

## “NUTRIENT” OR “CONTAMINANT”?

Richard G Foulkes BA MD  
Abbotsford, British Columbia, Canada

The word “nutrient” is currently used to refer to a substance that is required by the body for optimal life, growth and reproduction. The acid test has been that a deficiency of the specific substance can demonstrate an irreplaceable biological role. Fluoride has *never* been shown to be an “essential” part of the diet for either animals or humans.

Recently, the US *Federal Register* (Volume 81, Number 110, pages 28881-28882, June 6, 1996) published a notice of a review, by the Food and Drug Administration (FDA), the National Academy of Science (NAS), the National Institutes of Health (NIH) and other official agencies, of calcium and related nutritional needs of the US population. It is the expressed intention to review and establish minimum and maximum levels of calcium throughout life and to do the same with “related nutrients such as vitamin D, magnesium, phosphorus and fluoride.”

To include fluoride in the list of “related nutrients” is inappropriate.

Reviews have been carried out in the past that have satisfied both the FDA<sup>1</sup> and the NAS<sup>2</sup> that, in the words of the 1993 NAS report, “. . . fluoride is no longer considered an essential factor for human growth and development (see NRC 1989) . . .”

These decisions were based on appropriate reviews of scientific evidence which have seen no recent reversal.

Fluoride must be considered, therefore, not as a “nutrient” when found to be a component of foods ingested by the public, but as a “contaminant”.

As a contaminant, fluoride is known to cause disease by direct toxic effect (e.g. dental and skeletal fluorosis) and probably indirectly as a result of small amounts administered to the developing fetus through placental transfer and operation of the “paradoxical effect”. This action of fluoride may result in lowered fertility and brain damage leading to abnormal neurological findings including behaviour pattern disorders and lowered intelligence.<sup>3-6</sup>

In the light of recent discoveries, it must be stated that fluoride is a contaminant for which, like radiation, no “safe level” can be determined.

Calcium, magnesium, phosphorus and vitamin D are clearly nutrients for which specific roles have been determined. Review of these *may* be appropriate *provided* that these reviews are not based on what some authors see as

