

BRITISH FLUORIDATION SOCIETY STATEMENT (January 2006) on the absence of an association between water fluoridation and thyroid disorders

'This statement has been reviewed and endorsed by the British Thyroid Association (BTA), however the BTA would recommend that appropriate monitoring of thyroid status should be considered in areas where fluoridation is introduced to enable an ongoing epidemiological evidence base for thyroid status with fluoridation to be created.'

The available medical and scientific evidence suggests an absence of an association between water fluoridation and thyroid disorders.

Many major reviews of the relevant scientific literature around the world support this conclusion. Of particular importance are:

- an exhaustive review conducted in 1976 by an expert scientific committee of the Royal College of Physicians of England;
- a systematic review in 2000 by the NHS Centre for Reviews and Dissemination at the University of York; and,
- a 2002 review by an international group of experts for the International Programme on Chemical Safety (IPCS), under the joint sponsorship of the World Health Organisation (WHO), the United Nations Environment Programme (UNEP), and the International Labour Organisation (ILO).

None has found any credible evidence of an association between water fluoridation and any disorder of the thyroid.

Report of Royal College of Physicians

A scientific committee was established by the Royal College of Physicians to review whether, and to what extent, water fluoridation benefited people's teeth and whether there were any harmful effects to general human health. As well as confirming that water fluoridation reduces levels of tooth decay, the review also found that it was safe.

Specifically, the report concluded that "*there is no evidence that fluoride is responsible for any disorder of the thyroid*". It also confirmed that iodine deficiency was the root cause of goitre, and that fluoride does not significantly influence the thyroid's uptake of iodine.

The University of York Review

Published in 2000, the York Systematic review identified over three thousand references in total. However, they found **no** scientific studies of an acceptable scientific standard that would support suggestions of an association between water fluoridation and thyroid disorders, including goitre, in the populations drinking fluoridated water.

When the **Medical Research Council** subsequently used the York report as a basis for determining whether further research on any aspect of water fluoridation was needed, it concluded on the basis of the evidence already available that new research on fluoride and thyroid disorders should be regarded as a low priority.

Review by the International Programme on Chemical Safety (IPCS)

The IPCS review of fluoride was one of several published by the World Health Organisation intended to “*provide critical reviews on the effects on human health and the environment of chemicals and of combinations of chemicals ...*”, and to “*assist national and international authorities in making risk assessments and subsequent risk management decisions.*” As such, it examined evidence on fluoride relevant to all aspects of human health.

The review, which included 788 original studies from the worldwide scientific literature – both published and unpublished - identified no evidence of an association between fluoride and thyroid dysfunction in humans.

Experience in the UK’s most extensively fluoridated region

The conclusions of these authoritative reviews are mirrored by the experience of specialist doctors diagnosing and treating thyroid disorders in hospitals in the West Midlands, which has had fluoridation schemes in operation since the mid-1960s and which is today the most extensively fluoridated region of the United Kingdom. Around seven out of ten people in the West Midlands now drink water whose natural fluoride content has been topped up to the optimum for dental health of one part of fluoride per million parts of water.

Dr Andy Toogood, a consultant endocrinologist in the Department of Medicine at the Queen Elizabeth Hospital in Birmingham, says that he and his colleagues have seen nothing to suggest a rise in thyroid disorder cases resulting from water fluoridation.

Nor have public health officials who monitor trends in disease across the West Midlands detected any impact on the health of local populations drinking fluoridated water - other than a reduction in tooth decay levels which puts children living in the West Midlands among the best in the country for dental health.

ENDS

Notes

Sources of fluoride

All drinking water and virtually all foodstuffs contain measurable amounts of fluoride; tea leaves are particularly rich in fluoride, as is fish. We are all, therefore, exposed to fluoride from natural sources on a daily basis.

Furthermore, around 400 million people worldwide drink fluoridated water – including 150 million in the US. Water supplies for many communities have been fluoridated for over 60 years. If fluoridation caused *any* adverse effects – including thyroid disorders - it is inconceivable that the reviews to date would have missed them.

Water fluoridation

Fluoride occurs naturally in all water supplies. In many parts of the world – for example Hartlepool in the North East of England, and many parts of East Anglia and Essex - the level is around the optimal for dental health (one part of fluoride per million parts of water – 1ppm). However many communities lack sufficient natural fluoride in their drinking water to prevent tooth decay, and because of the significant health benefits of the right amount of fluoride, the World Health Organisation recommends water fluoridation.

Water fluoridation takes place at the water treatment works. It is the controlled adjustment of the naturally occurring fluoride in the water to a level known to be safe, and to benefit dental health (1ppm).

References

- McDonagh, M., *et al.* (2000): *A systematic review of public water fluoridation*. York, **The University of York NHS Centre for Reviews and Dissemination**. Report 18.
- **Medical Research Council** (2002): *Working Group Report: Water fluoridation and health*. London, MRC.
- **Royal College of Physicians** (1976): *Fluoride Teeth and Health*. London, Pitman Medical: 83.
- **International Programme on Chemical Safety** (2002): *Environmental Health Criteria 227 FLUORIDES*. Geneva, World Health Organisation.