

Diatomaceous earth (DE) — it sounds like a scientific term for a state of the planet, but it turns out it's actually a natural product made up of fossilized remains of tiny, aquatic organisms called diatoms.

you may never have heard of diatomaceous earth before, but chances are you've consumed or used plenty of products that contained it. Some common products that contain diatomaceous earth include dusts, powders and pressurized liquids that are used on the outside of buildings, on farms, in gardens, and in human and pet foods.

It usually comes in the form of a white powder and is also used in water filtering, food manufacturing, skin products and farming to naturally eliminate free radicals, viruses, insects, parasites and other harmful organisms by binding to them and drying them out. It also has the ability to improve the body's use of calcium, improve bone mineralization, protect joints and fight effects of aging. And that's not all.

Diatomaceous Earth Benefits: -

1. Detoxifies the Body

Diatomaceous earth — also known as diatomite — works like a natural detoxifying agent within the body, killing parasites and viruses that can contribute to illnesses while also helping to clean the blood. It's also inexpensive, simple to use and much safer than many store-bought detox products or plans. Some of the benefits of using DE internally include reducing odors, helping to curb gas, cleansing the digestive tract, boosting liver function and absorbing harmful toxins within the blood.

How does DE work to help with detoxification? Silica works similarly to antioxidants found in high-antioxidant foods because it retains its traits as a stable particle even while continuously suspended in a liquid medium, allowing it to fight free radical damage. It's broken down into a colloidal form, which acts like a detoxifier for the blood since it carries an electrical charge that attaches to free radicals and other harmful toxins. Silica particles can then neutralize the charge of free radicals and remove them from the body through sweat, urine and feces, which slows oxidative damage and has anti-aging effects.

A study published in the *American Journal of Clinical Nutrition* found that silica also helps eliminate heavy metals from the body, such as aluminum, making it perfect for a heavy metal detox. In studies, it has been shown to have a high-aluminum-affinity and reduces aluminum availability from the human gastrointestinal tract.

2. Helps Purify Water

Diatomaceous earth is used in many filtration products, including the rademarked brand name Celite, because its chemical composition makes it a great filtration aid. It's able to filter very fine particles that otherwise pass through or clog filter papers.

This makes it a common product used in water filters to help prevent tap water toxicityand also purification practices for fish tanks. Additionally, it's also important for manufacturing beer and wine, syrups, sugar, and honey without removing or altering their color, taste or nutritional properties.

A study published in the Journal of Applied and Environmental Microbiology found that diatomaceous earth helps kill viruses and purify drinking water. Viruses have been found to be dangerous and abundant in certain sources of drinking water, raising the risk for viral infections and having a significant impact on bacteria and algae populations in the ecosystem.

Researchers tested the effects of a filter containing DE on tap water that was contaminated with heavy metals and various viral strains. The results of the study showed that DE helped absorb up to 80 percent of the viruses present, including poliovirus 1, echovirus 5 and coxsackievirus B5, which were all present in tap water even after filtration.

3. Fights Parasites

A study published in the *Oxford Journal of Poultry Science* found that DE has the potential to be an effective treatment to help control parasites. Interestingly enough, this was observed in hens that produce organically raised, free-range eggs. Giving two breeds of commercial egg-laying hens DE improved production of their eggs and egg quality compared to control groups, effectively working as a parasite cleanse in the process.

The two groups of hens used in the study were found to differ in their resistance to internal parasitic infections, which was observed by examining their gastrointestinal tracts. The hens fed DE had significantly lower incidences of infections, including fewer Capillaria FEC, slightly lower Eimeria FEC, fewer birds infected with Heterakis and significantly lower Heterakis worm infections. Those fed DE were also significantly heavier in weight, laid more eggs and consumed more feed than hens fed the control diet, plus their eggs had larger yolks and therefore were more concentrated with nutrients.

4. Kills Insects and Other Harmful Substances in Your Home

In the U.S., DE is classified under the Federal Insecticide, Fungicide, and Rodenticide Act as a safe substance for household use. It's a natural insecticide, since it absorbs lipids from the waxy outer layer of insects' exoskeletons, which causes them to dehydrate and die of water deficiency. This is why it's useful in food preservation, as a natural home deodorizer and cleanser, and for helping to treat livestock suffering from parasites.

Using diatomaceous earth can help eliminate bed bug, house dust mite, cockroach, ants and flea infestations within your home without the use for harsh chemicals. According to the website for Pest Control Technologies, silica gels have been used by the pest control industry for more than a half century since they safely produce an electrostatic charge that helps them adhere to insects crawling over treated surfaces. Silica gel and diatomaceous earth have been found in studies to kill insects by removing a portion of the razor-thin, waxy outer coating that helps an insect conserve moisture, which allows them to work better than other products that relay on abrasion or poisoning.

5. Improves Joint, Bones and Ligaments Health

A 2007 study published in the *Journal of Nutrition Health and Aging* stated that dietary silicon is beneficial to bone and connective tissue and helps prevent low bone mass (osteoporosis), which is considered "a silent epidemic of the 21st century." Silica within DE helps with normal bone metabolism and joint formation, with evidence over the past 30 years suggesting there's a positive association between dietary silicon intake and better bone mineral density. Thus, DE makes a great addition to any osteoporosis diet and treatment plan.

A number of possible mechanisms for how this works have been suggested, including the possibility that silicon helps with synthesis of collagen (used to form joints, the lining of the digestive tract and connective tissue) and within the mineralization of bones. While more research is still needed, it appears that silica supplementation can be used to help support normal metabolic processes, preserve joint health and prevent bone disorders.

6. Helps Clean and Protect Skin, Nails and Teeth

Since it has natural abrasive qualities and kills parasites, DE is used in many toothpastes, skin exfoliators, polishes and skin scrubs. Just like other beneficial clays — like bentonite clay — it dries out harmful toxins and leaves behind clean, smoothed skin with little to side effects. It also seems to have antiaging effects by helping with the use of calcium in forming strong bones, nails and teeth.

Popular Diatomaceous Earth Uses

As mentioned, common products that contain diatomaceous earth include dusts, powders and pressurized liquids that are used on the outside of buildings, on farms, in gardens, and in human and pet foods.

What kind of benefits can you expect from using DE in these ways? These can include:

- improved digestion and more regular bowel movements
- better liver and colon functioning
- improved detoxification and removal of heavy metals
- stronger immune function and protection from illnesses
- a cleaner home, free from parasites, bed bugs and viruses
- healthier-looking skin, hair and nails
- stronger bones and protection from fractures or osteoporosis
- improved joint and ligament health
- improved energy
- for dogs and cats, cleaner skin and flea control

Diatomaceous earth is safe for humans and animals to consume and also beneficial for skin, so it's used both inside and outside the body. The Food and Drug Administration lists food grade diatomaceous earth as "Generally Recognized as Safe," which means it's legally allowed to be added to many different types of foods, beverages and supplements. Small amounts of silica are normally present in all body tissues and usually found in urine, too, so it's well-tolerated and not known to cause many side effects.

Today, there are over 150 pesticide-related products registered for use both indoors and outdoors that contain DE. There are also thousands of non-pesticide, food grade diatomaceous earth products that are used on the skin, in food, and in supplements or medications.

Some of the most popular diatomaceous earth uses include:

- pet nutrition products
- products used on dogs and cats to kill fleas
- bed bug-killing treatments
- sprays and products used for insect control, including cockroaches, crickets, fleas, ticks, spiders
- rodent sprays
- water filters
- skin care products
- toothpastes
- foods and beverages, such as in beer and wine

- anti-caking and clarifying ingredients used in food manufacturing
- supplements and medicines
- rubbers and paints used in construction
- abrasive products used as defoliators and for cleaning

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