

 Evidence Based



# Fluoride's Effect On The Pineal Gland

by Casey J Krol

Through the pineal gland's unique features and fluoride's toxic and reactive nature, the fluoride-pineal gland relationship was bound to fail from the start.

Making the pineal gland fluoride's number 1 victim.

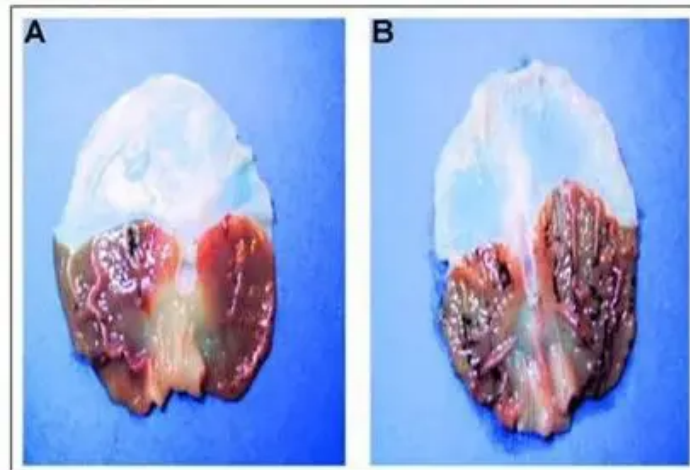
However in just minutes, not only will you know how important the pineal gland is and how fluoride damages it. But also the most up to date science on how to heal and bring your pineal gland back to normal.

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## Fluoride Calcifies The Pineal Gland

It was only until 1997, a good 50 years after fluoride started being added to tap water in the USA, that a British scientist named Jennifer Luke discovered that fluoride accumulates to strikingly high levels in the pineal gland.<sup>1</sup>

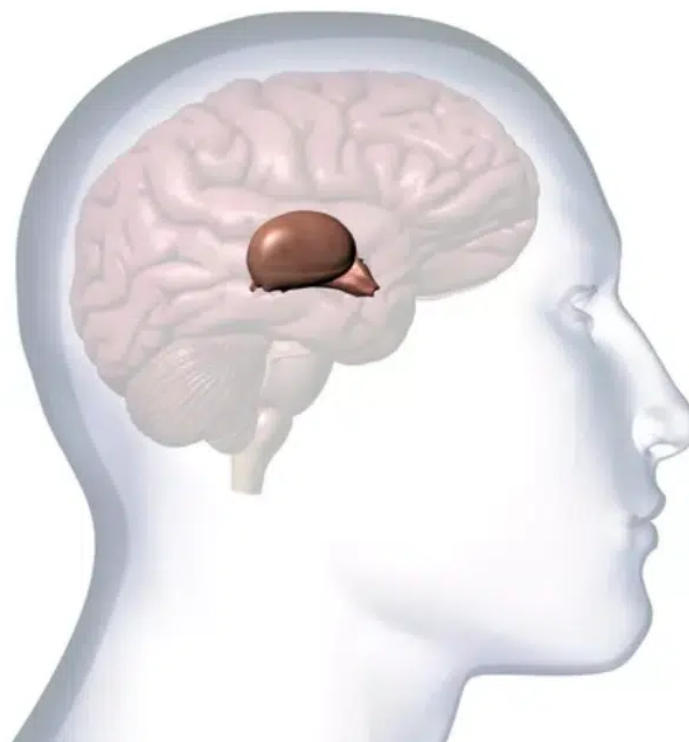
More in the pineal gland than any other soft tissue of the body. Jennifer Luke's study also found a positive correlation between the amount of fluoride found in the pineal gland and calcium.



The accumulation of fluoride forms phosphate crystals, creating a thick shell around the pineal gland called **calcification** (pictured above). Once the pineal gland is calcified, it causes it to become in/underactive.<sup>1</sup> Resulting in less melatonin production.<sup>2</sup>

## What Does The Pineal Gland Do?

The pineal gland is a tiny, pinecone shaped gland located in between the two hemispheres of the brain and outside the blood brain barrier.



The main function of the pineal gland is to make and release the hormone **melatonin**.<sup>3</sup>

Melatonin is used to perform three main roles:

1. maintain the circadian rhythm, also known as the sleep-wake cycle<sup>4</sup>
2. regulate the start of puberty in females<sup>5</sup>
3. help protect the body from cell damage caused by free radicals<sup>6,7</sup>

When the pineal gland is not producing melatonin or not enough of it, the body can not perform these vital roles properly. Leading to a cascading domino-like effect in the body.

## **Why Does Fluoride Accumulate In The Pineal Gland?**

The pineal gland has 3 main features unique to itself that leads to the accumulation of fluoride.

1. Located outside the blood brain barrier
2. Large amount of blood flow
3. High calcium concentrations

Since the pineal gland requires direct and unimpeded contact with blood to perform its functions.<sup>8</sup> It's located outside the blood brain barrier, directly exposing the pineal gland to fluoride circulating in your blood.

This leaves the pineal gland vulnerable and without any **protection**.



To make things worse, the pineal gland also holds the second richest capillary network, right after the kidney.<sup>9</sup>

Resulting in lots of contact with blood, through the large amount of blood flow delivered by the connecting capillaries.

Lastly, it does not help that the pineal gland holds the **highest** calcium concentration of any normal tissue in the body<sup>5</sup> And due to fluoride's negatively charged and reactive nature, that means it loves to react with positively charged ions in the body.

It's favorite to react with?

Calcium.

Making fluoride the best suited substance to damage the pineal gland.

Based on this and other evidence, the National Research Council stated in a [2006 review](#),

“Fluoride is likely to cause decreased melatonin production and to have other effects on normal pineal function, which in turn could contribute to a variety of effects in humans.”<sup>10</sup>

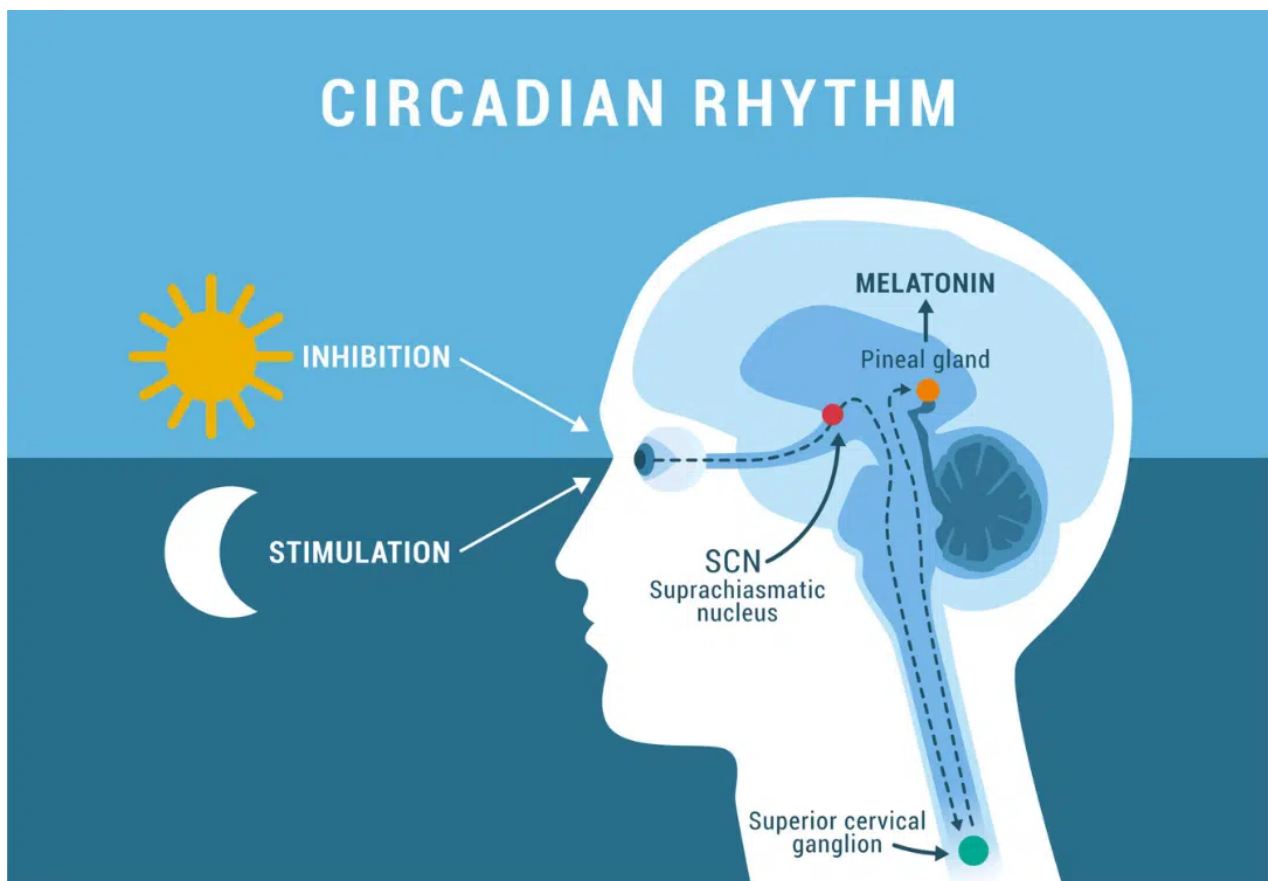
Now let’s talk about those effects...

# Health Effects Of Pineal Gland Calcification

## 1. Poor Sleep

When less melatonin is produced, the quality of your sleep gets worse.<sup>11</sup> You could say the production of less melatonin is the first domino to fall, while the second is sleep.

How much this affects your sleep depends on the extent to which your pineal gland is calcified. As the pineal gland calcifies further, poor sleep eventually turns to primary insomnia.<sup>12,13</sup>



Once your body does not have the chance to heal itself through sleep, the likelihood of many other health effects increases. With each poor sleep, you take one step closer to the next health outcome.

This has been reaffirmed through a 2021 study out of Canada which reported “ Higher water fluoride concentration was significantly associated with increased risk of reporting fewer than the recommended hours of sleep”.<sup>23</sup>

## 2. Early Puberty

In the United States and Canada, children are reaching puberty at earlier ages than ever before.<sup>14</sup> A trend that carries serious health consequences (the next one on this list).

Now evidence suggests that fluoride exposure leads to reduced melatonin levels and shortened time to puberty.<sup>5</sup>

But this isn't breaking news.

Even the first published fluoridation safety experiment based in Newburg, New York, supported the early puberty claims. As the authors uncovered, girls living in a fluoridated community reached puberty five months earlier than girls living in a non-fluoridated community.<sup>15</sup>

### 3. Heightened Risk For Breast Cancer

The way early puberty is linked with breast cancer, is not some crazy fluoride conspiracy theory. But instead, by being an established risk factor for breast cancer... influencing a woman's lifetime **estrogen** exposure.<sup>16</sup>

Swinging back to melatonin, the powerful chemical is also known to fight and halt the spread of different types of cancer- with a unique effect on breast cancer cells. Being capable of disrupting estrogen-mediated pathways, resulting in a net reduction in estrogenic stimulation of cells.<sup>17</sup>

This means, decreasing levels of melatonin strips the body of ammunition it would have otherwise used to decrease breast carcinogenesis.

### 4. Increased Oxidative Stress

For a detailed explanation, take a look at [what does fluoride do to the brain](#). But one of the several effects fluoride has on the brain is causing oxidative stress.

Now it is probable that the increased oxidative stress observed in fluoride-treated subjects is related to fluoride's effect on the pineal gland. In fact, it's even likely. Since we know one of melatonin's many important functions is the role it plays as a powerful antioxidant- aka ward off and reduce oxidative stress.<sup>6,7</sup>

Thus, anything that can reduce the melatonin levels in the body would therefore be expected to reduce the body's defense against oxidative stress in the brain.

Leading to more oxidative stress.

Now the problem with too much oxidative stress is that it commonly results in neurodegenerative diseases.<sup>18</sup> Potentially the next domino to fall...

### 5. Alzheimer's Disease

The link between a damaged pineal gland and Alzheimer's is very clear.

Alzheimer's is a neurodegenerative disease, which the development of is accompanied by changes in lifestyle factors, such as sleep disturbance.<sup>19</sup>

As mentioned, one of the main roles of the pineal gland is to secrete melatonin and directly control circadian rhythm (the thing that helps you sleep). Furthermore, we know the pineal gland has a remarkable antioxidant property and Alzheimer's is a disorder that is characterized by progressive degeneration of the function and structure of the central nervous system.

Now what causes degeneration (damage) to the brain?

Oxidative stress.

Without a fully functioning pineal gland, the inability of your body to properly recover during sleep and the lack of melatonin to fight oxidative stress in the brain, is a perfect combo to Alzheimer's disease.

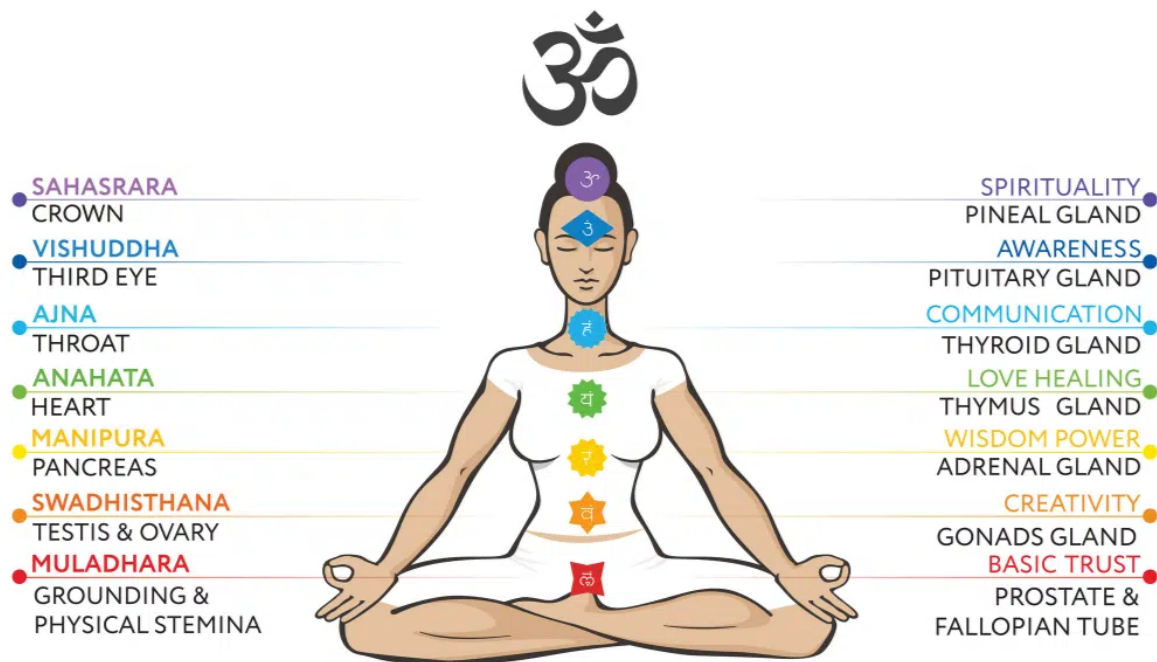
Which is exactly why, reduced pineal gland volume and pineal calcification, accompanied by cognitive decline and sleep disturbances have been observed in Alzheimer's patients.<sup>20</sup>

Something that needs to be addressed immediately, as current research reported at present levels there are more than 47 million Alzheimer patients globally, with the number projected to triple and reach 150 million by 2050.<sup>21</sup>

## **6. Loss of Spirituality**

This is the least "scientific" of the 6 potential health effects but maybe the most important. I say this due to the fact, the pineal gland is the third eye chakra and is known in Hinduism, Buddhism and Ayurveda to play an important role in an individual's spirituality.

While a "closed" third eye leads to confusion, cynicism, and lack of purpose. A "open" healthy pineal gland is associated with clarity, imagination, intuition, and universal connection.



The concept of chakras used in Hinduism, Buddhism and Ayurveda



The pineal gland was also highly regarded by many people. For example, the Greeks believed it ruled thought, while Rene Descartes held it as the seat of the soul. And as a whole, it's believed to act as a connection to God.

So who knows, maybe there is some truth in the jokes that those who consume fluoride are sheep, obedient, and follow orders without questioning.

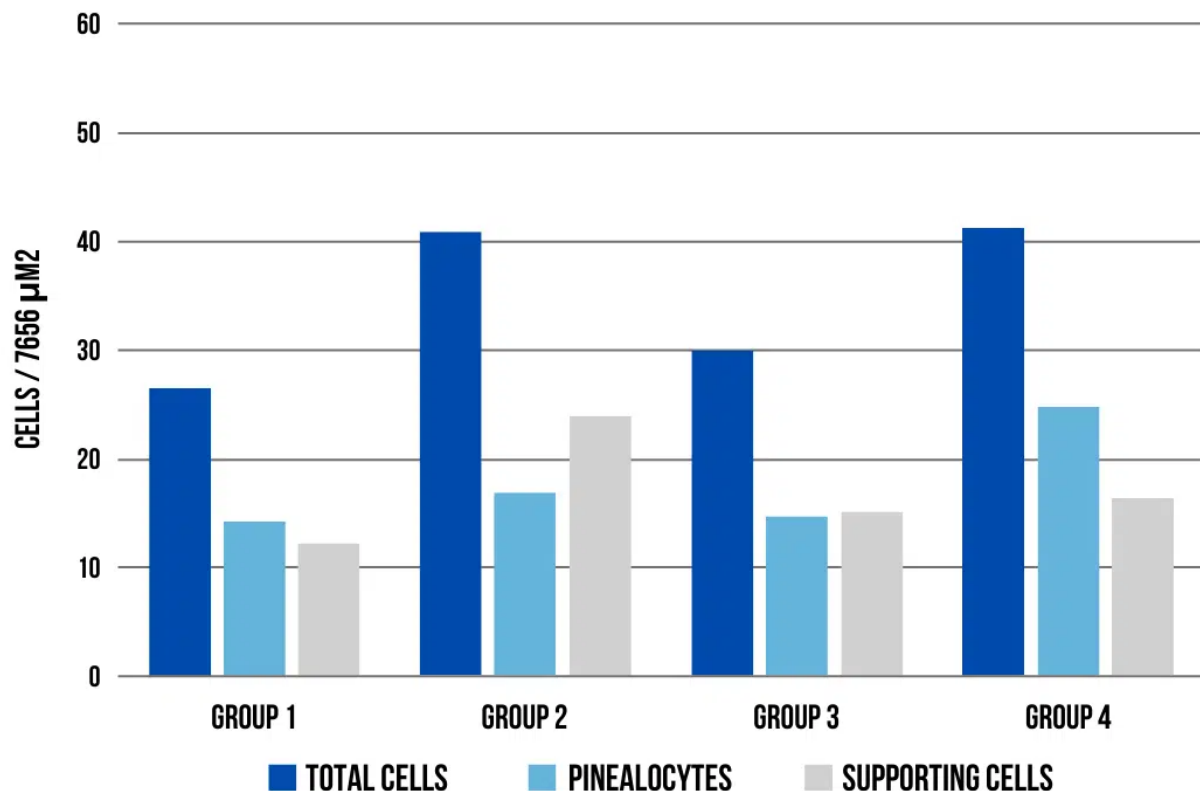
But like many would say, this isn't "scientific" so I'll let you be the judge if millions of spiritual people and religions of thousands of years have any wisdom in their teachings.

## How To Decalcify & Regrow The Pineal Gland?

A recent [2019 study](#) shed light on how one may regrow and potentially reverse the damage done to their pineal gland after being exposed to fluoride.

The researchers in this study took four groups of rats, all of which were raised on food and drinking water that contained fluoride. Group 1 was the control group and was analyzed on day 1 of the study. Group 2 was given a fluoride-free diet (food and water) for 4 weeks. Group 3 was on a fluoride-free diet for 4 weeks and then 4 weeks of water with fluoride (1.2 ppm). While group 4 stayed on the fluoride-free diet for 8 weeks.<sup>22</sup>





So what were the results?

At 4 weeks the pineal glands from fluoride-free animals showed a 96% increase in supporting cell numbers and at 8 weeks a 73% increase in the number of pinealocytes (main cells contained in the pineal gland) compared to control animals.

While the number of pinealocytes and supporting cells in animals in group 3 who were given a fluoride-free diet for 4 weeks but then given fluoridated drinking water (1.2 ppm) for 4 weeks were **no different** than the control group who never went on a fluoride-free diet.<sup>22</sup>

The researchers concluded that a fluoride-free diet encouraged the increase of pineal gland cells and growth of the pineal gland. While consuming fluoride stopped and even reversed previous growth.

## Exact Steps To Take To Regrow Your Pineal Gland

Thankfully the solution is quite simple.

Now I know we're not rats but based on the study mentioned above. If you'd like to heal and regrow your pineal gland back to normal function. It would be a good idea to drink water and eat food that is low in fluoride.

The best way you can drink fluoride-free water is to use a filter or drink bottled water. Thankfully at [fluoride water filters](#) you'll see my top 3 recommendations while at [bottled water without fluoride](#) you'll be able to search the fluoride levels of 286+ brands.

While when it comes to food, it's a bit tricky. But the [fluoride in food](#) article lets you search the fluoride levels of 503+ foods and gives you 5 tips on how to eat a diet low in fluoride.

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### Casey J Krol

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