple color in the glass. Rather shy but pleasing aromas of black cherries, spice and dried rose petals. Delicious black cherry and plum fruit front and center that is on the big, riper side for this cool Oregon vintage, reflecting the warmer vineyard site. Displays the spice that Francois Frères oak is known for. Soft in the mouth with supple tannins and well-integrated oak and acidity. A charming Pinot that is very enticing. Very good.*



Rekindling a Kistler Vineyards Romance

I have to confess of an amorous affair with Kistler Chardonnay a number of years ago. Back in the early 1990s, I was a regular purchaser of Kistler Vineyards Chardonnays, at a time the winery's popularity exploded and my wife had developed quite a taste for their style of Chardonnay. The winery's reputation was largely fueled by Robert Parker, who was the only wine critic other than Steve Tanzer invited to review the wines annually and Parker gushed over them. Parker said in the *Wine Advocate*, "If the Kistler Winery could be magically transported to the middle of Burgundy's Côte d'Or, it would quickly gain a reputation as glorious as any producer of Burgundy grand crus."

Kistler Pinot Noir has not gained as much notoriety as Kistler Chardonnay, yet Parker, and now his successor, Galloni, remain big fans. In 2002, Parker enthusiastically praised Kistler Pinot Noir saying, "Steve Kistler and Mark Bixler are justifiably proud of what they have achieved with Chardonnay, but what really turns them on is their accomplishments with Pinot Noir, which may be the greatest Pinot Noirs made in the New World." I was astonished by this statement at the time because I never found the Pinot Noirs the equal of many others made in California.

The Kistler style of Pinot Noir for years emphasized deep color, big extraction, thick and meaty flavors, substantial tannins, peak ripeness and alcohols, and generous oak. The wines were the epitome of what has been called "Parkeresque," in that they were unctuous and hedonistic as Parker would say. In a *Los Angeles Times* article in 2008, Allen Meadows commented on the 2004 Kistler Bodega Headlands Cuvée Elizabeth Sonoma Coast Pinot Noir, which Parker awarded 96-98 points out of 100, and said the wine was "bordering on perfection." Meadows remarked, "While the size and weight and concentration are impressive, the texture is anything but elegant." Meadows gave the wine 86 points.

I was in Meadows camp for years and eventually broke off my romance and stopped buying Kistler Pinot Noir and Chardonnay with the 2006 vintage (I found a number of comparable California Chardonnays at a more reasonable price, but that's another story). I conducted a large tasting of Kistler Pinot Noirs in 2010 (www.princeofpinot.com/article/963/), and found that wines tasted back as far as 1998 held up well, but did not improve with age and all of them tasted the same with any nuances buried in the prodigious fruit and structure. Pinot Noir is all about aromatics and mouth feel, and the wines did not consistently deliver on either count.

I have heard rumblings that Kistler has been striving for less extraction and more elegance and finesse in recent vintages and I decided to revisit Kistler Pinot Noir with a few examples from the 2009 and 2010 vintages. These wines, of course, are from my own collection, since Kistler prefers not, nor apparently needs to, distribute samples for review except on a very limited basis as noted above.

An article ran in *The New York Times* (January 11, 2011) by Isaac Asimov titled "A Cult Winemaker Tinkers with Success." Asimov confirms my remarks, saying, "For more than 30 years, restraint was not a quality remotely associated with Kistler. As Kistler's lush, exuberant style was widely emulated, it became one of the first modern California cult wineries." Asimov notes that in recent years the tastes of Steve Kistler have evolved and he is striving for elegance and energy rather than power, and wines that are more in tune with food.

Vineyard sources in recent years have moved to the cool true Sonoma coast and the emphasis is on a diverse mix of clonal plantings with emphasis on heritage clones such as Calera and unspecified clones of French origin other than Dijon clones. Of the wines reviewed here, the Cuvée Catherine (named after Steve and Cathleen Kistler's daughter) was assigned to the single vineyard Occidental Station Vineyard starting in 2004. The vineyard-designated Cuvée Elizabeth was produced from the Occidental Vineyard in the Sonoma Coast from 1998 to 2003, but this vineyard was acquired by Evening Land Vineyards and the designation was transferred to Bodega Headlands Vineyard in the Sonoma Coast. The vineyard designate, Cuvée Natalie from the Silver Belt Vineyard in the Sonoma Coast, debuted in 2006. The largest vineyard designate is the estate Kistler Vineyard Pinot Noir which previously was the primary or exclusive source of grapes for the Cuvée Catherine Pinot Noir from 1991 to 2003.

The four wines I tasted offer generous but not exorbitant extraction and deep color, particularly in the 2009 vintage, but a moderate amount of tannins. They are appealing wines that can be approached now with decanting, and the balance of the wines predict that undeveloped aromatics and flavors should improve over time in the bottle (although tasted two days after opening, the aromas had still not arrived). The wines do offer

more silk and satin textures and more overall pinotosity than I found in Kistler Pinot Noirs before 2006, but the aromatics failed to fully please. They are now commendable wines that compete with the best of the Sonoma Coast genre, and although very expensive, they are worth a try if you have the spendable income. They are well made for their style, but they didn't do enough for me to rekindle my romance.

This enigmatic winery is not open to the public, has no tasting room, and does not participate in public wine events. You won't find this winery on Facebook or Twitter. A winery website did not appear until 2005, although the winery was founded 35 years ago. Original winemaker owners Steve Kistler and Mark Bixler decided early on to direct all their energies to vineyard management and winemaking, avoid the public eye, and let the quality of the wines speak for themselves. Bill Price, part owner of Durell Vineyard and Three Sticks Wines, is a recent minority investor in Kistler Vineyards. Jason Kesner, the assistant winemaker at Kistler Vineyards, has become a major influence on the newer style of Kistler wines and has assumed a large part of the winemaking responsibility previously shouldered by Steve Kistler.

The wines are sold through a mailing list with allocation based on years of customer loyalty and volume of customer purchases (a small amount reaches fine restaurants). Minimum purchase is a case of wine or a six-pack of a single wine with each fall and spring offering. The wines are expensive, and with tax and shipping, a case readily tops \$1000. If you fail to buy wine from offerings, your allocation dwindles and you will eventually be unceremoniously dropped from the mailing list. Annual production is about 20,000 cases of Chardonnay and 5,000 cases of Pinot Noir. Magnums were bottled for the first time. A 2010 Kistler Vineyard Pinot Noir, and offered in the fall 2012 (\$180). The website is www.kistlervineyards.com. 707-823-5603.

2009 Kistler Cuvée Elizabeth Bodega Headlands Vineyard Sonoma Coast Pinot Noir 14.1% alc., 780 cases, \$90. *Dark reddish-purple color in the glass. The nose evolves slowly but beautifully in the glass, offering an array of scents including dark berry preserves, black plums, oak spice and a floral highlight. Richly flavored with slightly sweet and sappy dark fruits enhanced with subtle notes of vanilla, tar and fennel. Very silky in the mouth with admirable length on the luscious, fruit-driven finish. The next day when tasted from a previously opened and re-corked bottle, the nose had a green note yet the plush fruit flavor was hard to ignore. This wine will find fans among those who relish big-boy Pinots. Good (+).*

2009 Kistler Cuvée Catherine Occidental Station Vineyard Sonoma Coast Pinot Noir 14.1% alc., 535 cases, \$90. *Dark reddish-purple hue in the glass. Very shy nose initially, offering scents of dark berries and cherries and spice, picking up intensity over time in the glass. Well-endowed with ornate flavors of plum sauce and blackberry jam robed in firm but not aggressive tannin, finishing with welcome Pinot charm. Tasted the next day from a previously opened and re-corked bottle, the nose was still shy with a leafy, floral tone, yet the flavors were remarkably enticing with impressive length on the finish. Very good.*



2010 Kistler Cuvée Natalie Silver Belt Vineyard Sonoma Coast Pinot Noir 14.1% alc., 915 cases, \$90. *Dark reddish-purple color in the glass. The nose is closed for business showing primarily oak-driven aromas. Mid-weight core of dark red and black fruits that are flavorful and bright, but less intense and sappy than the 2009 wines. The tannins are nicely balanced and the finish is driven with notable citrus-laden energy. Tasted the following day from a previously opened and re-corked bottle, the wine's nose was still closed with a hint of dark red fruit and oak spice. Still very flavorful with plentiful, sappy fruit, smooth texture and some length on the fruited finish. Very good.*

2010 Kistler Kistler Vineyard Sonoma Coast Pinot Noir 14.1% alc., 2,135 cases, \$80. *Dark reddish-purple color in the glass. Shy aromas of black cherries, spice, and subtle mint. Very soft and smooth in the mouth with charming flavors of Bing cherries and cranberries underlain with spice and cola. Juicy, with bright acidity on the back end. The velvety texture is most alluring. Tasted the next day from a previously opened and re-corked bottle, the minty note on the nose had disappeared and the aromas were very pleasant. Still flavorful. Very good.*



Black Kite Offers Stunning Wines in 2010

The 2010 vintage is not a pleasant memory for Anderson Valley vintners. Spring was very cool with plenty of rain and the summer was cool throughout. There were challenges with botrytis and mildew. There was a mid-August heat wave that caused some baked fruit, particularly in vineyards that had thinned out the canopy, causing losses of up to 30 percent in some sites. Generally there was less ripeness when harvest arrived in late September and I have tasted a number of Anderson Valley Pinot Noirs from the 2010 vintage that show this unripeness. For Black Kite Vineyard, this was not the case.

Black Kite Cellars is a family owned producer of Pinot Noir named for the beautiful but endangered Black Shouldered Kite (now called the White Tailed Kite) that is native to the Anderson Valley. These hawks can frequently be seen circling the skies over the Black Kite Vineyard which is located in the cool, “deep-end,” portion of the Anderson Valley, only eight miles from the Pacific Ocean as the crow flies. The site is in a valley overlooking the Navarro River just west of the town of Philo. The 12-acre vineyard was first planted in 1999 and has been managed since 2004 by Paul Ardzrooni who is experienced in Anderson Valley vineyards. The first commercial vintage from Black Kite Cellars was 2003.

The highest elevation part of the vineyard, Redwood’s Edge, is planted with Dijon 114 and 115 on 3309 rootstock. The middle portion, Stony Terrace, named after the nature of the soil, is located where the hillside is naturally benched, and is planted to Pommard clone on 3309 rootstock. The lower riverside portion of the vineyard, River Turn, is named after the bend in the adjacent Navarro River. It is the most vigorous part of the vineyard and is planted to Pommard clone on 3309 rootstock. Yields are typically 1.5-2.5 tons per acre.

As the vines have developed, different portions or blocks have yielded different flavors and characteristics. As a result, a blend of the vineyard blocks is bottled as Kite’s Rest and the separate blocks are bottled as block specific wines (Redwood’s Edge, Stony Terrace and River Turn)

The winemaker since 2005 has been veteran Jeff Gaffner, who has over 25 years of experience in winemaking.

In the 2010 vintage, a Pinot Noir was added for the first time from a non-estate vineyard. A program has been launched to produce small lots from vineyards with compelling locations, farmed by dedicated growers. The Soberanes Vineyard Santa Lucia Highlands bottling in 2010 is farmed by Gary Francioni of Garys’, Rosella’s and Pisoni vineyards fame.



The 2010 vintage Black Kite Cellars Pinot Noirs are among the upper echelon of wines tasted from this vintage from Anderson Valley. The wines are consistently stellar in every department: aromatics, check; flavor intensity, check; balanced tannins and acidity, check; dreamy textures, check. Black Kite Cellars wines are sold through a mailing list at www.blackkitecellars.com with limited retail and restaurant distribution. Although not specified on the winery's website, tours and tasting are probably available to pinotphiles by contacting the winery at 415-923-0277. Look for the wines at this year's Anderson Valley Pinot Noir Festival. Information at www.avwines.com.

2010 Black Kite Cellars Kite's Rest Vineyard Anderson Valley Pinot Noir 14.5% alc., pH 3.50, TA 0.66, 541 cases, \$45. *Medium reddish-purple color in the glass. Intense aromas of fresh black cherries with a hint of cardamom spice. Mid weight flavors of black cherries backed by balanced fine-grain tannins, offering some length on the bright finish. A suave mouth feel adds to the pleasure. Very good.*



2010 Black Kite Cellars Redwoods Edge Anderson Valley Pinot Noir 14.6% alc., pH 3.50, TA 0.67, 149 cases, \$55. *Medium reddish-purple hue in the glass. Charming perfume of black cherries, blackberries and wooded forest, penetrating and possessing staying power over time in the glass. Bigger, riper, more structured, and more intense than the estate vineyard bottling yet still crisp and lively offering an enticing velvety texture and a monumental finish flush with fresh berry flavor that will not let go.*



2010 Black Kite Cellars Stony Terrace Anderson Valley Pinot Noir 14.6% alc., pH 3.60, TA 0.66, 153 cases, \$55. *Moderately dark reddish-purple color in the glass. The nose is very pleasing initially, offering scents of dark fruits, soy, saffras, forest floor and cedary oak. Tasty core of red cherries and berries with a note of pine in the background. Crisp, with tame tannins, a touch of classy oak, and some length on the finish. Even better the following day from a previously opened and re-corked bottle. Very good (+).*



2010 Black Kite Cellars River Turn Anderson Valley Pinot Noir 14.6% alc., pH 3.60, TA 0.61, 150 cases, \$55. *Moderately light reddish-purple color in the glass. Lovely aromas of cherry pie glaze, baking spice and sandalwood. This wine is all about spicy, red pie cherries. Supple tannins, bright acidity, and good length on the finish. A very pleasing red fruit festival that is the most feminine wine in the lineup and the epitome of pinotosity.*



2010 Black Kite Cellars Soberanes Vineyard Santa Lucia Highlands Pinot Noir 14.6% alc., pH 3.50, TA 0.60, 149 cases, \$55. *Moderately dark reddish-purple color in the glass. Alluring aromas of dark cherries and dark berry jam with a hint of mesquite. A delight to drink with middleweight flavors of black cherries in harmony with supple tannins and complimentary acidity. The soft mouth feel is captivating. This wine lacks the vibrancy of the Black Kite Anderson Valley bottlings but is very typical of the Santa Lucia Highlands and is quite charming in its own right. Very good.*

Pinot Briefs

Vaportini Dangerous One of the worse devices imaginable for achieving intoxication is the Vaportini, a simple device available online for \$35 that heats alcohol and allows it to be inhaled through a straw producing a quick and intense high. The device bypasses the digestive system and goes directly into the bloodstream through the lungs, leading to possible dangerous levels of intoxication if abused. Laboratory rats have been shown to be more susceptible to alcohol addiction through inhalation, but there have no human studies on the effects of inhaling alcohol.

Avoid Buying Too Much of One Wine Harvard psychologist Daniel Gilbert wrote about his research in the journal *Science* this month. According to a *Los Angeles Times* article (January 26, 2013), Gilbert's research found that people at all stages of life tend to believe they won't change much in the future. He calls it the "end of history illusion," and it invariably causes people to underestimate how much they will change in the future. It is why people make decisions they later regret such as buying cases of expensive California Cabernet Sauvignon or Bordeaux, realizing several years later that their tastes have changed and they now prefer California Pinot Noir or Burgundy. Many wine lovers I know have made this transition and regret the stockpile of wine in their cellars that they have lost a longing for.

Eighteen Tasting Rooms Now in Sonoma Plaza Sonoma Plaza is a National Historic Landmark and the spot where the California State flag was first raised in 1842. It is home to many tasting rooms for wineries offering Pinot Noir: Adobe Road Winery, Bryter Estates, Envolve, Erik K. James Vineyards, Ledson, R2 Wine Co., Sojourn Cellars, Walt, and Westwood.

Bill Price Buys Gap's Crown Vineyards The proprietor of Classic Wines, LLC, and Price Family Vineyards, LLC, Bill Price, along with Richard Magnuson of GI Partners, announced the sale of the 138-acre Gap's Crown Vineyard in the Petaluma Wind Gap region of the Sonoma Coast AVA. Planted to 106 acres of Pinot Noir and 32 acres of Chardonnay, the vineyard has been a source of grapes for over 20 wineries including Patz & Hall, Paul Hobbs Winery, and Kosta Browne Winery. The vineyard was sold to Gap's Crown LLC, which Bill Price recently formed. Price will continue to sell fruit from the vineyard to several producers including Kosta Browne who will lease 37 acres allowing Kosta Browne to launch an estate vineyard program. Grapes from Gap's Crown have been the backbone of Kosta Browne's heralded Sonoma Coast Pinot Noir. Price is chairperson of Kosta Browne Winery and Gary Farrell Winery (both owned by Price's company Vincraft) and through Classic Wines has ownership in Kistler Vineyards, Buccella, Three Sticks and Price Chanin Vineyards. Classic Wines LLC and Price Family Vineyards LLC also own and manage several vineyards including Durell Vineyard.

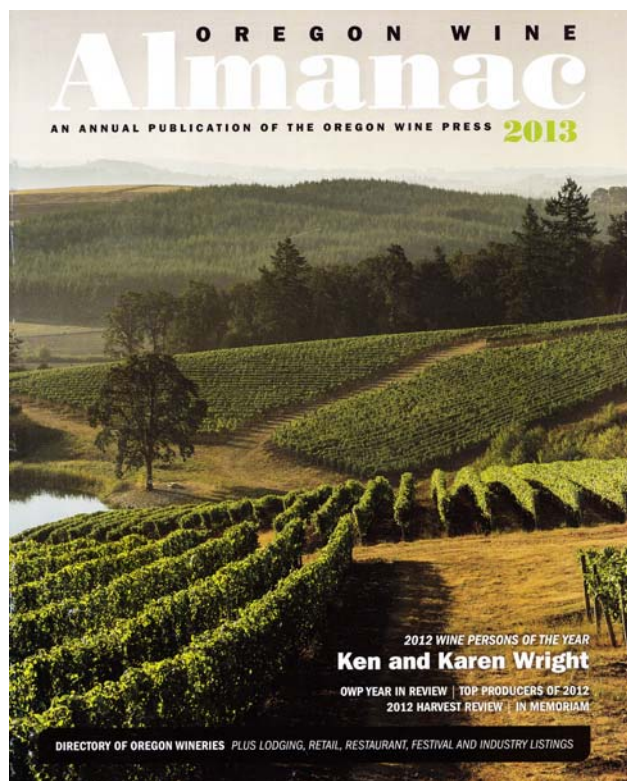
Woman of the Vine Grand Tasting Women of the Vine was founded by author Deborah Brenner and is the first of its kind collaboration of award-winning women winemakers and sustainable family grape growers. A tasting of wines from acclaimed women winemakers and owners will be held at The Westin Verasa Napa in Napa Valley on Friday, March 8 from 5:00 to 7:30 PM. Some well-known Pinot Noir producers participating include Amelia Ceja of Ceja Vineyards, Kathleen Inman of Inman Family Vineyards, Leslie Mead Renaud of Foley Estates, Theresa Heredia of Gary Farrell Winery, Chrissy Whitman of Wild Horse, and Barbara Ignatowski of Garnet. For information go to www.westinnapa.com/somms-soiree.

Grower of Year Award to Steve McIntyre The California Association of Winegrape Growers (CAWG) presented its 2013 Grower of the Year Award to Steve McIntyre, a long time winegrower in Monterey County. In 1987, McIntyre bought an 80-acre estate in the center of the Santa Lucia Highlands and established the McIntyre Estate Vineyard. The land, originally planted by the McFarland family in 1973, has some of the Highland's oldest Pinot Noir and Chardonnay vines. In 1992, Steve and wife Kimberly started Monterey Pacific, Inc., a viticulture management and development company which has grown to become the fifth largest vineyard management company in the United States at over 10,000 acres. McIntyre is a recognized leader of sustainability and was one of the initial founders of the Central Coast Vineyard Team's Sustainability in Practice (SIP) program. McIntyre wines, crafted along with winemaker Byron Kosuge, debuted with the 2005 vintage.

Family Winemaker's Only Southern California Tasting The only tasting by Family Winemakers of California will be at the Del Mar Fairgrounds on Saturday, March 9 (trade and consumer tasting) and Sunday, March 10 (trade only tasting). 170 member wineries will present over 700 wines from California's small, family owned wineries. Visit www.familywinemakers.org for more information and tickets.

French Wine Society Immersion Trips The French Wine Society, a United States-based non profit organization dedicated to French wine education, is announcing week-long immersion study trips to some of the top wine regions in France. Each trips offers an intensive, professional-level educational program on the ground in the wine region coupled with certification through the FWS's industry-endorsed Masters-Level program for the region upon successful completion of the final exam. The trips are led by internationally renowned experts who live in the visited region including Jean-Pierre Renard for Burgundy. The trips include extensive high caliber wine tastings at some of the best estates of each region. The trips are nearly inclusive with prices ranging from US \$3,495 to US \$3,895 per person, double occupancy, with each trip limited to 18 guests. Trips to Burgundy are scheduled June 9-15 (sold out) and October 20-26, 2013. For more information, contact jcamus@frenchwinesociety.org or visit the FWS website at www.frenchwinesociety.org.

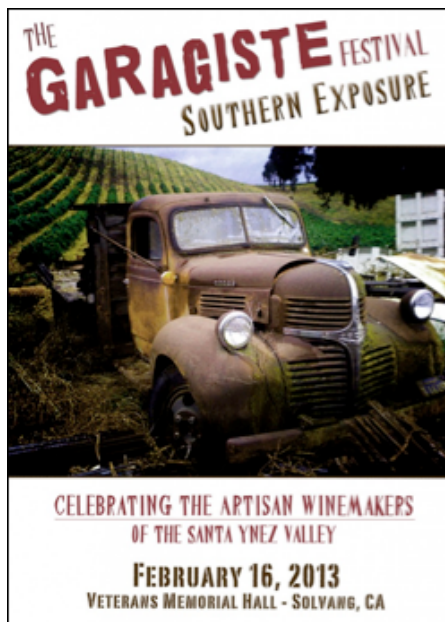
Oregon Wine "Bible" *Oregon Wine Press* (OWP) has published the inaugural *Oregon Wine Almanac*, a sixty page publication that includes a review of the 2012 harvest, a listing of top Oregon producers of 2012, a review of top Oregon wine stories of 2012, a feature on the Wine Persons of the Year (Ken and Karen Wright), a full listing of all Oregon wineries, a listing of restaurants in Oregon that are 2013 Superior Cellar Award Winners, wine country lodging, festivals and more. OWP editor Hilary Berg noted that this is the first time a wine publication has listed all bonded and licensed wineries in Oregon. OWP is published 12 times a year with a subscription price of just \$20 per year in the United States. Visit www.oregonwinepress.com.



Willamette Valley by the Glass Newsletter Willamette Valley wineries are launching an email newsletter full of special event news, roadshow tasting invitations, wine country activity ideas, winegrowing updates, and general love for Oregon wine. Visit www.willamettewineries.com to sign up for three or four emails per year. The initial newsletter reports that Pinot in the Windy City will take place on March 7. More than 60 Willamette Valley wineries will be bringing their Pinot Noir to City Winery Chicago.

Pinot Noir Still Hot Symphony IRI Group (SIG.), a market research firm based in Chicago, Ill., reported that for the 52 weeks ending in November, Pinot Noir was the fastest growing varietal in the \$20 plus category in sales (reported in *Wines & Vines*, January 2013).

Garagiste Festival The Garagiste Festival is dedicated to the undiscovered and under-recognized artisan 'garagiste' producers. Founded by fellow garagistes Stewart McLennan and Douglas Minnick, the festival is produced by Garagiste Events, a non-profit dedicated to furthering the education of future winemakers and those training for employment within the wine industry. The Garagiste Festival is a supporter of the Cal Poly Wine & Viticulture program. The "Southern Exposure" event will celebrate the artisan winemakers of the Santa Ynez Valley and will be held February 16 at Veterans Memorial Hall in Solvang. Participating wineries that produce Pinot Noir include a-non-ah-mus, Autonom, Center of Effort, Deovlet, El Rey, J. Wilkes, Kessler-Haak, La Fenetre, Luminesce, Native 9, Ryan Cochrane Wines, Seagrape, Storm Wines, and Transcendence.



2013 San Francisco Chronicle Wine Competition The results are in and here are the Red Sweepstakes (the Pinot Noir winner), Best of Class and Double Gold medal winners for Pinot Noir in each of the price categories.

Red Sweepstakes: 2010 Terlato Family Vineyards Russian River Valley \$60

Best of Class: Up to \$19.99 - 2010 Cupcake Central Coast \$13.99, 2011 A by Acacia California \$14; \$20 to \$24.99 - 2011 Chamisal Vineyards Edna Valley \$24; \$25-\$29.99 - 2011 Balletto Vineyards & Winery Estate Russian River Valley \$29; \$30-\$34.99 - 2010 Tolusa Winery Estate Edna Valley \$30; \$35-\$39.99 - 2011 Darms Lane Dutton Ranch Russian River Valley \$39; \$40-\$49.99 - 2009 Enkidue Tina Maria Russian River Valley \$42, 2009 La Fond Arita Hills Vnyd Sta. Rita Hills \$45; \$50 and over - 2010 Terlato Family Vineyards Russian River Valley \$60.

Double Gold: Up to \$19.99 - 2011 Diamond Collection Monterey \$18, 2011 Kenwood Vineyards Russian River Valley \$18, 2009 Oreana Winery Central Coast \$18, 2011 Sea Glass Santa Barbara County \$12; \$20 to \$24.99 - 2011 Goyette Sonoma County \$23.99, 2011 Peacock Cellars Central Coast \$24; \$25 to \$29.99 - 2011 Hook & Ladder Winery Russian River Valley \$25, 2010 Mercy Arroyo Seco \$28; \$30 to \$34.99 - 2010 Crooked Vine Winery Del Arroyo Livermore Valley \$30, 2010 Fritz Underground Winery Russian River Valley \$30, 2010 James Family Cellars Stony Point Vineyard Sonoma Coast \$34.99, 2008 Muccigrosso Vineyards Santa Cruz Mountains \$34.99, 2010 Portalupi Russian River Valley \$30; \$35 to \$39.99 - 2010 Gallo Signature Series Santa Lucia Highlands \$35, 2009 Jane Seymour Wines Lucas & Lewellen Vineyard Santa Barbara County \$36, 2010 Kitson Wines Donnelly Creek Vineyard Anderson Valley \$38, 2011 Von Holt Wines Hummingbird Hill Vineyard Sonoma Coast \$39; \$40 to \$49.99 - 2010 Bailiwick Foray Russian River Valley \$40, 2009 Cartograph Floodgate Vineyard Russian River Valley \$40, 2010 Deerfield Ranch Sonoma Coast \$48, 2009 La Rochelle Winery Sleepy Hollow Vineyard Santa Lucia Highlands \$48, 2010 Portalupi Migliore Russian River Valley \$48; \$50 and over - 2009 Russian River Vineyards Estate Grown Russian River Valley \$55, 2010 Toulouse Vineyards Estate Anderson Valley \$55, 2010 Trojak Knier Winery Antinori Family Estate Napa Valley \$50, 2008 Truckee River Winery Garys' Vineyard Santa Lucia Highlands \$55, 2010 Woodenhead "Wet Kiss" Russian River Valley \$52.



The Article I Wish I Had Written

I recently saw the article, “Events: Great PR or Waste of Cash?”, written by Sara Cummings and published in *Wines & Vines* (January 2013). Since I attend many large wine events, I have wrestled with the impression that wineries are simply not getting much benefit (meaning wine sales) from their participation. I just don’t think the events often give a fair return on cost for the brand or winery related to desired goals, as Cummings points out in her article.

In recent years, I have seen a decreasing participation of boutique wineries in large tasting events because their wine is simply drowned out by more famous winery names and the competition from the sheer number of wineries pouring. This, combined with the inability to sell wine on premises at most events, leads to disappointment. My informal poll of wineries finds that at these events consumers may sign up for mailing lists, but when contacted by the winery after the event, rarely commit to buying wine or join the winery’s wine club.

For large events, wineries must pay a significant fee to participate, pay expenses to attend the event, and commit to pouring a case of wine or more. The organizers of the events want as many participating wineries as possible to create a buzz and increase their profitability, which only tends to dilute the visibility of the small, lesser-known wineries. It would appear that those who benefit most from many large privately sponsored wine events are the organizers who operate on the falsely perceived premise that wineries benefit.

Cummings points out that these events fail to generate significant public relations buzz from invited media. Referring to an event in Miami she said, “Everyone who attended enjoyed the event, but what was the whole outcome. No feature articles, no splashy coverage - and as far as I know, the reputation of the wines remained the same.” I challenge anyone to show me a significant major news release after an event such as World of Pinot Noir or Pinot Days. Even the major wine publications give these events little mention. Large events are not very attractive to many serious wine writers because walk-around tastings at large venues populated with large, boisterous crowds are not conducive to meaningful conversations with winemakers and winery owners or to the serious tasting of wines. In addition, as profit margins shrink for large events, media are being offered less payment for expenses needed to attend.

There is no hard data to show the value of participation in major wine events for wineries, and few wineries even try to keep track. Wineries seem to shrug it off, feeling that there just aren’t any preferable options. I have asked several wineries off the cuff and they have said that many people seem to attend these events to drink (often in excess) and socialize, with no intent of connecting with the wineries.

The solution, if there is any, escapes me. I believe there is merit in smaller, more focused events that offer interest to both consumers and media. An example would be the upcoming In Pursuit of Balance events in San Francisco and Los Angeles (www.inpursuitofbalance.com), the Garagiste Festivals (www.californiagaragistes.com), and Pinot in the City events where a manageable number of Oregon wineries travel to a city to pour for media and consumers at a relatively small venue (www.willamettewines.com).