To fluoridate or not to fluoridate

Fluoridation of public water supplies — is it the greatest dental advance in history, or the greatest medical fraud? Both claims have been made in the fierce debates which have gone on for decades.

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Students at Wollongong University recently did a survey of community views on fluoridation.

Most people surveyed thought they knew what fluoridation was, and most knew Wollongong water was fluoridated.

Most people also thought there were benefits from fluoridation, and a smaller fraction thought there were risks as well.

Fluoridation is the addition of a small amount of the element fluorine, in its ionised form called fluoride, to water supplies in order to reduce the incidence of tooth decay in children.

Proponents of fluoridation claim that it greatly reduces tooth decay in children, by perhaps 50 per cent or more.

They also say that the small amount of fluoride required to do this has no harmful effect whatsoever on human health.

Nearly every dental association in the world supports fluoridation, and so do most medical association and health authorities.

Yet there have been strong criticisms of fluoridation since it was first introduced.

In the past few years, some scientists have re-examined statistics on tooth decay and claimed that rates are declining just about everywhere, including in unfluoridated regions. For example, declines in tooth decay in unfluoridated Brisbane seems just about as substantial as in the fluoridated Australian capitals.

Critics also point to experimental findings of the mutagenic potential of fluoride in human cell culture which, they suggest, show at a microscopic level a possible cancer-causing property of fluoride.

Some studies of the total intake of fluoride show most people are getting several times the advised one milligrams per day. To the opponents this shows that water fluoridation is unnecessary, and indeed is over-fluoridation.

Opponents say that too much fluoride can also cause allergic and intolerance reactions in some people and a bone disease called skeletal fluorosis.

Australia is one of the most highly fluoridated countries in the world, with something like two-thirds of the population drinking water with added fluoride.

Wollongong was fluoridated in 1968.

To Australia, the prominent and prestigious proponents of fluoridation have included Professor Noel Martin, Dean of the School of Dentistry at Sydney University, Dr Lloyd Carr of the Commonwealth Health Department in Canberra, and Professor Eldson Storey of the School of Dentistry at Melbourne University.

They have been involved with the study of fluoride for decades, and they and other prominent figures remain convinced of the value and safety of fluoridation. This is reflected for example in a recent report by the National Health and Medical Research Council.

The opponents do not now hold such powerful positions in the dental and health field, but they do include scientists such as Dr Philip Sutton, formerly Senior Lecturer in the School of Dentistry at Melbourne University and author of a book criticising the scientific quality of fluoridation trials, and Dr Mark Diesendorf, formerly Principal Research Scientist in the CSIRO Division of Mathematics and Statistics.

In the midst of claims and counterclaims, there is no easy resolution to the debate. This is not a topic entirely for the scientific experts, since social values are involved.

Should an individual be forced to have fluoride, or should it be left to individual decisions to take fluoride tablets or use fluoride toothpaste?

Conversely, should children whose parents are too poor to obtain dental treatment be denied any benefits that come from fluoridated water?

Most respondents in the Wollongong University survey thought that people should be allowed to choose between fluoridation or no fluoridation.

Whatever the claims and counterclaims, one thing seems clear. The controversy is not going to go away soon.