

Water and Educating Your Child

Derek Pugh



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Water

If our bodies are 70% water, and if our brains are 75-80% water there must be a very good reason. Brains get 20% of the blood supply from every beat of the heart and they're only about 2% of our body mass. This high investment in a single organ is important because water is an essential element in neurological transmissions.

Poor hydration at any time affects how well a child's brain operates and his or her learning ability. At school hydration is imperative to achieving a teacher's learning objectives. If kids are slightly dehydrated they may appear tired, complain of headaches and have a reduced ability to concentrate, and if they are usually like this they might know no different and think they feel normal.

If a child actually feels thirsty then his or her mental performance has already got to the level about 10 per cent lower than before and mental performance deteriorates progressively as the degree of dehydration increases.

You feel thirsty with a 1 - 2 per cent drop in body weight due to water loss. In a 10-year-old child this is about the same as one or two very large glasses of water, or the amount a child could lose during a PE lesson or recess time.

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Drinking water immediately revitalizes the body and brain. It is in a child's best interest to replace any lost fluid. It is in a school's best interest to see that all students remain well hydrated. Water is a brain booster and one of the key pillars to Brain Compatible Education because neurons work best at full hydration and stable pH. Children need to be adequately hydrated to maximize their learning potential and drinking water regularly throughout the day makes healthier pupils who are better learners.

How much water do children need to drink?

You can easily find experts recommending 8-11 glasses of water each day depending on the child's age, but quantitative amounts seem to be going out of favour. Children need about 50% more water than they lose through sweating and breathing. This allows a dilute urine and healthier waste management. In fact urine colour may be the best indicator. Teach your child or students to recognize when their urine is about the colour of pale straw, odourless and copious. If it's deep yellow, cloudy and smelly, or they don't wee at all, they're not drinking enough.



Alas, like most things there is a dark side

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kids need to hear about. Drinking too much water can be dangerous as over-hydration causes a sodium imbalance that can be fatal – so warn the kids not to go silly or drink more than they feel is right.

What Schools Must Do

- Provide easily accessible water to children all day. Water bottles on the desk or on a side table work well.
- Send a letter to all parents explaining the health and learning benefits of having water freely available during the school day.
- Ensure students drink water, not sweet soda or fruit juices. The brain accepts a sweet drink as a food rather than water, so it takes longer for the water to be of benefit.
- Teach students about water and how important it is in their bodies.
- Be consistent – water is for everyday, not just during exams or sports events.
- Teach students to check the colour and smell of their urine – dark yellow and smelly is not good.



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What Parents Should Do

- Learn the importance of water to your children's learning. Understand the science.
- Encourage your child to drink regularly.
- Provide water bottles.
- Use water for hydration, not fizzy drinks, milk, tea or coffee.
- Model good hydration patterns yourself.
- Teach your child to check the colour and smell of their urine – dark yellow and smelly is not good.
- Talk to your school teachers if you believe hydration is a problem at your school.

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Derek Pugh is an experienced Principal and teacher in both Australian and International Schools. He now runs workshops in Brain Compatible Education for students, teachers, parents and corporate groups worldwide. Workshop

participants discover the latest in neuroscience and why knowledge of the brain is a powerful tool in education; the 'SEWBaD model' of preparation for learning; what brain 'plasticity' means to education; individual learning profiles and how to use them for effective learning and teaching; how to teach or learn efficiently; and models of brain operation and function.

He is the author of "The Owner's Guide to the Teenage Brain"

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