



How-to “Booze”: Having a Drink While Minimizing the Damage

	Alcohol Type	Calories	Best choice
Worst ----- Good ----- Best	Wine	Red Wine	5oz (150ml) serving contains about 125 - Pinot Noir - Cabernet - Syrah
		White Wine	5oz (150ml) serving contains about 125 - Sauvignon Blanc - Pinot Grigio - Austrian Grüner Veltliners
		Champagne	4oz (120ml) serving contains about 90 - Brut - Brut Natural - Extra Dry
	Clear hard liquor	Silver Tequila	1.5oz (45ml) contains about 100 - Tequila & fresh squeezed lime
		Vodka	1.5oz (45ml) contains about 100 - Sea Breeze
		Gin	1.5oz (45ml) contains about 100 - Gin & Tonic
		Clear Rum	1.5oz (45ml) contains about 100 - Mojito (half syrup or none)
	Dark hard liquor	Gold Tequila	1.5oz (45ml) contains about 100 - Tequila & Soda (Skinny Margarita)
		Whiskey	1.5oz (45ml) contains about 100 - Dry Manhattan
		Brandy	1.5oz (45ml) contains about 100 - Sidecar
		Spiced Rum	1.5oz (45ml) contains about 100 - Spiced Rum with seltzer, lemon & lime juice
	Malt Beverages	Liqueurs	1.5oz (45ml) contains about 135 - Mudslide
		Beer	Varies: Light beers are usually about 100 for a 12oz (350ml) serving Higher alcohol content beers can go up to about 250-300 for a 12oz (350ml) serving. - India Pale Ale - Pale Ale - Stout Dark beers are higher calorie but provide healthy polyphenols
		Flavored	About 200-250 for a 12oz (350ml) serving. - Apple Ciders

NOTE: Darker liquors contain “congeners”—substances produced during the fermentation process, which contain chemicals that are not health-promoting. Whereas wines contain healthy polyphenols (red wines have the highest concentrations), flavored malt beverages have few redeeming qualities.

Hangover Damage Control

The best thing for a hangover is the tincture of time. Alcohol is a poison and must be detoxified through very specific physiologic pathways. It takes time to fully metabolize alcohol as well as the toxic intermediate metabolites that are created from that metabolism. However, you can give yourself the best chance at recovery by following these simple principles.

Hydration: Water is used in the breakdown and excretion of alcohol. The liver needs it, wants it, and will steal it from all other body tissues. But water isn't the whole story. Important electrolytes are also lost. If you are already experiencing the unwanted effects of excess alcohol, then the good advice of drinking water alongside alcohol is wasted because it's already too late...the damage has been done.

What to Do: Sip, don't guzzle, water to prepare for Sole Therapy (pronounced so-lay)—which is essentially just low concentration salt water with some tricks to it because making the concentration too high can result in a worsening of symptoms. Here's how to make it the "Always be prepared" method:

1. Fill a quart (about a liter) glass mason jar with an inch-thick layer of Himalayan Crystal Salt stones (yes, you need a lot of salt!) Add 2-3 inches of good quality artesian or spring water to cover the salt crystals completely. Cover with a non-reactive plastic lid (don't use a metal lid or a metal spoon to mix as it de-ionizes the salt!) Give it a good shake and let sit overnight or for 24 hours.
2. The following day, if all the salt crystals have dissolved, you can add a few more salt crystals to the water. Your Himalayan Crystal SaltSole is ready when the salt no longer dissolves, which means the water is saturated with salt. Visual proof of this is when you can see about an inch-thick layer of undissolved salt that has settled on the bottom of the jar.
3. Add one teaspoon of the Salt Sole to a 12oz-16oz (350ml-475ml) glass of artesian or spring water and drink. Keep the container covered to prevent the water from evaporating. Otherwise, no special storage is needed.

NOTE: Here's what to do if you aren't prepared for your hangover: Simply add fine granulated premium salt (about $\frac{1}{4}$ of a teaspoon) to 16oz (475ml) of water and mix completely. It will all dissolve eventually so keep stirring until it does!

Balance blood sugar: We generally worry when blood sugar (glucose) is too high. However, in the case of alcohol consumption, insulin is produced in large

amounts, thus driving blood sugar to all-time lows. This hypoglycemic state causes a lot of hangover symptoms.

What to Do: Now is the time to reach for something sweet. Fruit is a better choice than candy bars, of course. Fruit also provides hydration and electrolytes and a burst of much needed sugar. A handful of berries works, but melons such as watermelon, cantaloupe, and honey dew are the bomb for this. A small mixture of fruit is helpful rather than a big binge, and then once you are feeling up to it, a bit of protein and fat will help sustain the effect.

Support the liver: Everyone knows that the liver takes the proverbial bruising during an alcohol episode.

What to Do: Eat your greens! Green veggies, especially leafy greens contain powerful antioxidants, vitamins, and minerals to support the liver. This would be a good time for a smoothie, which would help with hydration as well. Additionally, you may supplement with liver supporting herbs such as milk thistle, dandelion, and artichoke. Use per label instructions.

Support the body with coenzymes and cofactors: If you do not regularly take a multi-vitamin/multi-mineral complex from a quality source, now is the time to start. During times of physiological stress, the body gets depleted of vitamins and minerals. A hangover most definitely qualifies as physiological stress.

Extra special care: Glutathione is the body's master antioxidant and it is significantly depleted with alcohol consumption. Supplementing with bioavailable glutathione or its precursor N-acetyl cysteine (NAC) is helpful when the need is high. Use per label instructions. Because alcohol interferes with circadian rhythms, melatonin can be used for several days following an episode to restore circadian rhythm and aid in sleep. (In general, 3mg or less is recommended for a hangover—similar to what one would take for jet lag.)

Myths and legends: According to science, while caffeine—typically coffee—works for some, it doesn't seem to help most people with hangover symptoms. Instead, "Hair of the Dog" (an alcoholic drink to help cure hangovers), or small amounts of alcohol the next morning, may help cure the withdrawal-type symptoms that happen. However, many experts suggest that this just extends the drinking into daylight hours. This is a potentially dangerous behavior for certain susceptible individuals.