

This One Cool Material Will make WorkSafeBC Hate You

(Number 1, 2, 3, and 4 will kill you!)

An Undistinguished Lecture by
ex-CS-Safety-Committee-Member Adam Geller

Why am I talking about this?

Honestly no idea, seemed interesting

I mentioned WorkSafeBC, what's that?

The Workers' Compensation Board of British Columbia (WorkSafeBC) is the exclusive workers' compensation insurer in BC

Its mandate includes prevention of occupational injuries and disease

In other words, the BC equivalent of OSHA (I highly recommend the OSHA subreddit [reddit.com/r/osha](https://www.reddit.com/r/osha))

Safety is our top priority (after shareholder value)



There's a lot of legislation about safety, Federally, Provincially, and Locally

Federal:

Many different Ministries may have jurisdiction

Provincial:

Health authorities, provincial Ministries, WorkSafeBC

Local:

Building Codes

Organization Specific:

Local Safety Teams, Occupational First Aid

Why all this talk about workplace safety?

It didn't always used to be like this

Storytime

Radium

After being discovered by the great Marie Curie, Radium was used to create the first luminescent paint in 1902

In the 1920s, radium paint was used to make luminescent “timepieces”

A watch with a very large amount of paint would cause about 310 mrem to your wrist each year, about 600x as much as getting a xray of your wrist [1]

[1] <https://www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives.html>



Radium Cont.

The use of radium paint contributed to several deaths

Not the people wearing the watches, but rather the people painting the watches

Ross Mullner - *Deadly Glow: The Radium Dial Worker Tragedy*

Mercury

(Freddie) One of the greatest singers of all time

(a.k.a. quicksilver) A heavy metal



Mercury cont

Mercury was once used to treat syphilis and during the reign of Queen Elizabeth, it was commonly used as a facial peel

In 2001, a dentist died as the result of a mercury spill in Vancouver

<https://www.cbc.ca/news/canada/british-columbia/mercury-magdi-moussa-hatter-1.3607828>

In the 19th century, Mercury was used in the process of making felt hats

Hence the term “mad as a hatter”, or “mad hatter”

Mercury poisoning

Mercury can be counteracted through Chelation if done quickly enough

Otherwise, it irreversibly damages significant enzymes which protect against oxidation, restore vitamins, and do other important things

The brain is very vulnerable to oxidation, so mercury poisoning causes significant brain damage

Asbestos

The most wonderful material
Electric insulator and highly heat-resistant

Became widely used at the end of the 19th
century, most buildings from before the 1980s
probably contain asbestos

Nowadays, completely banned by every
developed country

 **WARNING** 

**This Product Is
Known To The
State of California
To Cause Cancer**

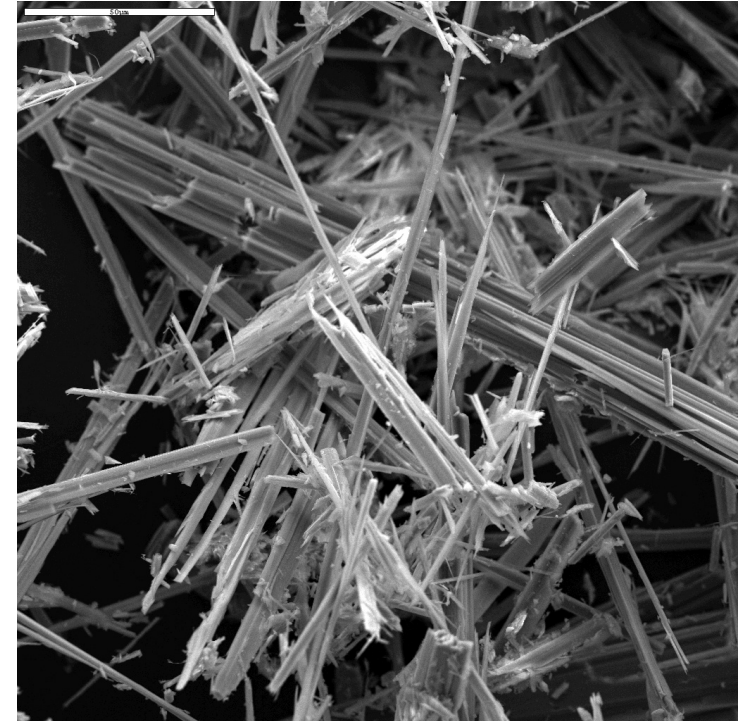
California Health & Safety Code Section 25249.5

Asbestos

According to the WHO:

“Currently, about 125 million people in the world are exposed to asbestos at the workplace. Approximately half of the deaths from occupational cancer are estimated to be caused by asbestos. In addition, it is estimated that several thousand deaths annually can be attributed to exposure to asbestos in the home.”

<https://www.who.int/news-room/fact-sheets/detail/asbestos-elimination-of-asbestos-related-diseases>



Lead

Another wonderful material

Dense, yet soft and pliable, doesn't oxidize, abundant

Used in all sorts of places, including paint and plumbing

Unfortunately, it's also a neurotoxin

We didn't used to know these things
were dangerous, we used them a lot
because they were useful

Are there things we use today that may turn out to be dangerous?

Microplastics causing birth defects and fertility issues

Widespread electromagnetic radiation

Other things???