

## **Science and Antiscience –Fluoridation of the drinking water**

It was demonstrated that in the geographical areas where the drinking water contains about 1 ppm (parts per million) of fluorides, the teeth of the population are in a better state than in the areas where the level of the fluorides is much lesser. In some populated areas, the natural level of fluorides in the water is even larger. It is easy, cheap and safe to add small quantities of fluorides in the water.

The first experimental attempt of fluoridation was done in Grand Rapids, Michigan in 1945. Today, the fluoridation of the water is a common operation in North America, but rare in the Western Europe.

Almost all toothpastes contain fluorides and it is possible to have a dental fluoridation treatment at the dentist.

The fluoridation of the drinking water is efficient, safe and cheap and affects the entire population of an area.

Nevertheless, there have been and there still are some opponents of the water fluoridation procedure. They state that the fluoridation of the water is injurious to health. Their statements may be considered anti-scientific. The claim that the fluoridation is not good is based on the bad interpretation of the scientific data. The base of this argument consists in the fact that in the areas where the water was fluoridated, the incidence of the dental decays increased. This is true but, the decrease of the dental extractions compensates much more this effect.

The characterization of the dental health is done by dentists with the so-called factor “DMT”, meaning the number of dental decays, dental extractions and blunt teeth. If the dental health is poor, then a large number of teeth have to be extracted. If all teeth of a patient have been extracted, then he/she has no dental decays. When the DMT index is used as an indicator of the dental health instead of the blunt teeth, then the benefits of the fluoridation procedure become clear.

The idea that the fluoridation is even injurious to health appears under different aspects. It is said about fluoridation that it leads to all kind of undesirable consequences. Each imagined negative consequence proved, after a solid analysis, to be false. Nevertheless, the ideas on the injurious nature of the water fluoridation continue to come into sight again and again. That is why, in 1964, a notice circulated which was trying to prove that the fluoridation of the drinking water in Birmingham led to the increase of the rate of cancer death. Graphs with the rate of cancer deaths in correlation with the consumption of fluoridated water have been made, every year, in the last 50 years. The rates of cancer deaths during the periods 1955-1964 and 1964-1973 were compared. During the period 1925-1973, the rate of the deaths because of cancer doubled. Yet, in the same period, the rate of deaths because of other causes, especially tuberculosis, decreased dramatically. Of course, the graph on which the conclusions were drawn, presents statistical fluctuations. The conclusion drawn by the author of the graph may be contradicted with the help of two arguments: the statistic and the epidemiological ones. The cancer is a disease that develops slowly. There has to be exposition to a cancer factor for several years (the lungs cancer does not develop after smoking one single cigarette!) That is why, if there had been a rapid change of the cancer death rate in 1964, as it had been claimed, the cause would have been something that was changed in 1955. This one is only one example regarding the way the scientists may influence the demolition of some anti-scientific statements.

Thus, it is important to examine the data source and carefully study the way the data have been processed. There is no need to be an expert, but one must have a certain capacity of understanding.

More recent data confirm that the cancer death rate in Birmingham is entirely comparable with the one in other cities in England where the water has not been fluoridated.