

Bulk forming agents can improve stool consistency in patients with colostomy. Generous amounts of water must be taken with all bulk-forming agents. The choice among different bulk-forming agents is a matter of personal preferences.

STOOL SOFTENER

Docusates (Dioctyl sodium sulfosuccinate; DOSS) It is an anionic detergent, softens the stools by net water accumulation in the lumen by an action on the intestinal mucosa. It emulsifies the colonic contents and increases penetration of water into the faeces. By a detergent action, it can disrupt the mucosal barrier and enhance absorption of many nonabsorbable drugs, e.g. liquid paraffin—should not be combined with it. It is a mild laxative; especially indicated when straining at stools must be avoided.

Dose: 100–400 mg/day; acts in 1–3 days.

CELLUBRIL 100 mg cap, **LAXICON** 100 mg tab, **DOSLAX** 150 mg cap.

As enema 50–150 mg in 50–100 ml;

LAXICON 125 mg in 50 ml enema.

Cramps and abdominal pain can occur. It is bitter; liquid preparations may cause nausea. Hepatotoxicity is feared on prolonged use.

Liquid paraffin It is a viscous liquid; a mixture of petroleum hydrocarbons, that was introduced as a laxative at the turn of 19th century. Millions of gallons have passed through the intestinal pipeline since then. It is pharmacologically inert. Taken for 2–3 days, it softens stools, retards water absorption and is said to lubricate hard scybali by coating them.

Dose: 15–30 ml/day—oil as such or in emulsified form.

Disadvantages

- (a) It is bland but very unpleasant to swallow because of oily consistency.
 - (b) Small amount passes into the intestinal mucosa—is carried into the lymph → may produce foreign body granulomas in the intestinal submucosa, mesenteric lymph nodes, liver and spleen.
 - (c) While swallowing it may trickle into lungs—cause lipid pneumonia.
 - (d) Carries away fat soluble vitamins with it into the stools; deficiency may occur on chronic use.
 - (e) Leakage of the oil past anal sphincter may embarrass.
 - (f) May interfere with healing in the anorectal region
- Thus, it should be used only occasionally.
- CREMAFFIN:** Liquid paraffin 3.75 ml, milk of magnesia 11.25 ml/15 ml emulsion, **AGAROL:** Liquid paraffin 4.8 ml with glycerine and sorbitol in 15 ml aqueous emulsion.

STIMULANT PURGATIVES

These are powerful purgatives; often produce griping. The mechanism of action is not clearly known. Some of them directly increase gut motility by acting on myenteric plexus neurones. However, the more important made of action appears to be accumulation of water and electrolytes in the gut lumen by altering absorptive and secretory activity of the mucosal cell. They inhibit $\text{Na}^+\text{K}^+\text{ATPase}$ at the basolateral membrane of villous cells, thereby transport of Na^+ and accompanying water into the interstitium is reduced. Secretion is enhanced by activation of cAMP in crypt cells (*see* Fig. 49.1) as well as by increased PG synthesis. The laxative action of bisacodyl and cascara is shown to be partly dependent upon increased NO synthesis or action in the colon.

Larger doses of stimulant purgatives can cause excess purgation resulting in fluid and electrolyte imbalance. Hypokalaemia can occur on regular intake. Routine and long-term use must be discouraged, because it can produce colonic atony. They can reflexly stimulate gravid uterus, therefore are contraindicated during pregnancy. Subacute or chronic intestinal obstruction is another contraindication.

Diphenylmethanes

Bisacodyl Administered orally, this synthetic diphenylmethane purgative is absorbed in the intestine and excreted in bile to undergo partial enterohepatic circulation. After activation in the intestine by deacetylation, it irritates colonic mucosa to increase fluid secretion, as well as stimulate enteric neurones to promote peristaltic movements.

One or two semiformed motions occur after 6–8 hours. Optimum doses vary considerably among individuals. The average dose is:

Bisacodyl 5–10 mg oral at bed time; 10 mg (adult), 5 mg (child) suppository in morning. **DULCOLAX** 5 mg tab; 10 mg (adult), 5 mg (child) suppository; **CONLAX** 5 mg, 10 mg suppository.

Orally, this dose may be ineffective in some individuals, but produces fluid evacuations and cramps in others. Morphological alterations in