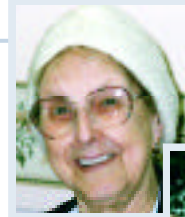


Water fluoridation: something for older people to smile about

November 1998



This briefing explains how adults benefit from water fluoridation. It highlights the benefits of water fluoridation for some older people who have a particularly high risk of tooth decay.

Water fluoridation benefits adults as well as children.

Most people know about the benefits that water fluoridation brings to children - less tooth decay, less pain, fewer fillings, and fewer emergency visits to the dentist. However, not many people realise that those benefits also apply to adults - including older people. In fact anyone who still has any of their own teeth will benefit from drinking fluoridated water.

We used to think that fluoride worked by being taken up and strengthening the developing enamel of children's teeth. However we now know that the effect of fluoride on the surfaces of teeth *after* they have erupted into the mouth is even more important, and that all age groups stand to benefit from water fluoridation. Indeed, the benefits to adults are seen as a natural extension of the well-recognised benefits to children.



“As a Birmingham City Councillor I voted for the introduction of fluoridation in the 1960s. At that time we thought that it would strengthen only children's teeth. I am delighted that there is now such strong evidence that it also benefits adults - including my own age group.”

Baroness Fisher, President, British Fluoridation Society.

Studies show that adults living in fluoridated areas have less tooth decay

Since the early 1950s studies have consistently shown that adults living in areas with the correct fluoride level in the drinking water (around one part of fluoride per million parts of water) have less tooth decay than those whose drinking water is low in fluoride.

The studies - in the USA, Sweden, Ireland and the UK - comparing the tooth decay rates of adults show that the protective effects of water fluoridation can be clearly demonstrated in adult populations. Professor Denis O'Mullane, an internationally recognised expert on tooth decay, and Head of the World Health Organisation Collaborating Centre for Oral Health Services Research at University College, Cork says:

“There is now ample evidence in the scientific literature - including our own studies in Ireland - to enable us to say with confidence that adults living in fluoridated communities have better dental health than those living in non-fluoridated communities.

Of particular importance is the fact that in fluoridated areas adults over the age of 65 keep more of their own teeth longer, and have much less trouble with them.”



Professor O'Mullane

More adults are keeping more of their own teeth

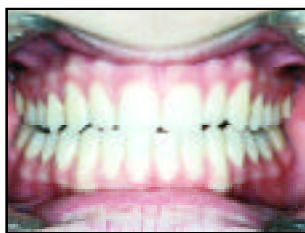
In the 1950s, the early days of the National Health Service, tooth decay was a scourge. Many adults decided that the simplest solution to the problem was to have all their teeth removed and replaced with a full set of dentures. Little wonder that the last UK national survey of adult dental health in 1988 found that only 43% of adults aged 65 to 74 had any of their natural teeth.

Fortunately this grim picture of toothlessness is changing, and the predictions are that by the year 2008 as many as 80% in this age group will retain some of their natural teeth. This is good news. However, it is important that adults with their own teeth experience as little tooth decay as possible so that more older people can go on eating a varied diet, and speaking and smiling with confidence.

“Fluoridation of drinking water provides a safe, cheap and practical method of reducing dental disease, and reducing the consequent pain and severe problems that can result from tooth loss in old age.”
Robin Heath, Professor of Gerodontology, Director of Dental Care for the Elderly at the Royal London Hospital.

Tooth decay: a difficult problem for older people

In older people the root surfaces of teeth often become exposed as a result of gum recession - hence the term 'long in the tooth'.

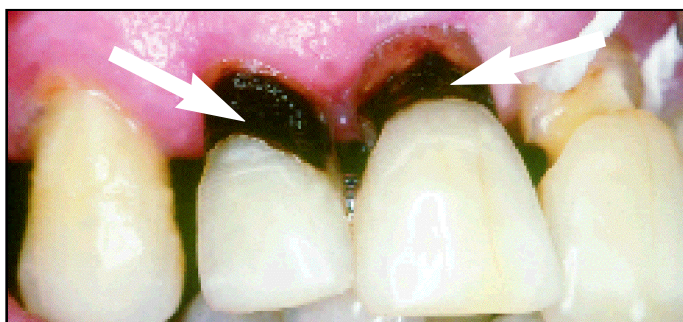


Young adult: healthy gums firmly attached to teeth.



Elderly adult showing gum recession

Unfortunately, when root surfaces of the teeth are exposed they become susceptible to tooth decay. Tooth decay attacking the exposed root surfaces of teeth is a particularly unpleasant condition known as ROOT CARIES. It is painful and can be technically difficult to treat.



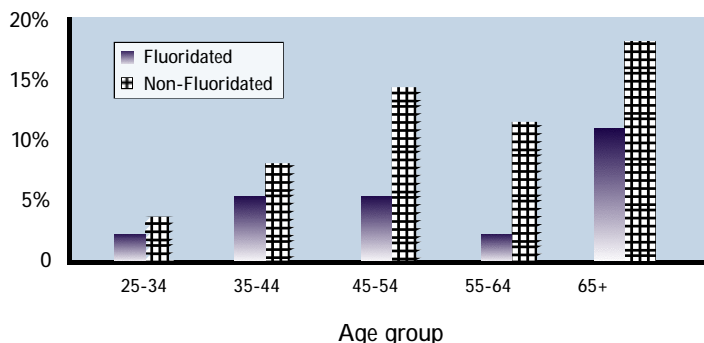
The arrows point to the decay on root surfaces.

Water fluoridation significantly reduces root surface tooth decay

The graph below is based on a recent national survey of adult dental health in Ireland¹ where over 70% of the population now drink fluoridated water. It clearly shows that adults living in fluoridated communities experienced much less root surface decay than those living in non-fluoridated communities.

¹O'Mullane D, Whelton H (1992); Oral Health of Irish Adults 1989 - 1990. The Stationery Office. Dublin

Percentage of exposed roots decayed or filled



A combination of factors increases older adults' risk of tooth decay affecting exposed root surfaces

Several factors combine to increase older adults' risk of suffering tooth decay on exposed root surfaces:

- As a person grows older, it becomes more likely that the root surfaces will be exposed. The 1988 survey of adult dental health showed that of adults aged 45 or over with their own teeth 95% had some root surface exposed - a third had 12 or more teeth affected. In the over 65s, 98% were at risk!
- A good flow of saliva, along with fluoride are important factors in preventing tooth decay.
- However, many older people experience 'dry mouth' as a consequence of disease or through medicines given for conditions such as raised blood pressure, anxiety and depression.
- Individuals with 'dry mouth' may also seriously increase their risk of tooth decay by sucking sweets or frequently sipping sweetened drinks to relieve the dryness.

Treatment of root surface decay is difficult and costly

Professor Angus Walls of Newcastle University specialises in root surface tooth decay, and is widely recognised as an expert in this field. Professor Walls says: "Unfortunately decay on root surfaces is often extensive and can be technically rather difficult to treat. Even when the root decay is filled individuals often develop more decay at the edge of the filling. Many older people are not aware that they are at risk.

Water fluoridation, which reaches the whole community, is an ideal way of reducing decay in all age groups. Its benefits extend to people who drink fluoridated water as adults as well as to those who have been exposed to fluoridated water throughout their lives. I am sure that these benefits help the older residents of Newcastle and will reduce their risk of developing root decay as our water supply has been fluoridated since 1968."

Colin Cromie, a General Dental Practitioner in Blackburn says: "Root surface decay is one of the most difficult and unsightly conditions I treat. The problems associated with the treatment of root decay in my older patients inevitably mean increased cost both to the individual and to the NHS."



Prevention of root surface tooth decay makes sense

Tooth decay is not a trivial condition, it is a preventable disease and is the main cause of tooth loss in all age groups. Furthermore, treatment of tooth decay accounts for the majority of the cost of NHS dentistry (currently £1.4 billion per annum). Prevention of root surface decay is possible and it makes sense. It means a better quality of life for older adults and less money spent on dental care - both by individuals and the NHS.

Fluoridation is good news for all - including older people.

Acknowledgement: We are grateful to David Landes for his review of the literature.

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The work of the British Fluoridation Society is supported by health promotion grants from the Department of Health (England), and the health departments of the Scottish Office, the Welsh Office, and the Northern Ireland Office.