AIRTHINGS

RADON
DANGEROUS, INVISIBLE, IN EVERY HOME

What is

RADON?

Protect your family

WHAT IS RADON?

Radon is a naturally occurring, radioactive noble gas. Radon is odorless, tasteless and colorless and arises from radioactive decay from uranium in the earth's crust. As part of the air we breathe, it surrounds each of us.

WHY IS RADON IMPORTANT?

Radon is the **number one cause of lung cancer** amongst non-smokers. If considered as a separate disease, lung cancer in people who have never smoked would **rank seventh in global cancer mortality**.

Approximately **21,000 people die from radon-related lung cancer** every year in the United States alone.

WHERE DOES RADON COME FROM?

The rocks and soil beneath our homes contain traces of uranium. Over time, the uranium breaks down and forms other elements. This is called radioactive decay. Radon is one link in the decay chain of uranium. When radon gas decays, it emits radioactive radi- ation in the form of an alpha particle.

RADIATION AND DNA

All our cells contain DNA, which acts as an instruction manual or blueprint for cells on how to create copies of themselves.

When an alpha particle hits our DNA it can cause damage to a cell's blueprint. Cells constantly replicate themselves, but with a broken blueprint the replication process can become cancerous.

Lungs have especially sensitive tissue made of living cells that allows oxygen molecules to pass from the air we breathe into our bloodstream. When alpha- emitting substances like radon are inhaled, they can damage local cell DNA.

RADIOACTIVE RADIATION

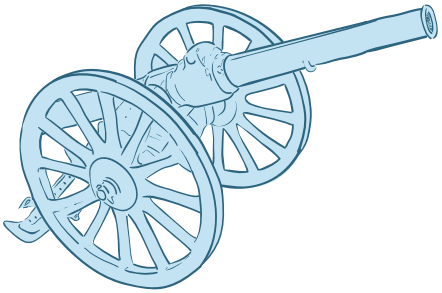
Radioactive radiation takes different forms including alpha, beta, gamma, X-ray, and neutron radiation, which are able to penetrate different substances.

When we think of radiation, we often think of artificial sources, such as X-ray or medical scans, but these sources have little effect.

Since alpha particles are ingested or inhaled, they come in contact with living cells which are not able to stop the radiation.

ALPHA RADIATION VS. GAMMA RADIATION

Alpha radiation has a much more severe effect on DNA than gamma radiation. This difference in damage can be compared to the DNA being bombarded by a **cannonball** instead of simply going through **acupuncture**.



ALL CHILDREN ARE SENSITIVE. RADON IS 10X MORE DANGEROUS FOR CHILDREN.

Children have still developing organs; their replicative tissue is more vulnerable to DNA damage.	Children breathe faster; they actually respire 2-3 times faster than adults as their lungs are much smaller.
Children weigh less; their exposure is greater, as it is measured in concentration per kilogram.	Children have more life "left", and thus could live long enough to get cancer from early life radon exposure.

RADON IN BUILDINGS

Modern buildings are often well insulated and sometimes the windows cannot even be opened. The aim of this is to reduce energy costs and reduce energy consumption. However, lack of ventilation can cause radon to build up, increasing the levels and causing long-term exposure. Good ventilation is essential to keep radon levels low.

A MAN-MADE PROBLEM

The radon concentration within buildings is often much greater than outside. The gas comes from the ground and is captured and contained in our homes, resulting in levels that we seldom find in nature.

RADON SOURCES

Radon rises and can enter a home or workplace through cracks in the foundation, entry points for pipes, wiring and more.

TOP FLOORS

Some buildings have a higher radon level in the top floors. This can be due to artificial ventilation, natural updraft, or building materials used.

WEATHER EFFECTS

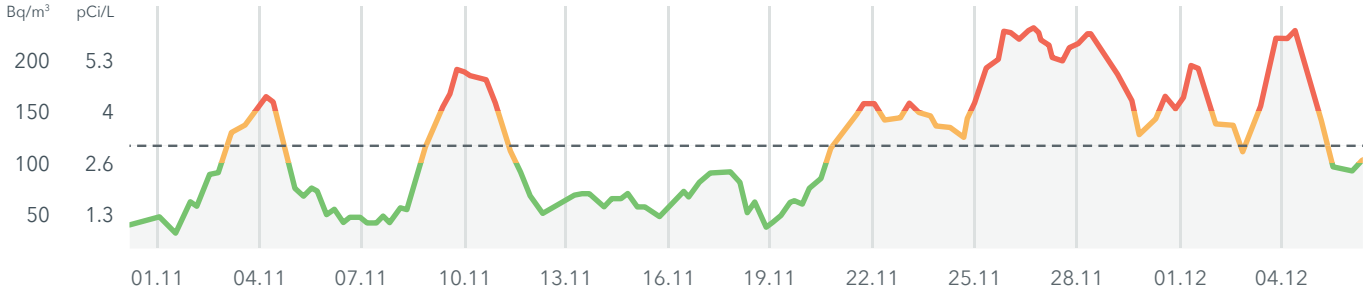
Radon levels can be affected by natural sources such as cold weather, wind, pressure, shifting soil and even earthquakes and local construction.

WHAT DO MY RADON LEVELS MEAN?

0-48 Bq/m³ 0-1.3 pCi/L	No action needed.
49-99 Bq/m³ 1.4-2.6 pCi/L	Experiment with ventilation and sealing cracks to reduce levels.
100-149 Bq/m³ 2.7-4 pCi/L	Keep measuring. If levels are maintained for more than 3 months, contact a professional radon mitigator.
150 Bq/m³ and up 4.1 pCi/L and up	Keep measuring. If levels are maintained for more than 1 month, contact a professional radon mitigator.

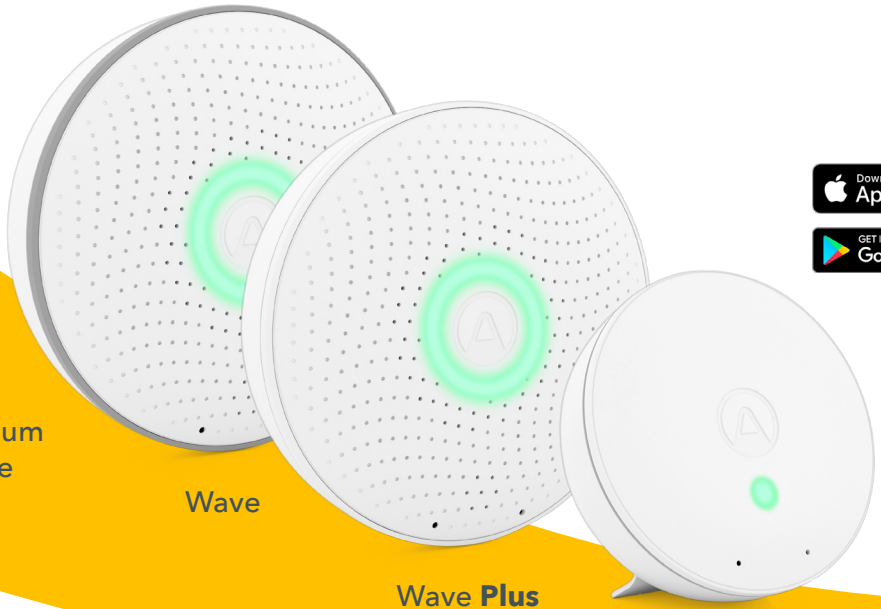
MEASURING MATTERS

The radon concentration fluctuates over time and is influenced by elements in our environment. Monitoring over a longer period of time enables such fluctuations to be taken into account, which gives you more accurate and meaningful results.



OUR RADON DETECTORS AND AIR QUALITY MONITORS

Corentium Home



Wave

Wave **Plus**

Wave **Mini**

Wave **App**

Model	RADON	MOLD RISK	CO_2	HUMIDITY	TEMP	VOC	PRESSURE
Corentium Home	●	-	-	-	-	-	-
Wave	●	-	-	●	●	-	-
Wave **Mini**	-	●	-	●	●	●	-
Wave **Plus**	●	-	●	●	●	●	●
House Kit*	●	●	○	●	●	●	○

*With an additional Wave Plus, you can also monitor CO_2 and Air Pressure. Marked here with ○.

Works with IFTTT

amazon alexa

works with the Google Assistant