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HYDRATION FOR CHILDREN IN EARLY YEARS

Establishing healthy hydration habits early is important for the health and well-being of young children and as they grow through life. Children form habits at a young age and are dependent on their caregivers to provide them with the best source of hydration at regular intervals. 31 to 41% of 5-year-old children across the UK have evidence of tooth decay, with rates higher for those in deprived populations.¹ Recent statistics also show that more than 1 in 5 children in the UK are also overweight or obese when they begin school.² With these statistics in mind, encouraging children to drink water before they start primary school is one habit that will help

support their longer-term health. This fact sheet takes a look at the water requirements of young children, current beverage patterns and provides some tips for hydrating children in their early years.



HYDRATION RECOMMENDATIONS

Water can come from fluids (drinks) and foods in the diet with the general advice that 80% should be derived from drinks and 20% from foods. European recommendations³ advise that fluid intakes should be 1.3 litres/day for children aged 2-3 years and 1.6 litres/day for children aged 4-8 years. Water is the healthiest way to hydrate and for pre-schoolers should be their primary source of fluid intake alongside milk. Scientific Advisory Committee on Nutrition (SACN) recommends babies are exclusively breastfed until around six months of age and continue to be breastfed for at least the first year of life. Breastfed babies do not need additional drinks whilst they are exclusively breastfed, then after six months when weaning begins water or infant formula can also

be offered as a drink. Bottle fed infants can be offered cooled boiled water if they require extra fluid, and water can also be offered during the weaning period.

So, for younger children aged 2-3 years around 0.9 litres/day fluid should be provided through drinks and for older children aged 4-8 years they should be aiming for about 1.1 litres fluid from drinks (Table 1). In terms of glasses and bearing in mind that a small cup/beaker is normally around 200 ml this would equate to about 4 to 5 glasses of fluid a day for younger children (aged 3-5 years).

Table 1: Young children's fluid requirements³

Age	Water from foods and drinks (litres/day)	Water from drinks (litres/day)	Equivalent in small cups/glasses
2-3 years	1.3	1	4
4-8 years	1.6	1.3	5-6

ARE YOUNG CHILDREN DRINKING ENOUGH?

An evaluation of children’s fluid intakes across 13 countries worldwide found that a high proportion of 4 to 9 year olds did not meet fluid intake guidelines referred to as Adequate Intake (AI) targets.⁵

Interestingly, it was boys who were more likely to under-consume fluids and have intakes below targets when compared with girls.⁵ When it comes to drinking plain water, data from the UK National Diet and Nutrition Survey has shown that 4 to 8 year olds drink just 436ml of tap and bottled water daily (about 2 glasses) with ethnic minorities drinking even less – 122ml daily.

In terms of ‘when’ beverages were drank by children, a U.S study showed that plain water was most typically consumed with main meals.⁷ The American children in this research drank more than two-thirds of their daily beverages with main meals.⁷ This emphasises the point that children often need reminding, or require points of time to be allocated to drink suitable fluids.

There is research to suggest children can change their hydration habits. Results from the ToyBox study⁸ – a kindergarten and family-based intervention involving a kangaroo hand-puppet, newsletters, tip-cards and posters – sought to understand whether these methods could improve young children’s drinking habits.

Intriguingly, water intake did not change but prepacked fruit juice and plain milk consumption declined.⁴ These findings show that children can change their hydration habits, although further guidance may be required to ensure the change happens for the long-term, in line with healthy hydration recommendations.

It is also important that children are reminded to drinks fluids at regular intervals to help increase the total amount of fluid drunk. Young children have immature thirst mechanisms, and often do not recognise when they are thirsty.

SIGNS OF DEHYDRATION

Children can be vulnerable to dehydration, particularly the under 5s.¹² Dehydration can also occur more easily if children have been in the sun for too long, been exposed to temperatures of 38°C or more, have suffered from vomiting or diarrhoea or been sweating.⁵



Table 2: Signs of dehydration in children⁵

Signs of dehydration in children can include:	Go to your GP or A&E if a child:
<ul style="list-style-type: none"> • Dark yellow and strong smelling urine • Dry mouth, lips and eyes • Feeling dizzy or lightheaded • Feeling tired • Peeing little and less than 4 times day / fewer wet nappies than usual 	<ul style="list-style-type: none"> • Breathes fast • Is drowsy • Has a dry mouth • Has a soft spot on the top of their head that sinks inwards (sunken fontanelle) • Has cold and blotchy-looking hands and feet • Has dark yellow wee • Has few or no tears when they cry

INTRODUCING FLUIDS

During the early years young children should be encouraged to drink water once they begin weaning. As with foods, some repetition may be needed before this becomes fully accepted. In addition, giving children water to drink with vegetables has been found to help dilute their bitter taste and improve their acceptability, encouraging both water consumption as well as vegetable consumption.¹⁰ The temptation to introduce sugar sweetened beverages such as squash or juice drinks that have added sugar are best avoided or chosen only occasionally.¹¹ If you choose to give pure fruit juice to your child dilute with water, serve at mealtimes to help reduce the risk of tooth decay and stick to no more than one 150ml glass a day.

<https://www.nhs.uk/conditions/pregnancy-and-baby/drinks-and-cups-children/>



TOP TIPS FOR HYDRATED YOUNG CHILDREN

- 1 Make sure children have some water to drink before they go to nursery, pre-school or out for the day.
- 2 Always have water available at mealtimes as this is an important time during the day when children will get their daily fluid intake.
- 3 Remind children to sip small amounts of water and often throughout the day.
- 4 Make water the beverage of choice for youngsters as it is calorie and sugar free.
- 5 Pack some snacks with a high water content such as cucumber, melon or plain yoghurts into their lunch box or your day bag.
- 6 On hot days remind children to drink water often and add plenty of ice to young children's drinks to make it easier to drink.

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References

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Please note

This information sheet has been based on scientific evidence available. The information contained in this fact sheet is not a substitute for medical advice or treatment, and we recommend consultation with your doctor or health care professional if you have any concerns for your child's health.



FURTHER INFORMATION
Natural Source Waters Association
www.naturalsourcewaters.org.uk