

Sorbitol Administered with Activated Charcoal... Is it Necessary?

Activated charcoal is often administered to poisoned patients to decrease the absorption of the drug/toxin. Many hospitals and Emergency Medical Services use activated charcoal products that also contain sorbitol. Sorbitol is a cathartic, as are magnesium sulfate and sodium sulfate. Cathartics have been advocated to decrease the absorption of poisons by accelerating the transit of the poison through the gastrointestinal tract. In addition, sorbitol is sweet and improves the palatability of activated charcoal. But, are cathartics such as sorbitol safe, effective and necessary?

There is no evidence to suggest that the combination of activated charcoal and a cathartic is more effective in limiting the absorption or toxicity of a poison/drug than activated charcoal alone. Some advocate the use of sorbitol to reduce the risk of constipation; however, constipation is not a complication of a single dose of activated charcoal. Multiple doses of activated charcoal are sometimes recommended to enhance drug elimination. In these circumstances, constipation can occur. If at least four doses of activated charcoal are administered, a cathartic such as sorbitol should be given but only once. Cathartic use is not without risks. Adverse effects from repeated use or use in small children include dehydration, electrolyte abnormalities, hypotension, and elevated serum osmolality. Deaths have been reported due to severe fluid and electrolyte abnormalities after several doses of activated charcoal/sorbitol mixtures.

In short, sorbitol and other cathartics are not necessary and can be potentially harmful if given in repeat doses. Administration of activated charcoal without a cathartic is recommended in adult and pediatric patients. If a cathartic is used with multiple dose activated charcoal regimens, it should be limited to a single dose to minimize the risk of adverse effects.

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DID YOU KNOW THAT... The Maryland Poison Center surveys hospital pharmacies yearly to find out what antidotes are being stocked?

Some antidotes such as Crofab® and Antizol® are not often used and are not always stocked in adequate quantities. The Maryland Poison Center keeps track of which hospitals have these antidotes and assists in locating and obtaining antidotes from nearby hospitals if needed. One more reason to call the Maryland Poison Center about all of your poisonings!



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