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DANONE waters

RUNNING ON EMPTY? DEHYDRATION SLOWS YOU DOWN

A GUIDE TO HELP YOU ENJOY PEAK PERFORMANCE

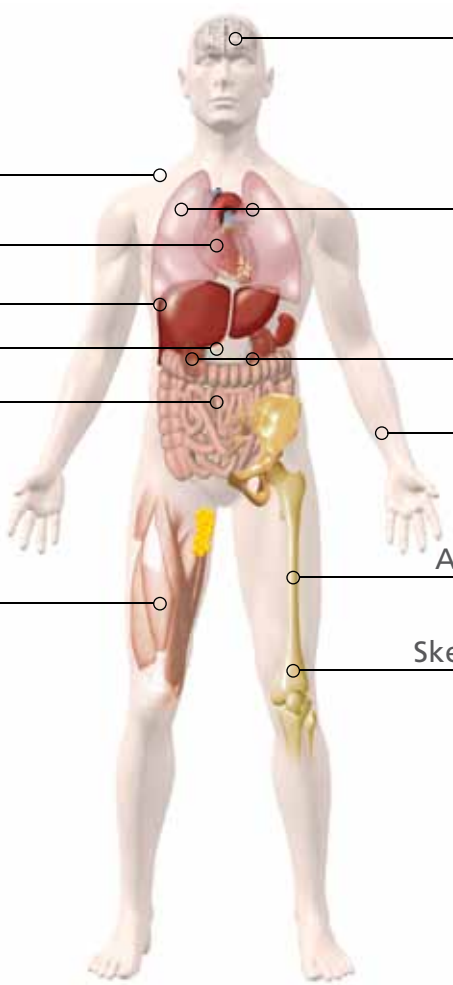
Why be less than your best? Side effects of dehydration can seriously impact our lives with many of us misunderstanding our bodies' needs and drinking less than we should.[1] Find out what you can do to stay hydrated and healthy

WATER POWER

Adults are about 60% water[2] and every cell in our body depends on maintenance of water balance to work properly. Water is essential to:

- Passage of nutrients and oxygen into cells
- Chemical reactions that power your cells
- Transport of waste out of cells.

Water composition of tissues and organs (% by weight) [3]



HYDRATION MATTERS

Water is essential to maintaining the good health of your body. Dehydration causes global body side effects…

- Fluid deficits of more than 1% body weight lead to reductions in exercise performance.[4]
- Aerobic and endurance type physical work performance is decreased by being dehydrated.
- For every 1% of body weight we lose due to dehydration, our heart rate increases by 5 beats per minute.[5] This is because dehydration puts extra strain on the heart's job of circulating blood.
- Studies show that insufficient fluid intake is a trigger for headache and migraine.[6]
- Thirst is not a good indicator of dehydration when you exercise. Experts advise matching fluid intake to amount lost through sweating.[5] Depending on how strenuous your exercise programme is, this may equate to drinking about 100ml for every 15 minutes of effort.

Good hydration gives you an instant advantage. It's a fact, most sportsmen and women don't drink enough to meet their needs.[1]

KEEP COOL

Top physical performance requires fluid maintenance. Your body uses and loses water every second – even just breathing in and out.[7]
When exercising, you get hot and core temperature goes up even more if you're dehydrated.[8] Your heart beats faster to pump more blood round your body and also to your skin where sweat glands open and water evaporates to cool you down.

When you exercise, particularly in hot weather, you can sweat litres of water in a short period of time. Studies show that male tennis players can lose up to 2.5 litres per hour.[9]

- Ensure you input what you output and drink enough water to replace lost fluids.

IS WATER ENOUGH?

For physical activity of up to 1 hour, replenishment with water is all you need to hydrate, restore fluid balance and maintain physical performance.[10]
Natural water is the healthiest drink you can choose to keep fluid levels optimal – zero calories, zero additives, total hydration.

HYDRATION ENHANCES PERFORMANCE

Research shows that replacing water during exercise actually enhances physical performance.[1]

In one study, amateur cyclists were found to ride 6.5% faster if they drank fluids during exercise.[11]

Trained runners racing at 1500m, 5km and 10km were seen to slow down by 3.1%, 6.7% and 6.3%, respectively, if they were dehydrated.[12]

HYDRATION ENHANCES ENDURANCE

Sports scientists have shown that people who are properly hydrated are more resistant and take longer to reach fatigue levels.[13]
In one study, time to exhaustion when cycling at high intensity was significantly increased when adequate hydration was achieved.[13]

To pick up the pace keep up the water...

PUT BACK WHAT YOU LOSE

Water loss during exercise leads to a decrease in plasma volume and blood flow. Your heart's capacity to work is then affected and your physical performance decreases along with a deterioration in aerobic capacity.[14]

Put back what you lose and you'll stay on top. But it's been shown that many people doing sports are dehydrated and drink at a rate that barely replaces 2/3rds of their fluid losses.[5] Are you one of them?

If you want to up your game – get ahead and drink water...

STAY ON FORM

Even mild dehydration levels can adversely affect your mind. Not surprising given our brains are about 75% water.

Short periods of fluid restriction, the kind that cause a loss of body mass of 1-2% are shown to lead people to express feelings of tiredness, inability to concentrate and loss of alertness.[15] Short-term memory loss and attention difficulties are seen at 2%.[16]

Do you identify with any of these effects?

HOW MUCH WATER SHOULD I DRINK?

Basic needs

When you're not exercising, you need about 2 litres of water.[17] That's about 8 glasses over the course of a day.

Fluid for exercise

You need to replace all the water you lose through sweat. The amount varies depending on the duration and intensity of your activity and the ambient temperature.

Take a urine check

Check your urine before and after you exercise. Look at the colour. It should be light yellow. If it's dark or strong smelling, you're probably dehydrated. If so, take immediate steps to hydrate by drinking water and taking some with you wherever you go.

Be aware that some medications, conditions and even food can affect the colour and smell of urine.

Don't wait till you're thirsty to drink

By the time we feel thirsty it's likely we're already dehydrated. Some people may also be developing side effects like tension headache and loss of performance. It's even possible to lose weight from dehydration before feeling the need to drink.[2]

TIPS TO PROGRAMME WATER INTO YOUR SCHEDULE!

Because we lose water constantly we need to replace it – little and often

- ✓ **Keep a bottle of water handy in your car, on your desk at work, in your sports bag.**
- ✓ **Take regular sips of water during exercise even when you're not thirsty.**
- ✓ **Drink extra water when you get hot or are sweating.**
- ✓ **For team sports or outdoor exercise, take a bottle of water with you and make time for regular hydration breaks.**
- ✓ **Drink half a litre of water 2 hours before any exercise.[10]**
- ✓ **Drink a couple of glasses after exercising to match your water losses and maintain your body's fluid balance.**

Check with your healthcare team for specific advice about your hydration needs.

Remember to input what you output…

References

1. *Noakes TD. Fluid replacement during exercise. Exerc Sport Sci Rev 1993;21:297-330.*
2. *Armstrong LE, et al. Hydration assessment techniques. Nutr Rev 2005;63(6 Pt 2):S40-54.*
3. *Pivarnik JM. Water and electrolytes during exercise 1994. In Nutrition in Exercise and Sport, ed. Hickson JF, and Wolinsky I. Boca Raton, FL: CRC Press, 245-62.*
4. *Murray B. Hydration and physical performance. J Am Coll Nutr 2007;26(Suppl 5):S542-48.*
5. *Coyle EF. Fluid and fuel intake during exercise. J Sports Sci 2004;22:39-55.*
6. *Blau JN. Water deprivation: a new migraine precipitant. Headache 2005;45:757-9.*
7. *Shirreffs SM. Markers of hydration status. J Sports Med Phys Fitness 2000;40:80-4.*
8. *Sawka MN, et al. Hydration effects on thermoregulation and performance in the heat. Physiol 2001;128(4):679-90.*
9. *Sawka MN, et al. Exercise and fluid replacement. Med Sci Sports Exerc 2007;39(2):377-90.*
10. *Convertino VA, et al. American College of Sports Medicine position stand. Exercise and fluid replacement. Med Sci Sports Exerc 1996;28(1):i-vii.*
11. *Below PT, et al. Fluid and carbohydrate ingestion independently improve performance during 1 h of intense exercise. Med Sci Sports Exerc 1995;27(2):200-10.*
12. *Armstrong LE, et al. Influence of diuretic-induced dehydration on competitive running performance. Med Sci Sports Exerc 1985;17(4):456-61.*
13. *Walsh RM, et al. Impaired high-intensity cycling performance time at low levels of dehydration. Int J Sports Med 1994;15(7):392-8.*
14. *Sanchez-Gonzalez JM, et al. Hydration status and aerobic capacity: effects on plasmatic volume during strenuous physical exercise. Cir Cir 2005;73(4):287-95.*
15. *Maughan RJ. Impact of mild dehydration on wellness and on exercise performance. Eur J Clin Nutr 2003;57(Suppl 2):S19-23.*
16. *Lieberman HR. Hydration and cognition: a critical review and recommendations for future research. J Am Coll Nutr 2007;26(Suppl 5):S555-61.*
17. *Howard G, Bartram J. Domestic water quantity, service level and health. WHO 2003.*

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