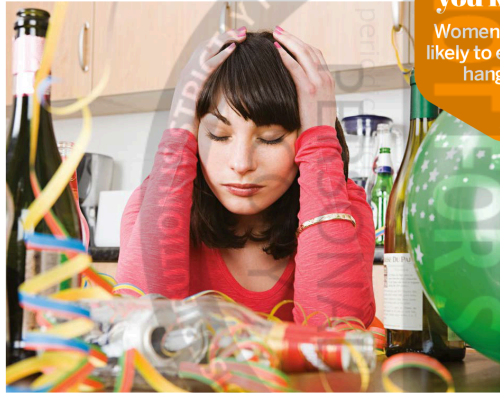


WHAT IS A HANGOVER?

The biochemistry behind your body's backlash after a night of heavy drinking

WORDS SCOTT DUTFIELD

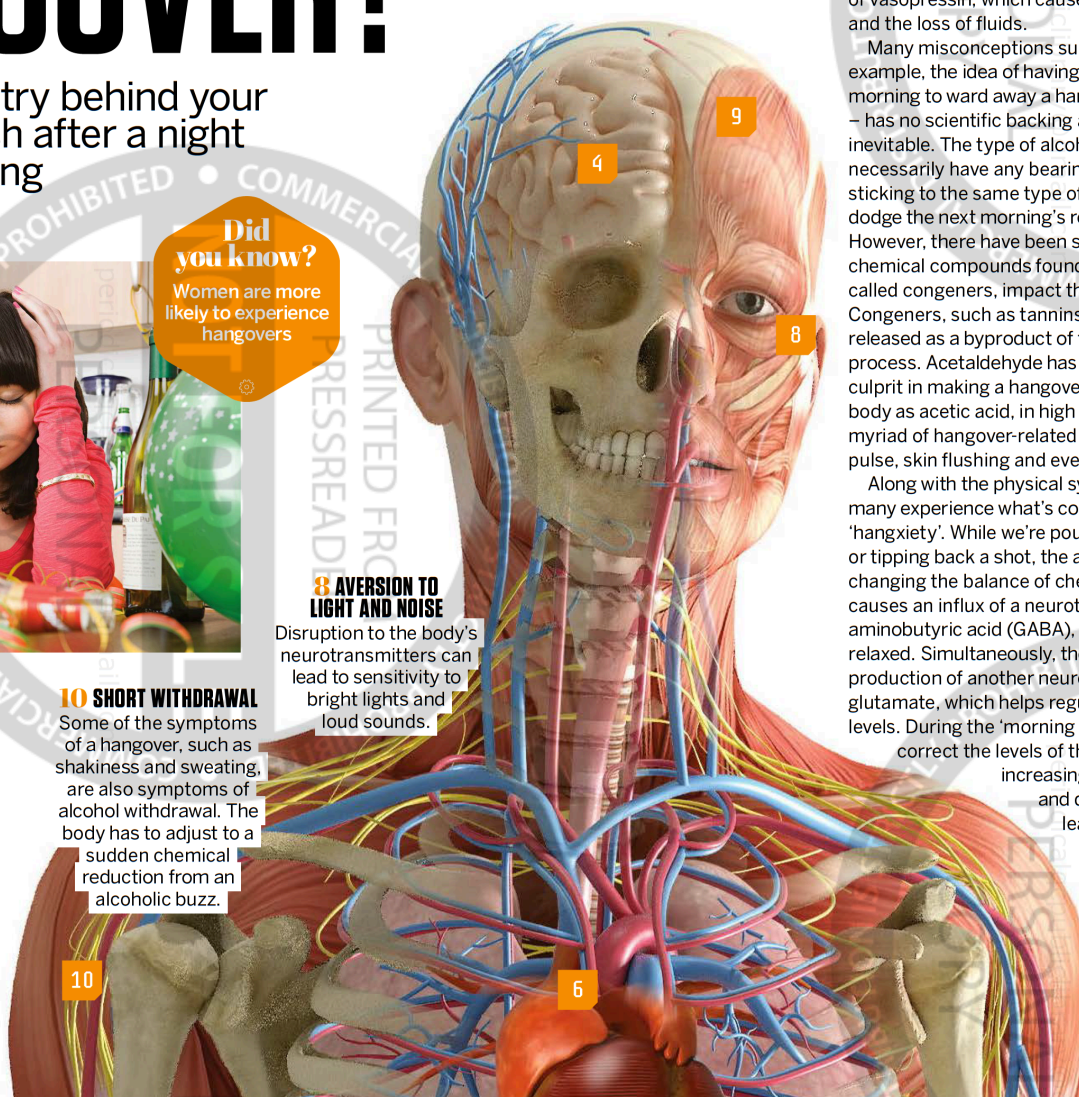


Did you know?

Women are more likely to experience hangovers

THE MORNING AFTER

How the body is affected by alcohol and the consequences of overindulging



4 HEADACHES

The expansion and contraction of blood vessels caused by alcohol consumption can lead to headaches.

9 BAD SLEEP

A hangover comes hand in hand with tiredness due to an interrupted sleep cycle.

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eadaches, nausea and fatigue are just some of the reminders of last night's boozing antics. Commonly known as a hangover, 'veisalgia' is the medical term for the group of unpleasant symptoms that follow a period of excessive alcohol consumption. One of the main causes of its symptoms is related to dehydration. Vasopressin is a vital hormone that is sent to the kidneys from the brain, signalling that they retain fluid. But consuming alcohol suppresses the release of vasopressin, which causes an increase in urination and the loss of fluids.

Many misconceptions surround hangovers. For example, the idea of having an alcoholic drink in the morning to ward away a hangover – the 'hair of the dog' – has no scientific backing and likely just delays the inevitable. The type of alcohol you consume doesn't necessarily have any bearing on a hangover, and sticking to the same type of alcohol won't help you dodge the next morning's repercussions either. However, there have been some studies that suggest chemical compounds found in alcoholic beverages, called congeners, impact the severity of a hangover. Congeners, such as tannins and acetaldehyde, are released as a byproduct of the alcohol fermentation process. Acetaldehyde has been found to be a prime culprit in making a hangover more severe. Found in the body as acetic acid, in high concentrations it causes a myriad of hangover-related symptoms, such as a rapid pulse, skin flushing and even vomiting.

Along with the physical symptoms of a hangover, many experience what's commonly referred to as 'hangxiety'. While we're pouring another glass of wine or tipping back a shot, the alcohol in our bodies is changing the balance of chemicals in the brain. Alcohol causes an influx of a neurotransmitter called gamma-aminobutyric acid (GABA), which helps the body feel relaxed. Simultaneously, the brain starts to reduce the production of another neurotransmitter called glutamate, which helps regulate mood and anxiety levels. During the 'morning after', the brain works to correct the levels of these two neurotransmitters, increasing the levels of glutamate and decreasing GABA, which can lead to a prolonged period of anxiety. Unfortunately, there are no scientifically backed remedies or hacks that can prevent a hangover. You'll just have to stay hydrated and wait out the rough ride, which can last for up to 72 hours after drinking.

8 AVERSION TO LIGHT AND NOISE

Disruption to the body's neurotransmitters can lead to sensitivity to bright lights and loud sounds.

10 SHORT WITHDRAWAL

Some of the symptoms of a hangover, such as shakiness and sweating, are also symptoms of alcohol withdrawal. The body has to adjust to a sudden chemical reduction from an alcoholic buzz.

10

6

SCIENCE

DO YOU KNOW?

On average, Britons spend 315 days of their lives battling a hangover

6 INCREASED HEART RATE

An increased heartbeat, called tachycardia, and increased blood pressure are common symptoms during a hangover. Excess drinking can lead to atrial fibrillation, also known as holiday heart, which can cause irregular heartbeats and damage.

2 INFLAMMATION

Alcohol increases the release of cytokines from the liver, increasing inflammation within the body. This contributes to the general discomfort or sense of illness experienced during a hangover.

3 LOW BLOOD SUGAR

Blood sugar declines, causing you to feel more tired and weak, as well as your affecting mood.



Darker alcoholic drinks contain high levels of congeners

5 EXCESSIVE THIRST

After a bout of dehydration, the body experiences excessive thirst to replenish what was lost.

7 DIARRHOEA

Due to the lack of water absorption while drinking, stools may pass loosely during a hangover.

1 NAUSEA

The lining of the stomach and gastrointestinal tract become irritated by alcohol, and the production of acid increases.

FEELING FRESH

For around 20 to 25 per cent of alcohol drinkers, hangovers aren't such a big deal. Known as 'hangover resistant', many people claim to be able to enjoy alcohol without feeling the negative aftereffects. Some studies have attributed genetics to such an ability. For example, a 2014 study in the scientific journal *Addiction* found that 43 per cent of hangover resistance in study patients was attributed to genetic influences. Scientists have found several genetic variants that appear to bestow hangover resistance, help flush alcohol out of the blood and dampen inflammation.

A link between a person's estimated blood alcohol concentration (eBAC) has also been made in connection with hangover resistance. In 2015, a group of international scientists found that almost 80 per cent of people who claimed hangover resistance paced their drinking and didn't pass an eBAC of 0.10 per cent, despite drinking the same volume of alcohol as other study participants.



For a lucky few, a night of drinking doesn't result in a hangover