



## **Children and Young People's Services**

# **Guidance on the Safe and Hygienic Use of Drinking Water Coolers and Fountains**

**This document applies to: all staff with premises management responsibilities within  
CYPS and schools.**

**If this document has been printed please note that it may not be the most up-to-date version.**

**For current guidance please refer to The Source, and Just4schools.**

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## 1. INTRODUCTION

Many schools in Devon have already experienced the benefits of providing easily accessible water through water-bottles-on-desks schemes which use mains water from taps, Point of Use dispensers; water coolers that are plumbed directly into the mains water supply, and not requiring bottles, or traditional refilled water bottle coolers.

This document aims to highlight the risks associated with the use of drinking water dispensers and provide guidance on the safe and hygienic use of drinking water within schools

Provision of suitable and sufficient drinking water is expected under Government School Food Standards (DfES 2006) which follow on from the recommendations made by the School Meals Review Panel in 'Turning the Tables: transforming school meals' (SMRP 2005). This states that;

***'Children and young people must have easy access at all times to free, fresh drinking water in schools'***

Additionally the Education (School Premises) Regulations (Department for Education and Skills, 1999) states that: ***'A school shall have a wholesome supply of water for domestic purposes including a supply of drinking water.'*** and the National Healthy School Standard Guidance, 1999, similarly makes it a basic requirement that ***'clean drinking water is provided'***. These regulations do not specify the means of delivery, appropriate locations, whether the water should be accessible to the children or how often, the type and number of facilities per pupil, hygiene standards, or that water should be palatable.

The provision of water in schools, and especially having water on desks, links well with learning programmes such as thinking skills and accelerated learning. It also contributes to the schools' development as health promoting schools, as part of the local healthy schools scheme.

## 2. BENEFITS OF DRINKING WATER

There have been a number of robust scientific studies which have shown the positive benefits of drinking water throughout the day and in particular that it is an important way of protecting health and contributing to well-being for both employee's and clients.

Children need to drink at least 3-4 glasses of water per day while at school and even more when exercising or in warm weather. Water needs to be conveniently located in safe and hygienic locations, be attractive to children in terms of taste and temperature, and children need to be encouraged and supported to drink water throughout the day.

Regular consumption of water;

- Helps to prevent a range of short and long-term health problems such as headaches, bladder and bowel problems, and cancer.
- Provides a source for healthy and low cost hydration.
- Reduces tiredness and irritability caused by thirst.
- Can have a positive effect on pupils' concentration throughout the day.
- Raises awareness of the importance of adequate fluid intake.
- Supports the management of obesity
- Water is essential for maintaining kidney health and function, and helps flush toxins through them.

**The body requires constant hydration to combat the fluid it loses - individuals can begin to feel tired and lose concentration at only 1% dehydration**

### **3. TYPES OF WATER DISPENSERS**

#### **3.1. Water bottles on desk**

Easy, cheap and the most effective way for children to get water. Either schools supply a water bottle or it is brought in from home.

Water bottles should only be filled from a bespoke drinking water tap supply.

#### **3.2. Water coolers**

Water coolers use either mains or bottled water however mains coolers (piped with a mains water supply) are the best.

They may be used with disposable cups, cones or used to refill bottles.

They should be sited in open places in view.

They provide a constant source of cool, pleasant tasting water, which is quickly and easily accessed and encourage reluctant water drinkers.

#### **3.3. Water fountains**

Refrigerated or non-refrigerated drinking fountains provide a jet of water to the user under normal mains pressure which does not need a cup or drinking vessel.

There are a number of different styles of units available and some can be fitted with filtration systems but all need to be connected to drainage.

Water fountains and taps are currently the most common drinking facility in schools.

#### **3.4. Water filters**

Water filters can be fitted to water fountains or coolers and are capable of reducing or eliminating bad tastes and odours, chlorine, and other organic contaminants to produce significantly improved drinking water.

## **4. LOCATION OF WATER DISPENSERS**

Once you have decided on the type of water dispensers to be used it is important to site them in an appropriate area. It is recommended that a risk assessment is carried out prior to installation taking into account the following factors:

- The location should NOT be in or close to a toilet area and must be easily accessible to all pupils.
- Machines to be securely fixed to appropriate structure and should be placed in open areas that are in frequent view of school staff.
- Must comply with health, safety and fire escape requirements outlined in the Fire Safety Order Regulatory Reform (Fire Safety) Order 2005 and not restrict access or encroach on an escape route.

## **5. RISKS ASSOCIATED WITH WATER DISPENSERS**

### **5.1 Microbiological Hazards**

A recent microbiological study by the Consumer Focus Group in 2007 found contaminated water from 26% of water samples taken from water coolers and water fountains. A total of 87 samples were taken in the study and bacteria such as Escherichia Coli (E-Coli) and Enterococcus faecalis which is found in human and animal gut and faeces, Staphylococcus aureus found in the mouth, nose and throat and Pseudomonas commonly associated with stagnant water, were found to be present

A study (Walters and Cram, 2002) which measured the hygiene of water fountains in 39 schools found that most were sited in toilets areas and were dirty, badly maintained and highly contaminated. Fountains with low water pressure were among the most highly contaminated. According to the Environmental Protection Agency (EPA), eight to 11 percent of the nation's schools may have water fountains contaminated with bacteria.

The presence of these bacteria could be as a result of one or more of the following;

- Insufficient and poor cleaning of the taps, trays and dispenser casing.
- Cross contamination from the poor personal hygiene of users.
- Failure to replace the filters regularly
- Inadequate cleaning and maintenance of the dispenser pipe work
- Incorrectly fitted systems which are not plumbed into mains water supplies
- Drinking directly from the tap - contact with saliva, lips and fingers.
- Growth of algae and mould if the cooler or water fountain is located in direct sunlight.

### **5.2 Health and Safety Hazards**

Slips and trips are the most common of workplace hazards and make up over a third of all major injuries.

When identifying a suitable location to site water dispensers it is important to take account of the potential for slips and trips from water spills.

Carry out a risk assessment and ensure that where reasonably practicable the following controls are implemented;

- Suitable drip trays and/or drains are provided under the water tap which are regularly emptied to prevent overflowing.
- The floor must be suitable for the type of activity that will be taking place on it. Where a floor can't be kept dry, people should be able to walk on the floor without fear of a slip despite any contamination that may be on it.
- Avoid carrying water in open cups or tumblers. Ideally water should be carried in containers with lids or in water bottles.
- The water dispenser should be located in a prominent location with frequent adult supervision.

## **6. MAINTENANCE AND CLEANING**

### **6.1. Bottled Water Coolers**

Bottled water is defined by legislation as a food product and must therefore be treated as such at each stage from its abstraction at the source, to bottling, storage, delivery to the customer and dispensing from the water cooler into the cup.

When water is left for more than three months a film called "bio film" begins to form and this creates an ideal home for bacteria.

Regular sanitisation is required to ensure deep cleaning is performed on the parts of the cooler that come into contact with the water. Effective cleaning and sanitisation removes any possibility of any type of bacterial growth.

Lime scale can also be a problem and sanitisation removes both thoroughly.

The British Water Cooler Association (BWCA) recommends that bottled water coolers are appropriately sanitised every 13 weeks.

Taps and bottle tops are also susceptible to bacterial growth and this is especially true in schools and nurseries, in fact anywhere where there are young, elderly, vulnerable or general public using the cooler. The British Water Cooler Association recommends the use of a sanitation solution to spray onto the taps regularly, and at 'bottle change' to spray the spike into the cooler and the new bottle top.



### Key points;

- Once a bottle is positioned on the cooler the water should be drunk ideally within 3 weeks
- A maintenance contract with the installer is needed to keep the filters working and replaced regularly.
- The bottles need cleaning thoroughly, this should be carried out by the water supplier.
- The taps used for filling the bottles and the rest of the equipment need regular sanitising and cleaning.
- Just because the treatment unit looks clean and shiny doesn't mean you can forget about it.
- Bottled water dispensers are initially cheap to install and do not require mains water pipe work, however they have far higher on-going costs, produce environmental waste and are onerous to maintain as they require the commitment to change, store and lift bottles as and when required

## 6.2. Point of Use Water Dispensers

Point of Use is the industry term for water coolers that are plumbed directly into the mains water supply and do not require bottles.

**The Water Supply (Water Fittings) Regulations 1999 (the Regulations)** protect public water supplies against waste, misuse, excessive consumption and contamination within plumbing installations of domestic and commercial properties. Wholesome water is defined by reference to the standards and other requirements of the **Water Supply (Water Quality) Regulations 1989**.

It is essential for health and hygiene that the Point of Use water dispensers (POU) are regularly maintained and sanitised. The POU supplier or FM manager should carry out this maintenance procedure at the beginning of each term, but no less than once every 6 months.

It is the responsibility of the site manager, or head teacher to ensure this is carried out within the correct timescales as part of the premises risk assessment.

Environmental Health Officers may also carry out random checks to ensure the quality of the schools water infrastructure and report any problems, based on previous microbiological results and maintenance histories.

### **Key Points:**

- Designate and train a member of staff to manage the cleaning of the POU water cooler.
- Coolers not used for periods of around a fortnight should be thoroughly cleaned before use.
- It is advisable that the cooler is adequately flushed through at the beginning of each school week; and definitely after any period of holiday closure.
- If the cooler is fitted with a drip tray, then this should be empty at least once a day.
- The drip tray should be damp-wiped weekly using a non-abrasive cleaning agent; or alternatively it can be washed in a dishwasher.
- The external surfaces of the cooler are kept clean and washed daily with a mild detergent solution.
- The taps and water cooler panels should be wiped down weekly with a food-standard antibacterial surface cleaner (Avoid using any bleach or unsuitable cleaning liquids).
- Sanitisation should be carried out on all water feed pipe work at the beginning of each school term. This should be undertaken by the POU supplier.
- Staff carrying out these weekly duties must wash their hands, wear one-use plastic gloves and use one-use cloths. They must not undertake these tasks if they are unwell or have gastrointestinal symptoms.
- In the interest of hygiene, anyone using the water cooler must use disposable cups and/or individual clean refillable water bottles.
- Coolers should be checked monthly for the build-up of lint or dust in the ventilation grilles on the cabinet. There should be no obstruction within 20cm of these grilles.
- Grilles will be cleaned as part of normal maintenance, but contact your maintenance engineer if the ventilation grilles become congested with dust or lint which is not easily removed from the outside of the cooler.
- Keep a formal record of how often you thoroughly clean the cooler.
- Filters should be changed by qualified engineers at least every six months
- Do not disconnect your cooler without advising the cooler supplier.

### **POU Filters**

Filters are sometimes fitted in water coolers to further improve the taste of the tap water. However, filters must never be used as a way of removing debris from your internal pipe work.

- Machines fed by tap water (from the mains) do not need to have filters fitted. Fresh, wholesome tap water is of a high quality and is safe to drink
- Filters should only be used where there is a need to improve the aesthetic nature of the water, and not be used to treat unsuitable (non potable) water.
- The European Point of Use Drinking Water Association (EPDWA 2005) recommends that if filters are used they should be changed every 6 months. 8

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*The European Point of Use Drinking Water Association (EPDWA) is a professional body that can help users locate responsible and reliable companies to install and maintain high quality drinking water systems.*

### **6.3. Water Fountains**

Water fountains are potentially high risk areas of cross contamination for bacteria and germs. Important points to consider include;

- Are they easy for a child to operate and drink from?
- Is the water jet high enough? Is it likely to be lower when the water pressure drops?
- Can children drink without having to suck on or touch the metal spout with their lips?
- Are there sufficient fountains? (“Water is Cool in School” recommends a minimum one per 30 pupils)

#### **Key Points**

- Designate and train a member of staff to manage the cleaning of the drinking fountain.
- It is advisable that the water fountain is adequately flushed through at the beginning of each school week; and definitely after any period of holiday closure.
- The tap and drip tray should be thoroughly cleaned every day with a mild detergent and food-standard antibacterial surface cleaner.
- Staff carrying out these weekly duties must wash their hands, wear one-use plastic gloves and use one-use cloths. They must not undertake these tasks if they are unwell or have gastrointestinal symptoms.

### **6.4. Water Bottles**

Most schools rely on pupils bringing in their own water bottles to be refilled however it is essential that these are kept clean.

Guidance on the best way of keeping bottles clean is provided below.

1. These bottles should be used only for water.
2. It is preferable for children and parents to take responsibility for cleaning the bottles daily at home.
3. Wash the bottles daily in warm soapy water, scrub the sports caps with a brush, rinse, and leave the bottles to air-dry upside down in a hygienic place; or wash them in a dishwasher if the bottles are suitable
  - Once a week, the bottle and the cap should be soaked in a solution of sanitiser e.g. Milton and used as per label instructions.
  - Rinse both the bottle and the cap again and leave the bottle sealed.
  - Rinse the bottle and the cap again before filling for use Water bottles

If the school prefers to take responsibility, then the above advice can be followed in school.

Ensure that hands are well washed before handling the bottles, and that each child's bottle and cap are washed separately and returned to them.

If schools take responsibility for the cleanliness of bottles, then it would be advisable to discuss appropriate procedures with the local Environmental Health Department, and to record agreed procedures within the school's Health and Safety policy.

Recent research has suggested that continued use of disposable water bottles might cause bacterial contamination, although contamination could be the result of not washing them properly. If such bottles are used it could be safer to use them for a limited time only.

## 7. Whole School Approach to Water Policy

All schools should have a water policy that is part of their whole school policy on food and nutrition. Research has shown that developing an effective water policy alongside improved water provision, results in water being consumed more regularly (Food in Schools 2005). It is important to educate the whole school about water requirements; benefits of consumption; and sources.

The following activities can be taken to improve the understanding of children, staff and parents:

- Reinforcing the importance of hydration during PSE classes, assemblies, class councils and during class tutorials.
- Displaying posters around school – classrooms, dining rooms, other eating areas and near point of use coolers.
- Sending out informative newsletters to parents and governors.
- Providing information leaflets and fact sheets for pupils
- Setting up a School Nutrition Action Group to include staff, caterers and pupils.

## 8. Summary

Schools should work towards open access to fresh drinking water at all times during the day to promote the health, wellbeing and learning opportunities of all pupils and staff, and that the drinking water systems introduced into the school are regularly cleaned, managed and maintained.

***Children are our heritage and our future. If we neglect to supply them with adequate high quality water, we run the risk of negating the importance of liquid intake. Our children's health has to be our number one priority.***  
**Lord Sebastian Coe**

## **Further sources of information**

**The Water is Cool in School** campaign aims to improve the quality of provision and access to fresh drinking water for children in UK primary and post-primary schools.

Website: [www.wateriscoolinschool.org.uk](http://www.wateriscoolinschool.org.uk)

**Water for Health** is a water industry initiative to guide and inform health professionals and health authorities, to stimulate interest and research, and to help move water up the public health agenda.

Website: [www.waterforhealth.org.uk](http://www.waterforhealth.org.uk)

**Water UK** is the industry association that represents all UK water and waste water service suppliers at national and European level. It seeks to develop understanding in areas that involve the industry, its customers and stakeholders.

Website: [www.water.org.uk](http://www.water.org.uk)