



Off your face

Nutritionist **Kim Pearson** discusses the effects of alcohol on the skin

Alcohol is something many of us enjoy, but our love of drinking can be at odds with our quest for eternally youthful skin. Is it possible to balance the two?

In this article I will discuss some of the ways that drinking alcohol impacts skin ageing. For those who have no intention of quitting their Champagne habit anytime soon, I'll also cover some strategies for minimising alcohol's negative effects on skin health.

OXIDATION

It is well accepted that oxidative stress contributes significantly to skin ageing.¹ Alcohol promotes the generation of ageing free radicals and interferes with the body's normal defence mechanisms against them. The breakdown of alcohol in the liver results in the formation of molecules whose further metabolism in the cell leads to free radical production. Alcohol also reduces levels of antioxidants known to counteract free radical damage. This results in increased cellular oxidative stress and subsequent cellular ageing.²

While we often consider the effects of sun exposure and pollution on free radical generation in skin cells, it's also important to bear in mind how our diet and lifestyle choices impact our systemic free radical load.

INFLAMMATION

Alcohol metabolism directly leads to the production of reactive oxygen species, known for their ability to stimulate activation of key inflammation transcription factors including nuclear factor- κ B (NF- κ B).³ Pro-inflammatory mediators increase the permeability of capillaries, leading to infiltration and activation of neutrophils and other phagocytic cells into the skin. Elastases and other proteases released from neutrophils can act to breakdown protein structures including collagen and elastin within the skin, contributing to skin ageing.⁴

NUTRIENT DEPLETION

Alcohol can impair nutrient absorption, metabolism, and utilisation and when consumed in excess can lead to deficiencies in a variety of nutrients.⁵ Alcohol consumption

has been associated with declines in levels of vitamin A⁶, essential for healthy skin cell turnover.

Regular alcohol consumption can decrease vitamin C levels. One study showed that in healthy male volunteers, alcohol consumption produced a 47% increase in urinary vitamin C excretion.⁷ Normal skin contains high concentrations of vitamin C, which supports important and well-known functions, stimulating collagen synthesis and assisting in antioxidant protection against UV-induced photodamage.⁸

While excess alcohol consumption can lead to a wide variety of nutrient deficiencies, vitamins A and C are both especially relevant to skin health and ageing.

GLYCATION

In addition to the alcohol itself, many alcoholic beverages also provide considerable amounts of sugar. Dietary glucose intake affects how the body ages via a process called glycation.⁹ Sugars from food and drink enter the bloodstream and attach themselves to the amino groups of tissue proteins such as collagen, rearranging their structure into advanced glycation end products (AGEs). AGE molecules can undergo extensive cross-linking, which cause healthy collagen fibres to lose their elasticity and become rigid, more brittle and prone to breakage.¹⁰

Alcohol promotes the generation of ageing free radicals and interferes with the body's normal defence mechanisms

DEHYDRATION

The link between alcohol consumption and dehydration has been well established.

Alcohol acts as a diuretic, dehydrating us by reducing our levels of antidiuretic hormone (ADH) and increasing urine production.¹¹ Increased fluid excretion increases the risk of dehydration.

Water is essential for the normal functioning of the skin, especially its outer layer, the stratum corneum.¹² Trans-epidermal water loss is already increased in aged skin, leaving the stratum corneum more susceptible to becoming dry in low-humidity environments.¹³ Couple this with systemic dehydration due to alcohol consumption and the skin becomes at greater risk of insults from other sources, leading to cycles of cell damage and inflammation that perpetuate cellular ageing.¹⁴ >



Regular alcohol consumption can decrease vitamin C levels

ALCOHOL'S IMPACT ON LIFESTYLE

It's also important to consider how other lifestyle factors can be affected when we drink and the subsequent impact on our skin. An evening (or day!) of drinking does not exist in isolation and is often associated with other unhealthy behaviours. These may include eating less healthy foods and / or higher quantities of food than usual, cigarette smoking and lack of sleep. What sleep we do get may be compromised in quality by our consumption of alcohol. All of these factors can further compromise skin health.

HOW TO MINIMISE THE IMPACT OF ALCOHOL ON SKIN HEALTH

Stick to the recommended intake

In January 2016, the government lowered the recommended intake for men to the same as that for women - 14 units per week. 14 units is the equivalent of six pints of average strength beer or cider, six small (175ml) glasses of average strength wine or six double shots of spirit. This means that we should be aiming to not regularly consume more than six drinks containing an average % alcohol over the course of a week.

Space your drinking

Saving up weekly units to binge drink them all in one go is not recommended. Whilst some studies have shown that regularly drinking a small amount of alcohol may provide health benefits, binge drinking provides no benefits whatsoever. Avoid drinking every day. Aim to have at least two days per week when no alcohol is consumed.

Choose healthier drinks

Opt for better quality, more naturally produced wines and spirits. Choose dry wines which have a naturally low sugar content and do not add sugar during production. Avoid regularly drinking beer and high sugar cocktails.

Eat and stay hydrated

Having a few mouthfuls of food before drinking will slow the absorption of alcohol into the bloodstream. Alternating alcoholic drinks with a glass of water can help maintain hydration.

Lifestyle factors

Going home a little earlier or organising for a lie in can help minimise alcohol's impact on sleep. If eating out, make healthier choices at restaurants and plan breakfast for the morning after. Rye toast with mashed avocado and a poached egg is my go-to.

Drink for the right reasons

It's easy to fall into the habit of drinking after a hard day or because it's Friday or because of associations with certain situations. Be mindful of what triggers an urge to drink. **AM**

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Kim Pearson qualified as a nutritionist in 2008. Her areas of speciality are weight loss, skin health and healthy ageing. She writes articles and provides professional comments for a range of magazines and newspapers and has appeared on national radio and television. Pearson speaks regularly at conferences and is a key opinion leader for leading nutrition companies. She is a full member of the Complimentary and Natural Healthcare Council, British Association of Applied Nutrition and Nutritional Therapy and the Guild of Health Writers.