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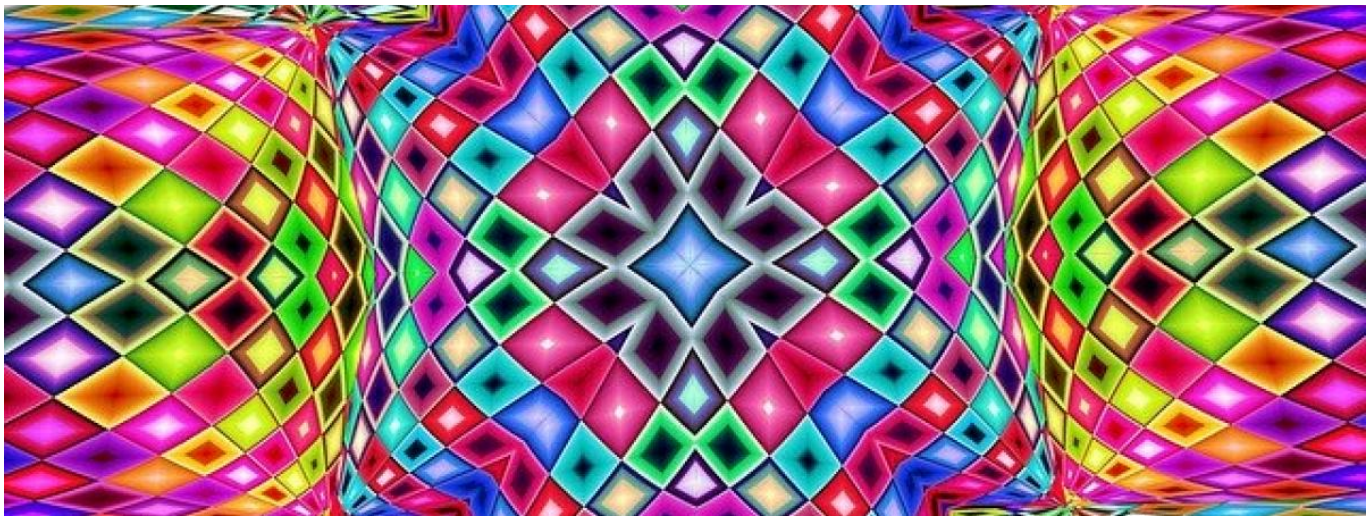
link to Reader's Digest article [1]

brain [2] heart [3]



With every beat of your heart your blood pressure is controlled by nerves that quickly and precisely raise or lower its value according to what you're doing, or feeling. Sometimes though blood pressure plummets without warning, leaving the brain under-perfused and making you oh so dizzy.

We talk about being "dizzy with excitement", of being "giddy in love" and of reaching the "dizzy heights of success". Far more mundane activities, such as standing up, eating, straining on the toilet, wearing tight collars—and even growing old—can also make you giddy.

## Standing up

When we stand up, gravity causes blood to pool in our legs, leaving less to circulate in the brain. The heart can respond by beating harder, restoring blood flow to the brain, whilst the narrowing of blood vessels in areas such as the gut allows blood supply to be momentarily diverted upwards towards the head.

Fail to restore blood flow [4] and you will probably faint; blood circulation to the brain will be instantly restored.

## Eating

Blood moves *towards* the stomach and gut to help with digestion (whereas it is diverted away during standing and during the famous "fight and flight'"response). The heart, in response, will receive less blood to pump to the brain. Being less full, it beats less strongly (since its success lies in its stretch), and so blood pressure drops.

Small, frequent meals may help minimise these symptoms.

## Wearing tight collars

Reminiscent of a barometer measuring air pressure, we have sensors called "baroreceptors [5]" in our neck that measure blood pressure. When they detect high blood pressure, they set in motion a chain of events to drop it back to normal levels. Trouble is, when you wear a tight collar, they can be similarly stimulated, dropping blood pressure that wasn't high in the first place. Dizziness may develop.

## Straining on the toilet

When you strain on the toilet [6] for a bowel movement, your blood pressure goes on a rollercoaster ride. First it rises as the "push" tightens your chest muscles, compressing blood vessels and raising the pressure within—rather like squeezing a hosepipe more tightly to get a more forceful flow. Within seconds, blood pressure [7] drops as the compressed vessels deliver less blood back to the heart, reducing its stretch and its pumping ability. You may feel very giddy, and even faint.

There's a final rise, fall and rise in blood pressure driven both by baroreceptors kicking into action and by you stopping straining. Phew.

## Growing old

Sir Roger Bannister [8], expert on the human nervous system, wrote much about the effects of ageing on blood pressure control. In his textbook, he explains how the body's pressure sensors become less sensitive with age; heart conditions and the drugs used to treat them (such as diuretics [9]) can further contribute to low blood pressure, as can dehydration (it's known that the sense of thirst diminishes with age; frailty and forgetfulness can also lead to reduced intake).

Standing up slower and drinking more fluids may help in the battle to balance your blood pressure, but if your dizziness is severe or accompanied by symptoms such as headache or heart palpitations, it's worth seeing your doctor [10].

MEDICAL JOURNALISTS' ASSOCIATION



**Links**
[1] https://www.readersdigest.co.uk/health/health-conditions/what-could-be-causing-your-dizziness [2] https://www.helencowan.co.uk/../tags/brain [3] https://www.helencowan.co.uk/../tags/heart [4] https://www.readersdigest.co.uk/health/health-conditions/how-can-you-treat-heart-failure [5] https://www.merriam-webster.com/medical/baroreflex [6] https://www.ctvnews.ca/health/fainting-on-the-toilet-is-a-real-medical-problem-but-doctors-say-it-can-be-avoided-1.3895702 [7] https://www.readersdigest.co.uk/health/health-conditions/18-ways-to-lower-your-blood-pressure [8] https://www.readersdigest.co.uk/health/wellbeing/what-did-sir-roger-bannister-teach-us-about-medicine [9] https://www.readersdigest.co.uk/health/health-conditions/all-you-need-to-know-about-diuretics [10] https://www.nhs.uk/conditions/dizziness/