



# Fluoride: An Invisible Killer

[\[En Espanol\]](#)

by [Floyd Maxwell](#), BAsC

Author of the [International Anti-Fluoridation Database](#)

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*"We would not purposely add arsenic to the water supply. And we would not purposely add lead. But we add fluoride. The fact is that fluoride is more toxic than lead and just slightly less toxic than arsenic." ([source](#))*

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*"The federal maximum contaminant level (MEL) for lead is 15 parts per billion (ppb), 5 ppb for arsenic and 4000 ppb for fluoride." ([source](#))*

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*1952: The Delaney Committee 82nd Congress Hearings on Fluoride revealed that there was no actual scientific basis for the fluoridation of water supplies in the prevention of tooth decay. The recommendation of the Committee was that more research be done, before proceeding with this national mass medication. Their recommendation was totally ignored. ([source](#))*

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**A common obstacle one runs into when trying to inform others of the dangers of a product is being told you are not an "expert". This can, however, be used to one's advantage if one happens to find an "expert" who verifies your own views on the benefits of natural versus chemical approaches to health.**

**My background is that of a Chemical Engineer, having earned my B.A.Sc. from the University of British Columbia in 1984. When it comes to chemistry I can say that I am an "expert" in this area due to studying it full time for over 10 years.**

**Luckily I also retained the ability to think for myself...**

## Built on Basics

Chemistry is built on basic principles. For example, "like dissolves like" means that salt (a polar molecule) dissolves in water (highly polar) but does not dissolve in oil (non polar).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra		Rf	Ha	Sg	Bh	Hs	Mt	-	-	-						
		3															
Lanthanide Series		La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	
Actinide Series		Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	

In studying the elements (see the Periodic Table of the Elements graphic above), application of just a few basic principles can lead to a grouping of families of elements based on their similar chemical properties.

As one goes down the Table, the size of elements increases while the reactivity decreases.

The second-to-last column of the Periodic Table are the [halides](#), and start with F (Fluoride), then Cl (Chlorine), Br (Bromine), I (Iodine) and As (Astatine).

Applying the reactivity rule one can accurately say that Fluorine is more reactive than Chlorine, that is more reactive than Bromine, that is more reactive than Iodine.

This reactivity rule also holds true for molecules/compounds (composed of two or more atoms that may be the same element or different ones) provided that one atom remains the same and only the halide changes.

Thus, we can infer that HF is more reactive than HCl. HCl (Hydro Chloric acid) was the strongest acid we used in school. But HF is so reactive, and so deadly that it was never seen or used in any of the 10 years of chemistry demonstrations and labs I took part in. [Allen Hoffmann](#), a former Scientific Glassblower, was forced to be in contact with HF as part of his work (and is now seeking Worker's Compensation for the damage it did to his body) notes that:

HF can't be smelled until 24ppm but has an IDLH (Immediately Dangerous to Life or Health) concentration level of 30ppm.

In other words, by the time you smell it, your life is danger! -- hence the title of this article: "*Fluoride: An Invisible Killer*".

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How strong, and prevalent, are fluorine-containing compounds?

HF is one of the [strongest acids](#) in the world. So strong it can [etch](#) glass (in fact, [this is a common test for the presence of fluoride](#)), making storage of this compound rather difficult!

Not to mention the [danger](#) in [handling](#) it!

[Searching for "hydrofluoric acid" on Google](#) produced about 12,000 web pages, evenly divided between typical chemical data sheets [with stringent handling procedures!] and health warning pages!

In fact, [Fluorine is the most reactive of all the elements](#) (elemental Fluorine is never found by itself in nature) and it was only the relatively recent laboratory-induced joining of Fluoride to Xenon, one of the previously "inert" elements (those in the right-most column in the picture above) that caused this group of elements to be renamed "noble" instead.

[This photograph shows what the fluorine added to Calgary, Alberta's drinking water has done to a thick and "corrosion resistant" steel water supply valve.](#)

Fluoride is used extensively in [computer chip](#) and [Aluminum and steel](#) manufacture, causing a staggering amount of environmental damage.

[In fact, in May, 2000, 3M Corporation announced it was discontinuing a whole family of fluorinated compounds, including Scotchgard, due to their incredible destructiveness to the environment.](#)

Fluoridated compounds are also extremely effective in killing bugs. The wholly predictable side effect of spraying crops with fluoridated pesticides is that fluoride remains on the produce, making fluoride-caused food contamination a very real concern and a good reason, by itself, to consider eating only organic food. [Beverage drinkers are not safe either.](#)

Fluorine is also found in mind-affecting drugs like Prozac and the "date rape" drug [Rohypnol](#). Click [here](#) for a more complete list of [drugs containing fluorine](#).

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## What are "Free Radicals"?

Perhaps some of you have heard of "free radicals" in recent years. The natural health industry has worked on finding compounds that can absorb, prevent the formation of or ameliorate the consequences of "free radicals".

But what are they?

Free radicals are what you get when you break a molecule into unstable pieces. This is achieved by subjecting an otherwise stable molecule to a jolt of energy of some sort (sunlight, heat, flame, etc.). Thus, too much sunlight can cause the formation of free radicals, as can heat or partial combustion (ie. smoke).

We are all already aware of the damaging effects of the sun. And we are increasingly aware of the harmful effects of smoke. But did we know that "free radicals" are one of the biggest and most dangerous by-products of smoking? Has anyone told us this?

Free radicals are so destructive because they are unstable and extremely reactive. So reactive, in fact, that they will react with almost anything, and in doing so will alter what they react with -- in plain terms, healthy tissue becomes unhealthy tissue due to the action of free radicals. It's that simple.

Many of us are already aware of something similar to this regarding the Chlorine that is sometimes added to municipal water supplies -- that it forms families of compounds in the water. Well, Fluorine is much more reactive than Chlorine, so one can only imagine the range of deadly compounds it is capable of creating when it is added to drinking water.

I just want to emphasize that, chemically, free radicals are much worse than most cancer causing compounds because free radicals can do "whatever they want" when they contact your body. They can alter virtually anything they contact -- cells, blood vessels, organs, etc.

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## Recapping:

- Chlorine is known to form numerous compounds after it is added to municipal water supplies.
- Fluorine is much more reactive than Chlorine.

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So, what happens when you add F to municipal water?

It turns out that there are vast ramifications from adding F, and va\$t rea\$on\$ for doing it.

In essence, the fertilizer, aluminum and steel industries produce, in the process, massive quantities of fluoride that used to be industrial waste. To save large amounts of money, they came up with the idea of dumping this industrial waste into drinking water. Now, instead of having to pay to have the fluoride waste hauled away, they are paid to poison us.

Here are just a few of the numerous web links that I encourage you to explore:

Ask the government for your 1992 Fluoridation Census report

<http://www.cdc.gov/nccdphp/oh/fl-home.htm>

The Fluoridation Fiasco: Poison In Your Water:

<http://rense.com/health/fluoride1.htm>

The Fluoride Stop:

<http://bruha.com/fluoride/>

NoFluoride.com

<http://www.nofluoride.com/>

EarthLife.Org's Factsheet

<http://www.earthlife.org.za/factsheets/fs-flouride.htm>

Why EPA's Headquarters Union Of Scientists Opposes Fluoridation

<http://www.fluoridation.com/epa2.htm>

Fluoride Pollution: An Overview

<http://www.fluoridealert.org/f-pollution.htm>

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Just Think It's International Anti-Fluoridation Database:

<http://www.just-think-it.com/the-f-db.htm>

150+ facts, horror stories and cover-ups about Fluoride

<http://www.just-think-it.com/f-facts.htm>

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## **Call to ACTION**

Assuming that Fluoride is "bad", how should we minimize or eliminate the problem?

(1) Lobby

Quite simply, [most of you are being poisoned](#) and you should be very concerned about this and should tell your official

representatives of your concern.

And you should not stop until they stop adding it.

Find articles about Fluoride. Print them. Fax them. Send letters to local newspapers. [Find out if your community is being poisoned](#) and if it is and we don't already know about it, [tell us](#) so we can tell other people in your community.

Do something.

Or suffer...

## (2) Avoid it

Note that I did not say "Remove it" because this is not possible, contrary to what countless manufacturers are claiming. The key reasons why not: (1) Fluorine's extreme reactivity, causing it to "cling" more tightly to water than anything I am aware of, and (2) the size of the F atom.

We have already dealt with one aspect of the Fluorine atom's size -- that it makes the atom extremely reactive.

The second aspect of Fluorine can be revealed by comparing the weight of a "mole" (602,000,000,000,000,000,000 atoms) of F to that of a mole of H<sub>2</sub>O (water). [To confirm the calculation, refer to the Periodic Table of the Elements graphic above.] F weighs 19 grams per mole (g/M), H<sub>2</sub>O weighs 18 g/M.

Summoning another well known rule of chemistry, that the size of a molecule/atom is directly related to its molecular weight and we can infer that these two molecules are almost identical in size.

## Ineffectiveness of Reverse Osmosis units

Reverse Osmosis [RO] manufacturers' claim they can remove fluoride. Don't believe their claim\$.

RO units work on the same principle as our kidneys. Think of a mesh, like the mosquito netting on your screen door. The mesh lets in air, but not mosquitos, because air molecules are smaller than mosquitos.

An RO unit is thus great for removing "heavy metals" like Pb (Lead), Hg (Mercury) and Cd (Cadmium), as well as Cl- family compounds like PCBs and PCP's (Poly Chlorinated Phenyls and BiPhenyls) because these are all large molecules relative to the size of H<sub>2</sub>O. In fact, even Cl (the smallest of these) is relative large (molecular weight of 35 g/M) and so if the RO unit is new and it is well made (ie. with precision tolerances on the RO membrane) it might even filter out some of the Cl. Note the "ifs" and conditions in the last sentence.

So, an RO unit will not filter out F atoms, as F atoms are too similar in size to H<sub>2</sub>O molecules.

## Equally Ineffective Distillation units

Distillation units will also not work because similar sized polar molecules have similar boiling and freezing points.

Water boils at 212 degrees Fahrenheit and FH boils at [203 to 239 degrees Fahrenheit](#). So, when your distillation unit has warmed up the water to 212 degrees Fahrenheit, and the water starts to boil off (evaporate), \*so\* does the Fluoride! It stays right with the water vapor, and gets condensed back into liquid at the end of the process.

So, don't let anyone tell you otherwise and don't trust those that do.

### (3) Don't trust your water

Unlike Chlorine, Fluoride is colorless, odorless and tasteless so you have almost no way of knowing if [it is present in the water you are drinking](#) or using.

Even bathing or showering in fluoridated water will cause you to absorb an unhealthy amount of it through your skin.

Fruit juices often have very high concentrations of Fluorine, due to the use of [Fluorine in pesticides](#).

Pop and other packaged beverages are also common and substantial sources of Fluorine, not only because of the fluoridated water but because of fluoride-laced ingredients, and the concentration of same during the manufacturing process.

Bottled water can be an option, but choose carefully. [Mineral Waters of the World](#) provides a free and very detailed analysis of the composition of over 600 types of bottled water available throughout the world.

### (4) Don't trust the experts

Before you even listen to someone's opinion about Fluoride, figure out what they have to gain by their opinion.

RO manufacturers would see sales "dry up" if they admitted that their units can not remove it. They will thus never admit it, and will try to "poison" our efforts to give people unbiased information.

Fluoride producers (the multi-billion dollar aluminum, fertilizer and steel industries) have everything to lose and nothing to gain by admitting that Fluoride is even remotely bad for anyone.

Ditto toothpaste manufacturers and thus dentists. Yes, dentists have a lot to gain by fluoridation -- dental fluorosis, caused by fluoridation, produces mottled teeth (in [advanced stages](#), fluorosis can turn teeth into black stumps -- [see for yourself](#), or view this [46 page slide show](#)) and this leads people to get very expensive cosmetic dental work performed...by dentists.

As to the supposed benefits of drinking fluoridated water, read the results of this [study](#), or [this one](#), or [this one](#), or this:

Any tooth decay reducing effect attributable to fluoride occurs by topical mechanisms involving action on tooth surfaces and on oral bacteria that promote dental caries. There is negligible anti-caries benefit from ingested fluoride that does not have actual contact with the surfaces of the teeth. – "Fluoride in Dentistry", 2nd Edition ([source](#))

Of course, topical application has its own problems:

Children under age 4 swallow 40% or more of the toothpaste they use.

– [Oregon Citizens for Safe Drinking Water](#)

And "public" health officials will definitely \*not\* want to admit that they have been officially encouraging the largest act of public poisoning the world has ever known.

"Anti-Expert" shields up!

### (5) Hound the water bottling companies

For some reason (worth an investigation itself) water bottling companies in the U.S. are not required to report the content of water on the label (and thus most don't).

Oh sure, they report how many calories the water has (zero), how much of the recommended daily allowance of protein, carbohydrates, and vitamins xyz (all zero) but there is no mandatory listing of the amounts of such common elements as Ca (Calcium), Na (Sodium), Cl (Chlorine) and (F) Fluoride!

Then visit their web sites. I did this for the largest bottlers in the Phoenix area and learned exactly nothing about the content of the water they are selling. I also learned that many are owned by larger companies, such as Perrier. And that they have "zero point zero" (ie. no) interest in communicating with the people who buy their product. On the Perrier site there was no way to contact them. No forms to fill out, no email addresses to use and, when I used my Internet knowledge to send to standard email addresses that every domain usually has I still got exactly zero response. Why?! Think about it...

I finally went with Sedona Springs because they told me the (low and naturally occurring) Fluoride content of their spring water. [Free plug: Sedona Springs, 602-254-0000, home or office delivery, sport bottles, half or full size jugs for your/rented water cooler...and "6 gallons for the price of 5"]

We encourage everyone to adopt this approach as well. Check the chemical analysis of your local water bottlers online at [Mineral Waters of the World](#). If some or all of your local brands are not on the list, try to contact your local bottlers/sellers. Ask them for a chemical analysis of their water, and especially the fluoride content. If you should manage to obtain this information, give it to [Mineral Waters of the World](#) and they will update their database.

### Free plug for the good guys

Australians can choose "NOBLE'S ULTRA PURE WATER" with zero fluoride.

Above all, only trust (ie. drink the water of) bottlers who tells you the Fluoride concentration of their water.

A guideline is that city water is polluted with 1 part per million (ppm) of F, and bottled water can have this much or even more! When I visited Toronto some time back I found only one brand (of perhaps 5 or 10) that had very low F. Every one of the other brands had "municipal" levels of Fluoride in their bottled water. Incredible!

Bottled water with the lowest F content that I have seen is around 0.08 ppm -- 12 times less than in the municipal water supplies, and "naturally occurring" of course. Naturally occurring fluoride is less harmful because the fluoride has already bonded (securely) with calcium. A well-bonded atom is a less reactive atom.

Be cautious, if not downright skeptical of bottled water that says things like "trace", and be only slightly more reassured by the word "undetectable". These days scientific equipment can measure parts per \*trillion\* and better, so parts per million measurements are trivially easy to make by comparison.

If they say they "can't" measure it, what else are they incapable of doing? Telling the truth?

(6) To repeat...

[Send us what you have learned](#). Tell us what happened when you tried to find out what your municipality is doing to your water. And what they told you about their chemical additions: concentrations, controls, reasons, etc. We are building an [International Anti-Fluoridation Database](#) movement and we need your help.

[Still unconvinced? Check out these 150+ fluoride facts!](#)

Our children thank you. [For your action](#).

Sincerely,

Floyd Maxwell

Contact:

[floyd@just-think-it.com](mailto:floyd@just-think-it.com)

This article can be found at:

<http://www.just-think-it.com/no-f.htm>

And in plain ASCII text (Microsoft Word-compatible) here:

<http://www.just-think-it.com/no-f.doc>

**NOTES:**

[1] Dr. John Yiamouyiannis, "Clinical Toxicology of Commercial Products", Fifth Ed., Williams and Wilkins. Quote at: <http://rense.com/health/fluoride1.htm>

[2] We have collected [every fact, horror story and cover-up we can find](#) [150+ of them so far!] and challenge you to read them -- strong medicine!

[3] We are building a free [International Anti-Fluoridation Database](#) but we need your help in adding to it. We ask everyone reading this to contact their local city officials and find out whether they are adding F, Cl or something else like Chloramine, and to tell us what concentration is being added and what (if any) safety measures are in place to protect Joe/Jane Citizen from catastrophic over-additions. Then [send us the information](#), preferably by [email](#), at this address:

E-mail: [floyd@just-think-it.com](mailto:floyd@just-think-it.com)

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