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Why do children need fluoride?

Many countries around the world add a minute amount of this natural mineral to public water supplies in an appropriate level to prevent cavities.

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FLUORIDE helps prevent tooth decay and makes your child's teeth stronger. Fluoride can be found in drinking water, food and beverages, toothpaste, mouth rinses and dental treatments such as fluoride varnish.

Here are some common questions you may have about how fluoride helps keep your child's teeth healthy.

What is fluoride and how does it prevent dental decay?

Fluoride is a natural mineral that can slow or stop tooth decay – also known as cavities. We all have bacteria in our mouth that combines with sugars from food and drinks to make acid.

This acid can erode through teeth to cause cavities. Fluoride helps protect teeth from being damaged by the acid and helps rebuild the hard outer layer of our teeth called enamel.

Fluoride is naturally present in all bodies of water on the planet.

It is naturally present in soil and all plants and animals – making it a normal part of our diets. Depending on where you live, your water naturally contains higher or lower levels of fluoride.

When scientists found many fewer cavities in children who drank water with what we now know to be adequate natural fluoride levels, they discovered the power of fluoride to prevent dental decay.

In the United States and other countries around the world, many communities now add a minute amount of fluoride to public water supplies to adjust the fluoride to an appropriate level to prevent cavities.

Adding fluoride to the water supply, and adjusting it to the level known to prevent cavities is called “community water fluoridation.”

In the US, the recommended level of fluoride in community water fluoridation is 0.7ppm (parts per million or milligrams of fluoride per litre of water).

In contrast, the amount of fluoride in fluoride toothpaste is much more concentrated at about 1,000ppm.

In countries where it is not technically possible to add fluoride to the water supply, fluoride is added to table salt as another means of providing fluoride for prevention of dental decay.

How effective is community water fluoridation?

The American Academy of Pediatrics, the American Dental Association and the Centers for Disease Control and Prevention agree that community water fluoridation is safe and works to prevent cavities.

Fluoridation benefits people of all ages. After the US started community water fluoridation in 1945, rates of dental decay and complications like toothaches from abscessed, decayed teeth and total tooth loss in adulthood plummeted.

The oral health in US children and adults is significantly better now that fluoride is widely available in community water and toothpaste. In the current era, drinking water with appropriate fluoride reduces cavities by 25% compared to drinking water with too little fluoride.

Is community water fluoridation safe?

Many studies have been done to understand what is the appropriate and safe amount of fluoride to be in drinking water.

Reviews of research conducted by public health, academic, US and international agencies have continued to confirm the safety of community water fluoridation.

Is fluoride linked to IQ?

Fluoride in drinking water at the recommended level has not been linked to lower IQ scores. Some studies have noted a possible link between high fluoride levels in drinking water – more than twice the level of fluoride in US drinking water – and lower IQ scores in children.

The findings were based on studies in countries where some pregnant women and children were exposed to total amounts of fluoride much higher than in the US.

Some studies looking for a link between higher fluoride intake in pregnancy and lower child IQ have been criticised for their small numbers of subjects, questionable research methods and conclusions.

Other larger studies of entire population groups in Australia, Sweden and New Zealand have found no link between drinking water with appropriate levels of fluoride – like what is in community water fluoridation and child IQ.

To protect your child’s and your teeth, the American Academy of Pediatrics continues to recommend age-appropriate amounts of fluoride toothpaste and drinking appropriately

fluoridated water to protect children's teeth.

When should my child start using fluoride toothpaste?

The AAP recommends using a smear or grain-of-rice-sized amount of fluoride toothpaste twice a day when the first tooth appears and until age three years. A pea-sized amount of fluoride toothpaste can be used twice a day after they turn three.

Training toothpastes and other toothpastes without fluoride do not prevent cavities and are not recommended.

All children will swallow toothpaste when brushing their teeth.

If you apply the recommended amount of toothpaste to the brush, swallowing a small amount is not harmful. Teach your child to spit when they are able. They do not need to rinse their mouth with water after brushing.

What if we live in a community where the water is not fluoridated? What can we do?

Check with your local water utility to find out if your water has adequate fluoride in it.

If you have well water, it can be hard to know how much fluoride is naturally present in your water. Well water can be tested to determine the fluoride level. If your water supply has less than the recommended amount of fluoride, talk with your doctor or dentist for their recommendations.

It is especially important to brush with fluoride toothpaste twice daily every day if your water supply has too little fluoride in it.

What should I know about fluoride if I am breastfeeding or using infant formula?

Breastmilk contains only a very small amount of fluoride that remains at a pretty constant level regardless of how much fluoride is in the mother's drinking water.

In most of the US, it is fine to use tap water to prepare infant formula from powder. You do not need to buy bottled water. Ask your paediatrician if you need more advice.

Should pregnant people switch to bottled water?

In the US, public water supplies – the source of tap water for most Americans – are monitored carefully to ensure they are clean and safe. It is safe to drink tap water in most parts of the country when you are pregnant.

Even so, some people prefer drinking bottled water, which may or may not have fluoride in it; there is no requirement for testing or labelling the mineral content of bottled water.

A few bottled water companies specifically add fluoride to their water to bring the level up to what is found in community water fluoridation as a cavity-preventing benefit. When fluoride is added to bottled water, this must be specified on the label. – American Academy of Pediatrics/ Tribune News Service

Dr Charlotte Lewis is a professor of paediatrics at the University of Washington School of Medicine where her research has focused on oral health disparities and improving access to dental care. She has written about fluoride and community water fluoridation. She is also a physician at the University of Washington Medical Center and Seattle Children's Hospital where she leads the Multidisciplinary Infant Nutrition and Feeding Team.

NEARLY 90% of babies who had to be hospitalised with Covid-19 had mothers who didn't get the vaccine while they were pregnant, according to new data released by the Centers for Disease Control and Prevention.

The findings appear in the agency's Morbidity and Mortality Weekly Report. Babies too young to be vaccinated had the highest Covid-19 hospitalisation rate of any age group except people over 75.

The study looked at infant medical data from October 2022 to April 2024 in 12 states and underscores the critical importance of vaccinating pregnant people.

It also echoes what physicians have anecdotally reported for more than three years – that people are still sceptical of Covid-19 vaccines due to persistent misinformation.

Of the 1,470 infants sick enough to be hospitalised due to Covid19, severe outcomes occurred “frequently,” according to the report.

Excluding newborns hospitalised at birth, about one in five infants hospitalised with Covid19 required intensive care, and nearly one in 20 required a ventilator.

“These aren't necessarily highrisk, ill newborns. These are just regular, full-term, healthy newborn kids who happen to get Covid-19 and wind up on a ventilator in the hospital,” said Neil Silverman, a professor of clinical obstetrics and gynaecology and the director of the Infectious Diseases in Pregnancy Program at the David Geffen School of Medicine at University of California Los Angeles.

Babies can't get the vaccination until they are at least six months old. That leaves a “huge window” when infants are most vulnerable, Silverman said.

Vaccinating pregnant women so they pass the antibodies on to their newborns is an effective way of protecting babies during that time.

Vaccination during pregnancy also protects pregnant people from severe disease.

But persistent vaccine misinformation online has led to scepticism among Silverman's pregnant patients.

“The most frustrating response that I get from folks is that they need to do more research before they think about getting the Covid vaccine,” Silverman said. “We have dozens and dozens of studies showing the safety of the MRNA vaccine. I don't know how much more research we can provide to sceptics.”

Convincing parents

1n,00do-plus Among the babies hospitalised with Covid, the median age was just two months old, according to the report. Nine of the infants died.

South Carolina paediatrician Deborah Greenhouse said she plans to share the study with families she cares for.

“There absolutely is a proportion of the population who will look at this and say, ‘Hey, wow, I should get that vaccine. It could protect my baby,’” she said.

Greenhouse believes the new data could solidify the risk of skipping the vaccine when she speaks to families.

“I think that it might help to convince some parents when you can actually show them hospitalisation numbers and you can show them intensive care numbers and you can show them mechanical ventilation numbers,” Greenhouse said. “Those things are a big deal.” Often, Greenhouse waits to be informed that a person is pregnant before bringing up the updated Covid-19 shot. Now she's rethinking that strategy. “As paediatricians we do get

mums in our office who are pregnant and we have an opportunity to intervene and to do some education and make them understand how important this is,” she said.

Physicians can encourage vaccination by making it as easy and simple as possible, Silverman said. He encouraged fellow doctors to offer the shots in their offices, rather than sending patients to pharmacies or other providers.

“We lose probably 30% to 40% of vaccination opportunities once someone has to leave the office to get a vaccine,” Silverman said.

But offering Covid-19 shots in their clinics leaves some doctors with a difficult calculation. They are struggling to predict how many patients will be interested in the vaccine and may not be able to return all their excess doses.

Many providers can’t afford to lose money on doses that won’t be used, but they still need to order enough to vaccinate vulnerable patients who want the shot. – Kaiser Health News/Tribune News Service

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