

**CHARAC-50
&
CHARAC-25**

**ACTIVATED CHARCOAL
(222mg/mL)**

ORAL ANTIDOTE FOR ADSORPTION OF INGESTED POISONS

Description:

Aqueous suspension of Activated Charcoal USP (micronized) in purified water.

Pharmacology:

Activated charcoal is an effective, nonspecific adsorbent of a wide variety of drugs and chemicals. Its adsorptive power is primarily due to the very large internal surface areas associated with the numerous tiny pores which develop in the charcoal during activation. To be adsorbed, a drug or poison molecule must reach the external surface of the charcoal, diffuse inside, and then travel by molecular diffusion through the pore network until a vacant adsorption site is found.

In the presence of food, a higher dose is needed because of competitive inhibition with adsorption. The charcoal should be given as soon as possible after the ingestion for optimal effects on drug absorption.

Activated charcoal not only inhibits drug absorption but may also increase the nonrenal clearance of drugs that have already been absorbed and are in the systemic circulation, it has been proposed that adsorption of drugs in the intestinal lumen by activated charcoal prevents their diffusion into the general circulation, which reverses the concentration gradient between the plasma and the lumen and favors further diffusion of drug into the gastrointestinal tract from the blood. The charcoal must be given repeatedly to replace that which is excreted in the feces. Use of activated charcoal to enhance clearance of drugs from the body does not preclude the use of standard procedures, such as dialysis and alkalization of the urine, to increase drug clearance.

Activated charcoal is not absorbed in the gastrointestinal tract nor is it metabolized. It is excreted in feces.

Drug Interactions: The use of charcoal may enhance the clearance of medications used to treat intoxicated patients, necessitating more frequent administration of these drugs. Syrup of ipecac is adsorbed by charcoal and ipecac reduces the adsorptive capacity of the charcoal. If both charcoal and ipecac are to be used, it is recommended that the charcoal be administered only after vomiting has been induced and completed.

Oral antidotes (e.g. n-acetylcysteine) may also be adsorbed by activated charcoal. The use of activated charcoal is discouraged where such oral antidote therapy is needed.

Activated charcoal is not to be used when a neutralizing agent is to be used, e.g. sodium bicarbonate for iron poisoning.

Indications:

For use as an emergency antidote in treatment of poisoning by most drugs and chemicals. However, activated charcoal does not adsorb cyanide and is relatively ineffective in adsorbing lithium salts, caustic or corrosive alkalis and acids, methanol, iron salts, sodium chloride, lead, boric acid, other mineral acids and petroleum distillates.

Precautions:

Should not be given with an emetic as it diminishes the action of the emetic.

Activated charcoal should not be administered to comatose or unconscious patients, during epileptic episodes or if the gag reflex is absent.

Pregnancy and lactation: Problems in humans have not been documented during pregnancy or breast feeding.

Ice cream or sherbet should not be used as a vehicle for the administration of activated charcoal since they will decrease the adsorptive capacity of the activated charcoal.

Do not use if caustic or corrosive substances have been ingested as charcoal may reduce the endoscopic visualization of esophageal erosions or burns.

Adverse effects:

Activated charcoal appears to be non-toxic when given by mouth, although regular ingestion may affect the normal gastrointestinal absorption patterns.

Charcoal will color stools black which may be alarming to the patient although medically non significant.

Vomiting may occur if administered too rapidly. Constipation may occur, but may be overcome by the use of saline cathartics or sorbitol.

Aspiration has been reported, causing airway obstruction. The charcoal solution should be adequately diluted and administered slowly to avoid such problems.

Rarely bowel obstruction may occur.

Chronic exposure to activated dust is non toxic.

Administration:

Shake well before using.

Oral: cut off delivery tip and insert drinking straw.

Gastric tube: cut off delivery tip, insert end into gastric tube and squeeze bottle lightly to evacuate contents into tube.

Dosage: Administer slowly over 15 minutes to minimize gastric distention and resulting emesis.

CHARAC-25: single pediatric dose 60 to 112.5mL (13 to 25g of activated charcoal)

CHARAC-50: single adult dose 60 to 225mL (13 to 50g of activated charcoal).

Available:

CHARAC-50: aqueous Suspension of 50g of Activated Charcoal USP (micronized) in purified water USP (50g/225mL).

CHARAC-25: aqueous Suspension of 25g of Activated Charcoal USP (micronized) in purified water USP (25g/112.5mL).

Storage: Store between (15°-30°C).