Activated Charcoal (Actidose)

Activated charcoal (Actidose) is an agent that binds to poisonous chemicals to prevent toxicity. This drug is indicated to remove ingested large molecule poisons containing carbon. Side effects may include black stools and GI distress characterized by cramping, nausea, vomiting, diarrhea, constipation, and vomiting. Activated charcoal should be administered as soon as possible through oral or NG tube route. Administering this drug with an antidote may neutralize the anticipated effects.



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Mechanism

Binds to Toxins

Binds to Toxic-barrel

Activated charcoal irreversibly binds to large toxic molecules containing carbon atoms. Toxins that bind to this drug include acetaminophen, aspirin, NSAIDs, and tricyclic antidepressants. This chemical has a poor affinity to substances, such as heavy metals, caustics, corrosives, alcohols, chlorine, lithium, cyanide, iodine, and petroleum distillates. Since charcoal cannot be absorbed into the blood, the toxins that bind to charcoal are excreted in black-colored stools. The binding of toxins to activated charcoal decreases the exposure time in the stomach and intestines.

Indications

Ingested Poison

Swallowed Poison from Poison-bottle

Since activated charcoal adsorbs certain chemicals, this agent is indicated to remove ingested poisons that may cause toxic effects. Because the degree of toxic removal decreases with time, activated charcoal should be administered as soon as possible after poison ingestion.

Side Effects

Black Stool

Black Intestine-stool

Since activated charcoal turns stools black, warn the patient that this is an expected and harmless side effect of the chemical.

GI Distress

GI with Flare-gun

Activated charcoal may cause GI distress, such as nausea, vomiting, diarrhea, constipation, or abdominal cramping. In some instances cathartics, such as sorbitol are administered with the first dose of activated charcoal to stimulate intestinal motility and increase elimination. Rapid administration of this drug may induce vomiting. Since GI distress is a common side effect, activated charcoal is contraindicated in patients with bowel perforation or obstruction.

Considerations

Give As Soon As Possible

ASAP-watch

Activated charcoal should be administered as soon as possible after poison ingestion. Approximately 90% of the ingested poison may be adsorbed if activated charcoal is given within 30 minutes of exposure. This amount is decreased significantly if given 1 hour after toxin exposure.

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Via Mouth or NG Tube

Mouth and Nose-stomach Tube

If the patient is alert and awake, activated charcoal is administered via mouth. This medication may be administered through an NG tube, if the patient cannot tolerate the taste or vomits the initial dose.

Gastric Lavage

Stomach Lava

The stomach may be pumped within 30 minutes of ingesting toxic substances. Activated charcoal is often administered after gastric lavage to remove any poisonous substances that have reached beyond the stomach.

Do Not Administer with Antidotes

Antidote-agent Not Allowed

Activated charcoal may absorb an antidote and neutralize their beneficial effects. Do not administer an antidote immediately before, during, or after giving the patient activated charcoal.

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