

## Absorb Toxins and Poisons in the Digestive Tract with Activated Charcoal

Activated charcoal has been treated by heat to open up millions of small spaces between the carbon atoms and turn it literally into an atomic sponge that adsorbs both organic and organic impurities.

This heat treatment is carried out in the absence of oxygen, so the charcoal cannot burn. Instead, what oxygen it did contain is driven off leaving behind all of these interstitial gaps that multiply the effective surface area by factors of ten. Since it is the surface area of the charcoal that determines its potency, then the greater this is the better.

Activated charcoal has a massive surface area, and just ten grams has the same surface area as nine American football pitches or 77 tennis courts. Ten grams is just marginally more than a third of an ounce. The term adsorb has a different meaning to absorb, and while a real sponge absorbs water by mopping it up through capillary action and suction, activation carbon adsorbs substances through a form of chemical attraction. You get rid of water from the sponge by squeezing it, but that doesn't work with activated charcoal, since the substances are bound to it, not just physically constrained.

This huge surface area provides activated charcoal with innumerable bonding sites, and when chemicals that are attracted to carbon pass by they are attached to the surface. They cannot get free again, as water in a sponge can, but are bound to the surface of the carbon. Because the digestive system has no effect on charcoal then whatever is bound to it passes naturally through the body.

It is most effective at binding other carbon-based materials, and other substances with the right electronic arrangement, but others will just pass straight through. Because it is a chemical process, once all of the empty bonding sites have been taken up, the charcoal loses its effectiveness and has to be replaced. It is possible to regenerate it, but hardly worthwhile for you to do so because of the small quantities you use.

Because of the way it works, activated charcoal can help people to recover from some forms of food poisoning. It can adsorb gases in the intestine and help to relieve the pain of excessive gas in the gut. It has many additional uses that will be touched on later, but for now we will look at its effect on poisons because that is where activated charcoal is of greatest benefit to us.

It does not adsorb and neutralize all poisons, but is very effective with those that it can be sued for. Professor Touery proved a point when he drank a lethal dose of strychnine in front of colleagues at the French Academy of Medicine in 1831 and came through unscathed. He had mixed the strychnine with activated charcoal, and the fact that he lived after drinking a dose that would certainly have led to a very painful death within minutes testifies to the powerful effect of activated charcoal as a potential antidote for poisoning.

Every medicine cabinet should have an emergency supply of activated carbon, especially those with young children in the household. However, this is not good news for the pharmaceutical companies who have reacted by refuting some of the claims made in its favor: they have claimed that it is not effective against arsenic. If that is so, then how did Michel Bertrand survive after swallowing 5 grams of arsenic trioxide – 150 times what is regarded as the lethal dose? He did this in 1813 after mixing it with activated charcoal, just as Professor Touery was to do 18 years later with ten times the lethal dose of strychnine.

It is true, however, that it does not have this degree of activity with all poisons, and it has no effect on cyanide, alcohols, antifreeze (glycols) and lithium. It also has no effect on corrosive poisons such as the strong alkalis used in oven cleaners, or hydrocarbons such as kerosene. The way it works is adsorb the poison and prevent it being released into the body. For that to happen, the poison must have an affinity for carbon, and its adsorption site, and not all substances possess that property. Those that do however are permanently bound and therefore safe.

For charcoal to be effective in neutralizing a poison, it must be swallowed within an hour of taking the poison, or the poison will be too far advanced in the digestive process for the charcoal to do any good. Keep in mind, though, that it is not selective, and activated charcoal can adsorb nutrients and other beneficial constituents of your body's chemistry. It is important therefore that you take it only when necessary: you might need several doses if the poison was severe, but once it has done its job it is not meant to be used as a maintenance material to take 'just in case'. Used like that, it can do harm.

If charcoal can adsorb poisons then it makes sense to believe that it can also adsorb some of the harmful agents that cause food poisoning. Not all food poisoning is of course, but certainly those organisms that emit toxins that are attracted to carbon. And this is, in fact, the case. Food poisoning is caused by bacteria rather than viruses, and is not the presence of the bacteria that make you vomit and feel very ill.

As bacteria grow in your body they release toxins, or poisons, into your digestive system. These poisons are what make you ill. They can seriously affect the complete gastro-intestinal tract, causing vomiting, diarrhea, and inflammation and swelling of the small and large intestine. The latter can

cause abdominal cramps and severe colic, and the severity of the symptoms depends very much upon the type of bacteria and the number of them in your body.

Many of these toxins are attracted to carbon since they are frequently organic based, and activated charcoal can be used to adsorb them. Once adsorbed they lose their potency, and since carbon is not digested by the body, they are passed harmlessly through the colon and eliminated in the faeces. It can also be used to eliminate many other foreign bodies from your gut, including viruses and fungi and might possibly reduce the concentration of uric acid, which can bring relief to gout sufferers.

Activated charcoal has many uses, and is normally available in capsule form. It can be dangerous to take too much, particularly if you suffer from intestinal problems that cause constipation, because the charcoal itself can have that effect. However, there is no better emergency treatment for accidental poisoning in the home, although, since it is not suitable for all poisons, you must still regard poisoning as an emergency and contact the emergency services.

Activated charcoal, or activated carbon as it is sometimes called, is also a good emergency treatment for vomiting and the other unpleasant effects of food poisoning. It deals with bacterial toxins in the same way as any other, though once again you must refer to your physician before or after using it – preferably the former.

### About the Author

More information on activated [charcoal for stomach problems](#) such as food poisoning is available at VitaNet &reg;, LLC Health Food Store.  
<http://vitanetonline.com/>

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