ADHD & WATER

ELIXIR COACHING WITH MELISSA

Why Hydration?

WHY HYDRATION?

Do you find yourself forgetting to drink water?

Even 1–2% dehydration can impair cognitive and physical performance, while chronic mild dehydration may contribute to fatigue, stress, and metabolic issues.

Hydration refers to maintaining the right fluid balance in the body
Water makes up 50–70% of body weight and is vital for most body processes

Air: after a few minutes without air you will lose consciousness
Water: generally people can only survive 3 days without hydration
Food: 2 - 3 months but it is dependant on overall health

Hydration is one of the foundation stones for physical health

Certain medications increase or decrease your hydration needs. If you have a medical condition or are on medication for which there is specific advise related to fluid intake; you should always with your GP or medical professional before making any big changes to your hydration.

ADHD & HYDRATION

Hydration is essential for all, but the risk of dehydration is higher for the ADHD brain...

EXECUTIVE DYSFUNCTION

Executive dysfunction challenges:

- ***Forget to follow routines and to drink water or eat?*** This is easily done during periods of hyper-focus or distraction, this then can create a feedback loop of fatigue and inattention - making routines harder to recall

- ***Experience decision fatigue? Find self-regulation hard to manage?*** *A*s overwhelm increases: decisions and even making simply choices becomes harder. The brain increasingly misreads body signals (thirst, hunger, tiredness), the decision to stop a task and initiate a task such as eating or drinking becomes something that requires too much mental energy. This makes it even harder to self-regulate.

- ***Working memory and planning a bit of a pain on an average day?*** These both decline faster with dehydration, as ADHD brains already work harder to maintain focus, the drop-off feels steeper.

EXECUTIVE DYSFUNCTION

Executive dysfunction challenges:

- **Dopamine** and **noradrenaline** signalling are dysregulated in the ADHD brain:
    - Thirst cues register less strongly, the motivational drive to drink doesn't fire reliably
    - The brain's salience network (which decides what's important) can mis-prioritise internal body cues (like thirst, hunger, fatigue) are often under noticed.

This is part of the ADHD trait called **interoceptive unawareness** which is a difficulty sensing internal states.

REGULATION

Neurotransmitter and hormone regulation:

- In ADHD, the **dopamine** and **noradrenaline** systems don’t function optimally, dehydration makes the functioning even less efficient

- **Dopamine** (neurotransmitter and hormone) = motivation, reward, drive, learning from positive outcomes.
  - Dopamine: dehydration can initially increase dopamine to create a drive to find water to drink. But prolonged dehydration decreases dopamine and increases cortisol (stress hormone). This results in brain fog, fatigue, irritability and a lack of focus. Studies show: larger dopamine activity is usually correlated with a shorter time to start doing a task (less effort with task transition)

- **Noradrenaline** (neurotransmitter and hormone) = alertness, focus, stress response, attention stability, blood pressure regulation - key role in the body's "fight or flight" stress response
  - Noradrenaline: dehydration increases noradrenaline = your body stays in a state of high alert = more anxious, more irritable and worse sleep

ADHD & HYDRATION

Autonomic nervous system dysregulation:

- The **a*utonomic nervous system*** controls involuntary bodily functions, such as heart rate, blood pressure, digestion, breathing, sweating
- This affects maintaining blood volume and electrolyte balance - a drop in hydration and electolytes will have a negative impact on the functioning of your autonomic nervous system

For people with ADHD:

- Hydration isn’t just physical, it’s neurochemical regulation.
- Altered dopamine/noradrenaline make it harder to notice thirst, motivate action, and recover from stress.
- Regular hydration breaks are essentially nervous system resets; they stabilise attention, energy, and emotional tone.

STIMULANT USE

Stimulants:

- Suppress appetite and thirst, which increases your dehydration risk;
- Increases metabolism and body temperature, which raises water loss through sweat;
- Can cause a dry mouth and increased urination and constipation

Stimulant Use and ADHD:

- Prescription medication for ADHD is often stimulant based
- Self medication with legal stimulants (e.g. caffeine, nicotine, pseudoephedrine/ephedrine in over the counter medications, herbal stimulants in energy drinks and dietary supplements. e.g. Guarana, Ginseng, and Taurine)
- Self medication with illegal stimulants (e.g. amphetamines, cocaine, crystal meth, Khat, Betel nut)

STIMULANT MEDICATION

Hydration helps your body use your ADHD medication:

Hydration improves **absorption** and **consistency of release of stimulant medication** effects through the day.

Many **slow-release medication**s use osmotic systems (water pushes the drug out at a constant rate). Without adequate hydration, the osmotic process is impaired, so the drug may not be "pumped out" or released consistently through the day

Most **oral medications**, need sufficient water in the gastrointestinal tract to dissolve properly. If you are dehydrated, (less fluid in the digestive system), it can lead to slower or incomplete absorption of your medicine

STIMULANT MEDICATION

Dehydration has a negative impact on ADHD medication:

Dehydration can **slow down the transit time** the medication moving through your body, potentially altering where and when it is absorbed, leading to inconsistent drug levels in the body.

Dehydration **impairs the functioning of the kidneys and liver**, which are responsible for processing and eliminating the left over medication fragments from your system. This can increase the risk of side effects or toxicity from mediation that has not been effectively removed from your system.

Dehydration can also **intensify side effects** of ADHD medication: like headaches, dizziness, or nausea.

BENEFITS OF GOOD HYDRATION

Benefits of Good Hydration in ADHD:

- Improves mental clarity, focus, and mood
- Supports dopamine and neurotransmitter regulation
- Aids digestion and nutrient absorption
- Reduces headaches and fatigue
- Improves sleep
- Supports better physical energy regulation

Consequences of even mild dehydration in ADHD:

- Can produce larger cognitive and emotional impacts on the ADHD brain e.g. decreased focus, lower mood
- Deliberate hydration strategies are often necessary to stay well-hydrated

YOUR HYDRATION

YOUR OPTIMAL HYDRATION CAN MAKE A BIG DIFFERENCE IN YOUR DAILY LIFE

How Much Water?

The NHS recommends:

- that most adults drink 6 to 8 glasses of fluid a day
- which is about 1.2 to 2 litres
- this can include water, lower-fat milks, sugar-free drinks,
- non caffeinated tea

Please note: Specific hydration requirements depend on age, activity levels, weather, air humidity, health conditions, medication etc

Living on several cups of coffee a day?

Be mindful of caffeine intake from drinks like tea and coffee, as they can have a stimulating effect and increase urination.

How Much Water?

Don’t like the taste of tap water?
Use a filter for your water, it really improves the taste. I use a glass and metal filter made by Aarke. https://www.healf.com/OLD-MELISSADVL - go to my drops and get my special discount!

Can’t drink something unless it is sweet?
Fruit juice and smoothies contain sugar, so limit them to a combined total of 150ml a day.

Commercial soft drinks as well as containing sugar are often a perfect storm of chemicals that can amplify ADHD symptoms through artificial colours (e-numbers), preservatives, artificial sweeteners, caffeine - which can increase hyperactivity, restlessness, irritability, sleep issues, interfere with dopamine, overstimulation and then a dopamine crash. Read the label carefully!

Consider adding fruit to your water instead!

SIGNS OF GOOD HYDRATION

- Urine is light, pale yellow (like straw)
- Skin feels normal (not overly dry)
- Normal energy and concentration
- Moist mouth and lips: check the mucus membranes inside your mouth, they should be moist
- Thirst is minimal or only mild between drinks
- Regular urination (roughly: every 3–4 hours, about 5–7 times/day)
- No dizziness or lightheadedness when standing up.

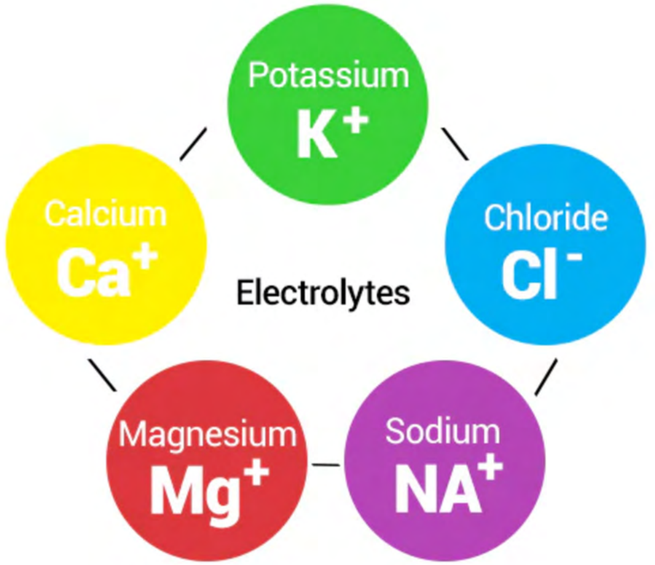
Drink BEFORE you are thirsty

- Well hydrated = pale urine, steady energy, normal thirst
- Mild dehydration = dark urine, tired, dizzy, dry mouth, fix with fluids + food
- **Severe dehydration** = no urine, confusion, rapid heartbeat, fainting = medical emergency, call 999 for help

ELECTROLYTE DRINKS

Maintaining optimal electrolyte balance is essential:

Electrolytes (like sodium, potassium, magnesium, and calcium) are tiny charged minerals (carry an electric charge) that control how your brain and body send signals. They are critical for fluid balance, nerve transmission, muscle function, and overall cellular health. They help nerve cells “fire” properly, move water in and out of cells, and keep energy stable.



For individuals with ADHD:

- Who have fluctuations in energy
- Issues with focus and attention
- Difficulty with stress regulation

AND who are already more prone to dehydration due to:

- Executive function challenges
- May also be taking stimulant medication

WHY ELECTROLYTES?

Fluid Balance & Hydration Electrolytes:

- Regulates the movement of water into and out of cells
- Ensures your body tissues, including the brain, have appropriate fluid

Nerve Conduction & Neurotransmission Neurons:

- Relies on shifts in sodium and potassium concentrations
- Imbalances = slower signal transmission or cognitive “brain fog”

Muscle Function & Energy:

- Calcium and magnesium: essential for muscle contraction / relaxation
- Low levels can contribute to fatigue, cramps, and restlessness
- Muscle cramps, frequent headaches, persistent fatigue = possible electrolyte imbalance

Using Electrolytes

When?

- Before, during, or after intense exercise;
- When experiencing dehydration from illness;
- Travelling in an aeroplane as the air is much drier;
- When the weather / your environment is very warm;
- After a night of drinking alcohol, as alcohol is a diuretic and can lead to dehydration;

How?

Make a homemade electrolyte drink and avoid the added nasties of shop bought ones

- 1 litre of water;
- 1/4 to 1/2 tsp sea salt or pink Himalayan salt;
- Juice of 1 lemon

Hydration & the Loo

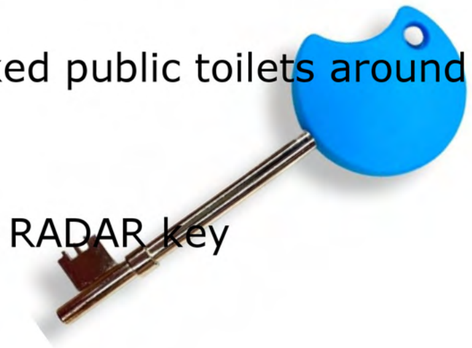
Putting off drinking as you are worried about needing the toilet?

If you are on the move for work or fun it may be worth working out where toilets are located so you don't avoid drinking because of worries about the toilet.

Public facilities at shops, cafes, train stations, petrol stations, libraries, theatres, galleries etc

RADAR keys give you access to **locked disability toilets** - check with your local authority, you may be able to get a radar key if you are taking stimulant medication due to your ADHD which requires you to drink more water

There is a **National Key Scheme (NKS)** offers disabled people independent access to locked public toilets around the country.



You may also be eligible for a **National Disability card** which can allow you to purchase a RADAR key

Ensure you purchase a genuine key, as they are more reliable

ADHD TIPS

MAKE IT A HABIT AND START YOUR JOURNEY TO TRANSFORM YOUR HEALTH

Availability And Ease

Availability & Ease

Keep water with you and **in sight** at all times if possible

Pre-fill your bottles first thing in the morning

Maybe a **shoulder strap** to carry your bottle separate to your bag is helpful?

Bottles that can be washed in the **dishwasher / easy to wash** (complicated straw mechanisms or sipping spouts are not easy to keep clean)

Having **lots of bottle** will mean you should always be able find one as you need to wash bottles, especially straws and spouts daily for good hygiene

Metal bottles only have a metal taste if you leave water standing in them over night

BOTTLES AND VESSELS

Bottles and vessels

Have **multiple fun bottles** - ideally metal, glass or ceramic (avoid plastic if possible)

Have bottles for work / travel / at home / over night / back up ones!

Do you prefer a favourite cup or glass ? - buy one for work and home

A **glass** bottle to see how much you have drunk or a **metal** one that is less likely to break?

A **marked water bottle with times** on it or one with a brightly coloured design?

Bottle with a **straw**? If yes, consider metal ones and have a lot for washing purposes

An **anti-spill** bottle!

REMEMBERING TO DRINK

Pair with other habits

Build the habit of **regular** drinking of water over time so it becomes **second nature**

Start **first thing**, before you get out of bed

Reminders on watches / phones / diaries / online calendars - to remind you

App’s / **trackers** / notes on phone or paper - to monitor your progress

Create a **batch of tasks** to do and include drinking a bottle of water as part of it

WHEN TO DRINK

First thing: Start your day off right with a big glass of water, have it next to your bed and ready to go

All day: Forward load your drinking so you have drunk most of your 1.2 to 2 litres several hours before going to bed to avoid night time urination

At meals: Drinking water with food aids digestion, (misnomer that it dilutes digestive juices - you would have to drink an excessive amount to negatively affect digestion). Water is important when eating high-fibre foods. Fibre absorbs water and moves everything through your digestive system

Snacks: Drink a glass of water before every snack

Afternoon slump: Rather than teaching for coffee or sugar to cure a mid afternoon slump, try drinking water (as dehydration causes fatigue) and doing some light stretching

Before bed: Sip water if you are thirsty but don’t leave it till now to get your water intake in

WHEN TO DRINK

Feeling hunger, may actually be thirsty? *T*ry water and wait for 20 minutes before snacking

Prefer **sipping** through the day?

Or maybe **downing** 150ml at once may suit you better. Be careful not to swallow air when drinking a lot at once and do still drink throughout the day. This technique may help you hit your target more easily.

Example day for 1.5 litres

250ml before getting out of bed circa 8:00

250ml before 10:00

250ml before 11:30

150ml before lunch & 100ml with lunch

250ml before 14:00

150ml before 16:00

100ml before dinner

EXTRA HYDRATION

Hydrate before, during, and **after exercise**

At the first signs of a **headache** as this can be a symptom of dehydration

Drink more if you are **unwell**

Hot weather when you are sweating more

Heating systems on high and drying out the air

If you are on **stimulant ADHD medication** you may need more fluid

Certain medications and medical conditions have specific fluid needs, please contact your GP

Make it Appealing!

- **Fun & attractive** bottles or glasses or cups
- Add a slice or lemon or other **fruit** such as berries
- Add some herbs or **spices** e.g. ginger or mint
- **Coconut water** is good and has electrolytes
- If you use **cordial / squash - no artificial** additives / preservatives / no added sugar
- What **temperature** do you prefer? (bottles to keep it warm/cold)
- Eat **foods** with a high water content e.g. watermelon, cucumber, oranges or make soups from vegetables
- **Sparkling** water? (machines make it fun and reduce plastic)
- I like the **Aarke carbonato**r - https://www.healf.com/OLD-MELISSADVL - go to my drops and get my special discount!

Hydrating Foods

Cucumber (96%)
Lettuce (95%)
Celery (95%)
Courgette (94%)
Tomatoes (94%)
Bell peppers (92%)
Spinach (91%)
Cauliflower (92%)
Watermelon (92%)
Strawberries (91%)
Cantaloupe/melon (90%)
Oranges (86%)
Pineapple (86%)
Peaches (89%)
Apples (86%)
Grapes (81%)
Blueberries (84%)
Broth-based soups (often >90% water)
Plain yoghurt / kefir (80–85%)
Coconut water (95% water & electrolytes)






TRACKERS

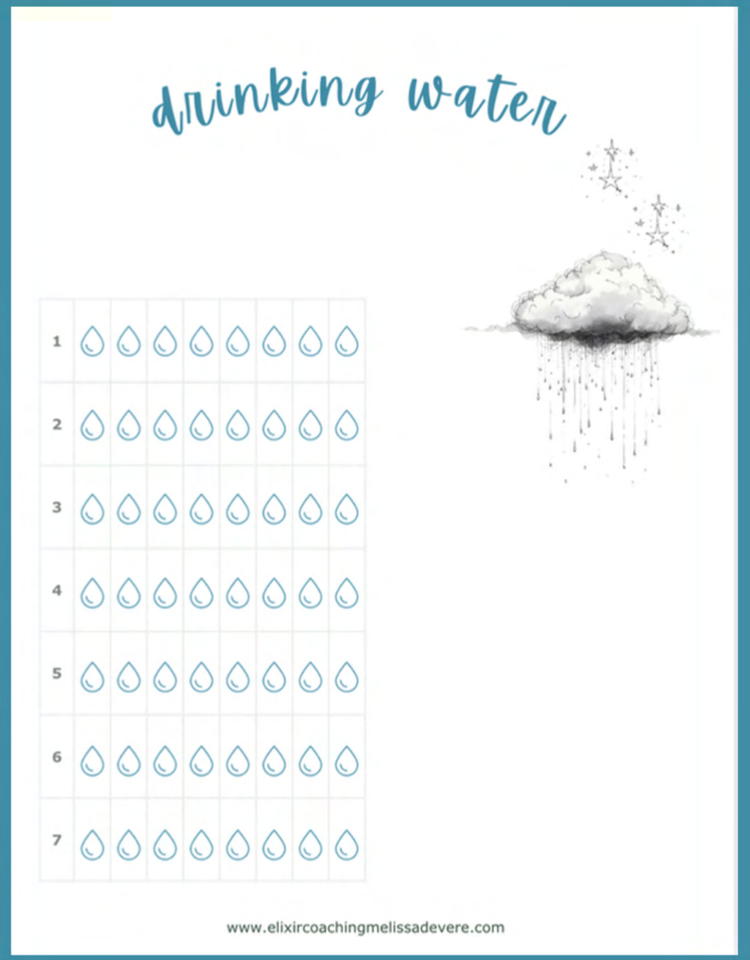
Have a **goal** amount to drink each day - **Write it down!**

For the first few months **track** how much you are drinking.
As it is easy to tell yourself you have drunk more than you have or to loose track of how much you have drunk.

Would an **app** on your phone or using **notes** makes it easiest for you to use the tracker on the go?

Do tick lists give you a sense of **achievement**?

Do you like to **compete**? Have a Leader board on the fridge to track your and your family’s water totals.



REWARDS

Pick a small reward that appeals to you - *ideally not a high sugar or high refined carb food*

Ideas for when your water bottle is empty:

- A walk in a local park
- Play with a pet
- Check your phone
- Watch a film/TV
- Read a book/magazine
- Dance party in the living room
- Crafts/something artistic
- A manicure
- Aromatherapy bath
- Use a tracking app to make it into a game

HYDRATION & BODY SYSTEMS

HYDRATION IS THE BASIS OF EVERY CELL IN YOUR BODY

HYDRATION & BODY SYSTEMS

Hydration is key to these body systems and processes, all of which I discuss how they personally apply to my clients, considering their unique needs and their health journey:

01. Brain Function
02. Neurotransmitters
03. Nervous system (stress & anxiety)
04. Gut-brain connection
05. Digestive System
06. Sleep
07. Temperature regulation
08. Immune system
09. Cardiovascular System & Circulatory System
10. Body's fluids (blood & protective fluids)
11. Urinary and elimination Systems
12. Musculoskeletal system
13. Blood Sugar & Metabolic Stability
14. Body Cells: Energy & Metabolism
15. Body's Tissues (epithelial, connective, muscle, nervous)

BRAIN FUNCTION

Brain Function

Your brain is about 75% water.
Even mild dehydration (1–2%) can impair:

Cognitive Performance & Emotional Regulation

- Mood stability (increased irritability, anxiety, fatigue)
- ‘Brain fog’
- Attention span
- Poor focus
- Processing speed
- Short-term memory

These are areas where people with ADHD already have struggles

COGNITIVE PERFORMANCE

Dehydration **lowers cerebral (brain) blood flow** (area of the brain most affected in ADHD):

- **Limiting oxygen**;
- **Limiting glucose** supply to the prefrontal cortex

Hydration improves cerebral blood flow:

- Ensuring delivery of oxygen;
- Glucose, the brain's primary fuel

Lower blood flow in the brain:

- Reduces dopamine synthesis;
- Receptor efficiency

Leading to **sluggish** thinking and **"brain fog",** this can make hyper-focus states harder to enter or sustain.

COGNITIVE PERFORMANCE

Cognitive Performance is improved with good hydration

Studies using EEG scans show that water intake before a cognitive task enhances electrical brain activity, especially in the frontal cortex, which handles focus and executive function.

Impact: Better oxygen and nutrient delivery =

- Better **focus**;
- **Clarity**;
- **Faster response** time

EMOTION & MOOD REGULATION

Emotions and Mood Regulation

Dehydration causes your body to **increase cortisol and adrenaline** to conserve water and maintain blood pressure. This is a stress response.

Increasing **cortisol**, the "**stress** hormone", puts your body is in 'fight or flight':

- Amplifying anxiety and irritability, triggering restlessness or agitation (hyperactivity)
- Increasing emotional dysregulation

Consistent high levels of **adrenaline** can be stressful and lead to negative side effects like restlessness, irritability, and sleep problems.

Very simply put: the **HPA axis** - hypothalamus–pituitary–adrenal - body's central stress response system that regulates various body processes - is central to the process of increasing these hormones.

In ADHD, the HPA axis is **already more sensitive**, thus dehydration creates an exaggerated stress response.

WORKING MEMORY

Working Memory

Working memory relies on **real-time data processing** in the **prefrontal cortex,** the brain's emotion control centre. The ADHD brain has variations in structure, function, and connectivity in the prefrontal cortex, which leads to executive dysfunction.

Dehydration **reduces brain efficiency**, leading to:

- **slower processing** and
- **reduced short-term memory capacity**

Drinking water helps maintain the fluid environment needed for real-time thinking and memory recall.

Elevated cortisol negatively affects working memory and decision-making.
Hydration buffers this response and helps maintain a calm, clear mental state.

Impact of good hydration: you are more composed, make better decisions, and retain more information.

SHRINKING BRAIN CELLS

Did you know?

- Dehydration causes **brain cells to shrink** this effect is temporary and fully **reversible** with proper rehydration in healthy individuals
- Cells can start to lose water and begin shrinking **within hours of inadequate hydration**. 1–2% loss of body water can cause measurable cellular shrinkage, especially in the brain and muscles. Neurons in the brain are 70-80% water and rely on consistent volumes of water for electrical signalling.
- Brain cells can show volume decreases in **2 - 4 hours of fluid restriction**, whereas muscle cells take 3 - 6 hours to loose water
- Chronic dehydration: if the body is not rehydrated, the **brain tissue can lose size and mass** over time
- Chronic dehydration can lead to **long-term cognitive impairment** and may contribute to neurodegenerative diseases

WATER & HRV

Heart Rate Variability (HRV)

- **HRV** measures the variation in time between heartbeats. Not how fast your heart beats, but how flexible it is.
  - High HRV = your nervous system is balanced and adaptable (good stress recovery)
  - Low HRV = your body is under stress — from dehydration, fatigue, anxiety, illness, or poor sleep
- HRV is like your stress resilience score — how smoothly your body switches between “on” and “off”

Hydration and HRV

- Dehydration thickens your blood slightly = your heart works harder, result: HRV decreases
- Dehydration dulls your vagus nerve activity = increases your stress reactivity, result: HRV decreases
- Dehydration raises core body temperature = your heart beats faster to cool the body = reduces your heart beat to beat variation, result: HRV decreases
- Dehydration increases the stress hormone, cortisol = suppresses your parasympathetic nervous system (you remain on high alert), result: HRV decreases

ELECTROLYTES & HRV

Electrolytes and how they impact HRV: Sodium, potassium, magnesium, calcium are crucial for electrical stability of the heart and nerves

- **Sodium & potassium**: Maintain nerve impulses and heart rhythm. Deficiency impact: Irregular heartbeats, decreased HRV
- **Magnesium**: Calms the nervous system, supports vagus nerve functioning, muscle contraction and relaxation. Deficiency impact: Increases anxiety and tension, decreased HRV
- **Calcium**: Muscle contraction, including muscles of heart and blood vessels. Deficiency impact: stiff muscles, reduced flexibility of the rhythm of the heart, decreased HRV

Support your HRV with:

- regulation hydration and taking a few deep slow, relaxing breaths after drinking
- use of electrolyte drinks as appropriate

IT'S A MINDSET SHIFT...

MINDSET SHIFT

Hydration and nutrition are **not chores**, they **are tools for the ADHD brain** to feel more focused, think more clearly, feel calmer and better able to cope

Observational studies: People who drink more water report better mood and lower anxiety.
Experimental studies: Mild dehydration leads to higher ratings of tension, anxiety, and fatigue, even in healthy adults.

Hydration is just part of the puzzle, you cannot cure anxiety or dysregulation or lack of focus or brain fog with hydration, however, you can **reduce the impact** and **improve your physical and mental resilience**.

For individuals with ADHD, particularly those on stimulant medication, maintaining an optimal electrolyte balance and appropriate hydration, enhances neural function and sustains both physical and mental energy.

Combine this with a **nutrient-rich diet,** good **sleep strategies** and **daily movement** to support your optimal cognitive performance and overall wellbeing.

DO YOU NEED SUPPORT?

www.elixircoachingmelissadevere.com

My approach to health and wellbeing coaching is **holistic, personalised, trauma-informed**, and includes an awareness of 'neurotype'.

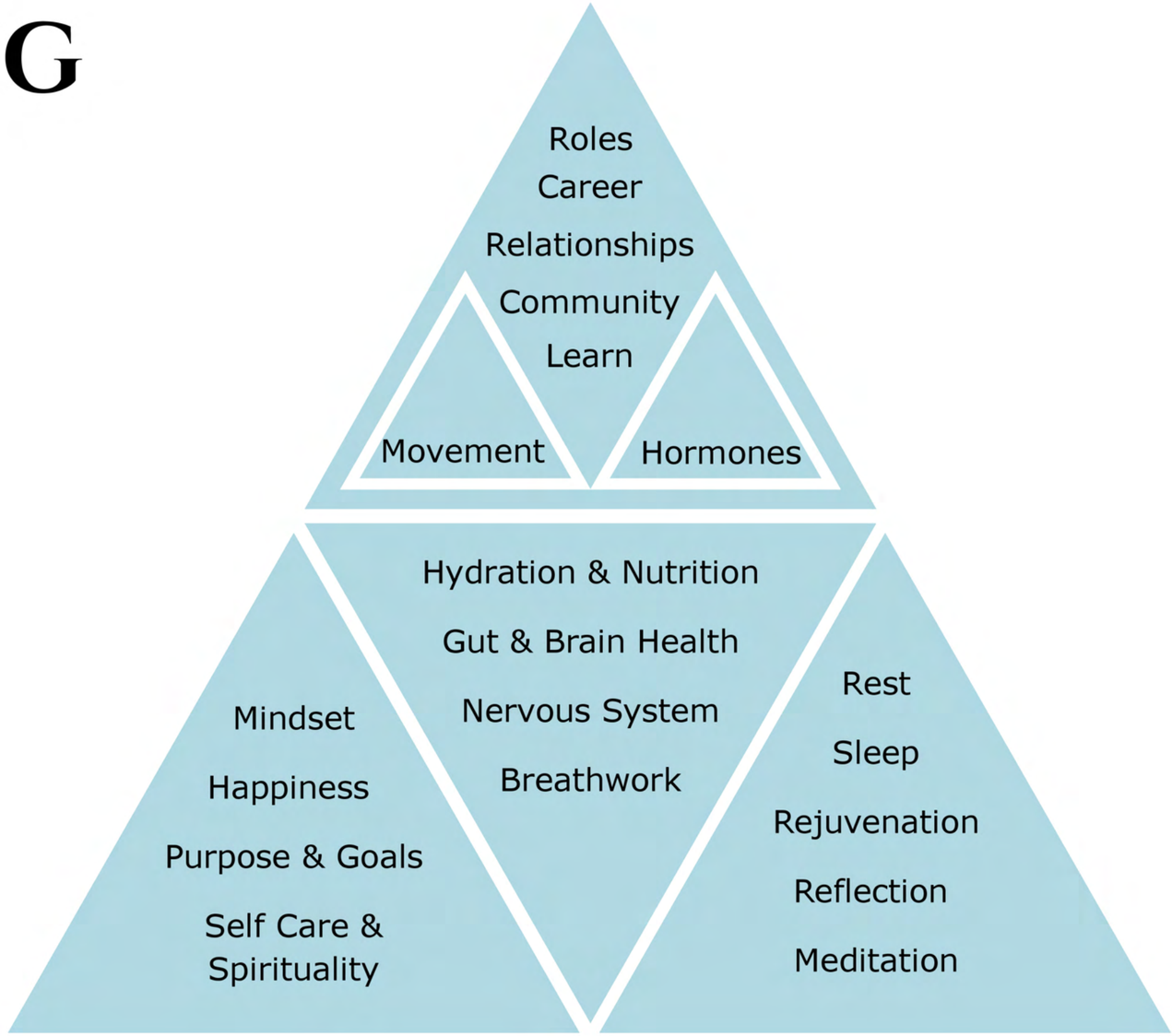
Change is easier when working with an empathetic coach, experienced in change management, who will partner with you to co-create **your wellbeing journey.**

At Elixir Coaching you will be supported and empowered to transform your health and your beliefs about your wellbeing. Where you want to have better sleep, improve your energy, manage your weight or improve your self care, I can support you achieve **your optimal health and wellbeing**.

You can book a **free 20 minute Discovery Call** from my website.
This is **zero pressure** call to find out what Health and Wellbeing coaching can do for you.

www.elixircoachingmelissadevere.com/contact-melissa-elixir-coachingholistic-health-wellbeing

ELIXIR COACHING BY MELISSA



ELIXIR COACHING
HOLISTIC WELLNESS PYRAMID