

MIRACLE Academy

قال تعالى (يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ)

تفريغ OTC
زميلتكم سارة جرادات



لجان الدفعات

Laxatives

b. Bulking Agent; Bulk-Forming Agent



Are those that **most closely copy the normal physiological mechanisms** involved in bowel evacuation and are considered by many to be **the laxatives of choice** (Fibers).

Bulk-forming laxatives are **indigestible, hydrophilic colloids** that **absorb water, forming a bulky gel that distends the colon and promotes peristalsis.**

← بتکوٹے Gel داخل الأمعاء بزرگ سے قعد جبرحت الـ Colon و بزرگ الـ peristalsis بوجس الـ bowel evacuation

→ slow onset of action

The laxative effect can **take several days** (12-24 hours but may **require 3 days** in some individuals) to develop.

Constipation

b. Bulking Agent; Bulk-Forming Agent

عقيدة عند الأشخاص الذين يعانون من صعوبة في استهلاك الألياف
Fiber
من الخضراوات والفواكه.

Psyllium, ispaghula, methylcellulose are especially **useful** where patients have **difficulty in increasing their intake of dietary fiber using fruit, vegetables and bran** (نخالة).

• Advice by the pharmacist

زيادة تناول السوائل

It's **necessary to increase fluid intake** with **bulk laxatives**. Inadequate fluid intake → risk of intestinal obstruction.

يخلطها مع كوب من السوائل
ويفضل شرب كوب من السوائل بعدها كحاف

In the form of **granules or powder**, the **preparation** should be **mixed with a full glass of liquid** (e.g. fruit juice or water) before taking and ideally **followed by a further glass of liquid**.

Fruit juice can mask the bland taste of the preparation.

* بتسحب الماء water يك تجوف الأمعاء .

c. Osmotic laxatives

Laxatives

Contain substances that are poorly absorbable and draw water into the lumen of the bowel. Lactulose and polyethylene glycol (PEG); also known as **Macrogol**, are common examples.

* *الاشهر* → *تتم في عمليات*
once we need a rapid response, Colonoscopy → to clean the colon. *تكون effect سريع in hours*

May take 1-2 days to work.

- Lactulose is generally **not recommended as a first-line agent** for the treatment of constipation because it is **costly** and may **cause flatulence, nausea, and abdominal discomfort or bloating**.



Laxatives

*Act as a surfactant to increase the water content in the feces to enhancing elimination.

d. **Emollient Laxatives** (Stool Softeners)

Anionic surfactants that enable additional water and fats to be incorporated in the stool, making it easier for them to move through the gastrointestinal tract.

They may be administered orally or rectally.

* To prevent development of constipation (**prophylactic**); e.g. after rectal or abdominal surgery and **are of little or no value in treating long-standing constipation**.

ex:-

Docusate Calcium, **Docusate Sodium**, **Docusate Potassium**.

Docusate sodium appears to have both **stimulant** and **stool-softening** effects and acts **within 1-2 days**.

Hemorrhoids
Fissures
حالات

Laxatives

e. ~~Lubricant laxatives-Glycerin~~

- Has been available for many years in suppository dosage form.
- Poorly absorbed
- It induces bowel motion within 30 min. *rapid onset ✓*
- Complicated with rectal irritation.
- They are considered to be safe for occasional use in all age groups.



Laxative abuse

- Two groups of patients are likely to abuse laxatives:

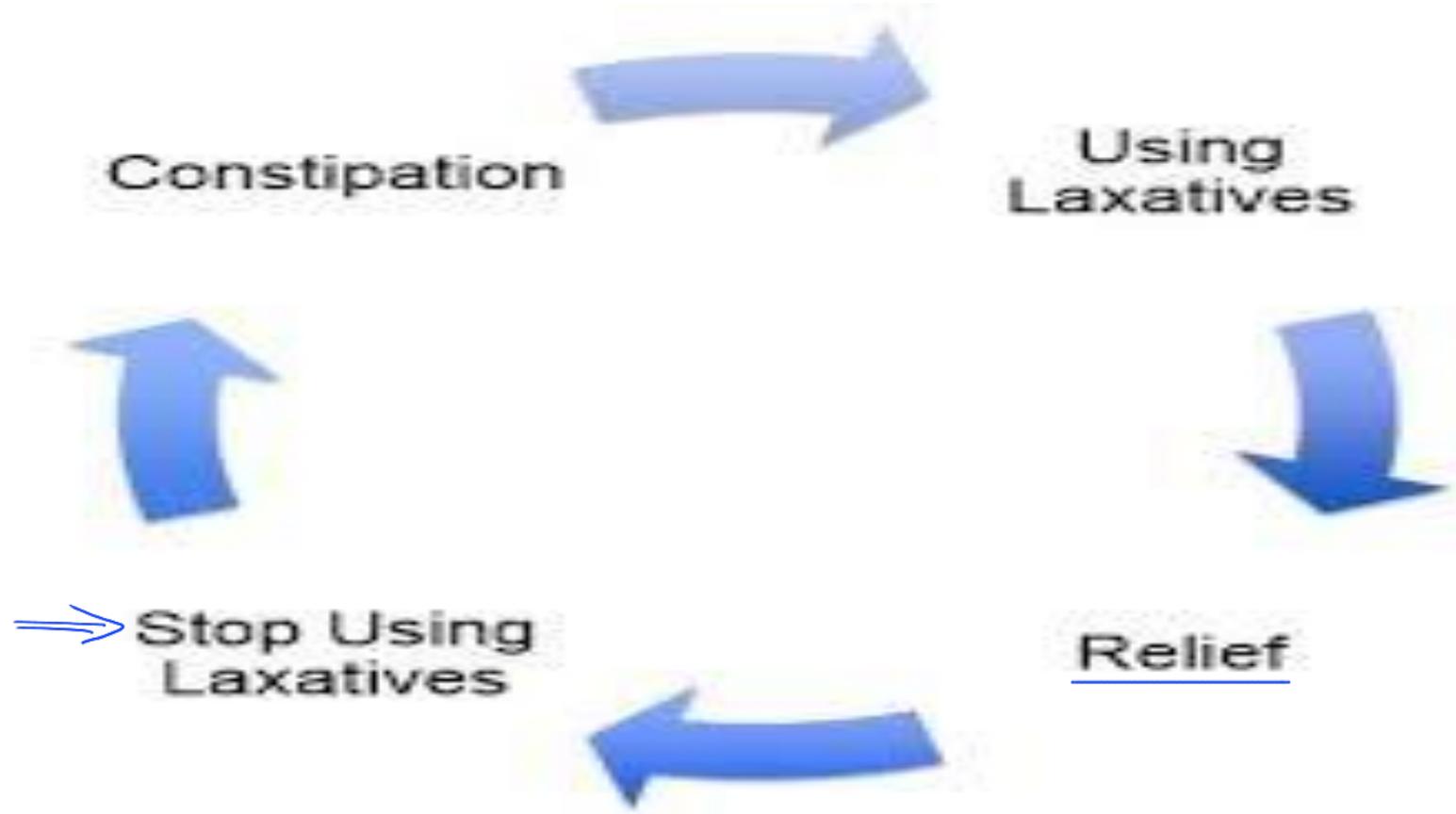
1- laxative dependency ⇒ dependent on laxatives to have bowel movement
علاج يعتمد لفنفس في حركة الأمعاء مع الوقت

بنت لوها بكن معزط لفنة انك الوزن

2- People who take laxatives in the belief that they will control weight, e.g. eating disorders such as anorexia nervosa and bulimia

- The pharmacist is in a good position to counsel and monitor laxative use

Constipation and Laxative Dependency



Special population

Pregnancy and lactation

Constipation commonly occurs during pregnancy:

①

Hormonal changes are responsible (reduce the contractility of the intestine).

②

Oral iron, often prescribed for pregnant women, may contribute to the problem.

Dietary advice concerning the intake of **plenty of high-fiber foods and fluids can help.**

→ * Castor oil

Stimulant laxatives are best avoided during pregnancy.

* + **Bulk-forming laxatives** are preferable, although they may cause some abdominal discomfort to women when used **late in pregnancy**.

+ Glycerin ✓

خاصة في الأشهر الأخيرة من الحمل .

Special population

Children

- **Nonpharmacological methods**, such as **increasing the amount of fluid**
- If nonpharmacological methods **do not work**, **rectal stimulation may be useful**. Pharmacological agents that can be **used for acute relief** include **glycerin suppositories**.
- **Nonprescription laxatives** approved for **self-care in children** ages **5 to younger than 12 years** include:
 - ① – **Oral bulk-forming laxatives**,
بکھیات ماروسہ، اکیریشہ
فنی ای بیخترها ال Adults
 - ② – Rectal products include **glycerin suppositories**

Special population

Elderly

First choice: Bulk-forming

مخاوف من حدوث جفاف مع الاستخدام الشدي للملينات.

- A **major concern with geriatric patients** is the possible **loss of fluid** that can be induced by **aggressive laxative treatment**.
- If **medication adjustments** and **lifestyle changes** do not provide **adequate relief**, **laxative therapy** is needed.
- **Bulk-forming laxatives** can be **considered a first step**. **Sugar-free** products are **recommended** for **patients with diabetes**.
- **Stool softeners** (e.g., **docusate**) may be **helpful in older adults** with **anal fissures** or with **hemorrhoids** that cause **painful defecation**.

Laxatives in hepatic impairment

- Because most laxatives are not absorbed or metabolized extensively, they can usually be used without difficulty in patients.
- with hepatic impairment. In fact, they are used therapeutically in hepatic encephalopathy to decrease absorption of ammonia dietary protein in the GI tract. Lactulose is usually given.

يمكن ما يكون عند
Constipation
→ Lactulose
و لكن يتم اد
حتى يتلاص إسهال الأمونيا من ال (GIT).

Drug selection

- Choice of a laxative or cathartic depends on the reason for use and the client's condition.

1. For long-term use of laxatives or cathartics in patients who are elderly, unable or unwilling to eat an adequate diet, or debilitated, **bulk-forming laxatives usually are preferred.** However, because obstruction may occur, these agents should not be given to patients with difficulty in swallowing or adhesions or strictures in the GI tract, or to those who are unable or unwilling to drink adequate fluids.

ما ينطبقه للأشخاص عندهم مشاكل في البلع أو تناول كميات كبيرة من السوائل

1 2 3 4

Drug selection

2. For patients in whom straining is potentially harmful or painful, stool softeners (eg, docusate sodium) are the agents of choice.

الأستخدام العرضي زلي عمليات التنظير ← بنسبة highly effective laxative

3. For occasional use to cleanse the bowel for endoscopic or radiologic examinations, saline or stimulant cathartics are acceptable, polyethylene glycol–electrolyte solution, bisacodyl). These drugs should not be used more than once per week. Frequent use is likely to produce laxative abuse.

(Osmotic laxative)

Stimulant laxative

الأستخدام المتكرر

* تقييماً ليعم
باعتبارها

Drug selection

4. Saline cathartics containing sodium salts are contraindicated in patients with edema¹, renal disease² or congestive heart failure³ because enough sodium may be absorbed to cause further fluid retention and edema.

Patient education

* تتریباً کل امشی حکیناه .

Nondrug Measures

- Use nonpharmacological methods such as a high-fiber diet (goal is 25–35 grams per day), adequate fluid intake, and exercise to foster regular bowel movements.
- Increase dietary fiber by eating foods containing wheat grains, oats, fruits, and vegetables.
- Avoid constipating foods such as processed cheeses and concentrated sweets.
- Drink plenty of fluids (six to eight 8-ounce glasses a day) to aid in stool softening and to facilitate fecal evacuation.
- Develop and maintain a routine exercise program. Walking can be beneficial if your cardiovascular system is healthy and if you have no other apparent health risks.
- Establish a regular pattern for bathroom visits. Do not delay responding to the urge to defecate; allow adequate time for elimination in a relaxed, unhurried atmosphere.
- Maintain general emotional well-being and avoid stressful situations.

Nonprescription Medications

- Do not routinely take laxatives if your bowel habits are interrupted for a day or two, or to routinely “clean your system.”
- Do not give laxatives to children younger than 6 years unless the use is recommended by a primary care provider.
- If you have kidney or liver disease, heart failure, hypertension, or other conditions requiring sodium, potassium, magnesium, or calcium restriction, do not use laxative products whose maximum daily dose contains more than 345 mg (15 mEq) of sodium, 975 mg (25 mEq) of potassium, 600 mg (50 mEq) of magnesium, or 1800 mg (90 mEq) of calcium.
- Consult your primary care provider before using laxatives if you currently have or have a history of any of the following conditions: colectomy, ileostomy, diabetes, heart disease, kidney disease, or swallowing difficulties.
- Consult a primary care provider or pharmacist before using a laxative product if you are taking anticoagulants (blood thinners), digoxin (a heart medicine), sodium polystyrene sulfonate (a treatment for high potassium levels), or tetracycline antibiotics.
- Avoid taking laxatives within 2 hours of taking other medications.
- Take most laxatives at bedtime, especially if more than 6–8 hours are required to produce results.
- Discard any medications that are outdated, that appear to have been tampered with, or that have an unusual appearance.

Patient education

Bulk-Forming Laxatives

- Unless a rapid effect, such as cleaning out the bowel for a diagnostic procedure or X-ray, is needed, take a bulk-forming laxative. **Be sure to drink at least 8 ounces of fluid with each dose to prevent intestinal obstruction.**
- Use bulk-forming agents with caution if you have diabetes or are on a carbohydrate-restricted diet. These agents have a high caloric content per dose and contain sugar.
- Do **not give sugar-free bulk-forming products to patients with phenylketonuria**. Such products may contain aspartame, which contributes excessive levels of phenylalanine, an amino acid these patients cannot metabolize.



Hyperosmotic Laxatives

- **Do not take the medication in larger than recommended amounts.**
- When using PEG 3350 (MiraLAX), use the provided cap to measure the prescribed dose. Mix the powder with a full glass (8 ounces or 240 milliliters) of liquid such as water, juice, soda, coffee, or tea.
- **Use of glycerin may be inappropriate in patients with a previous condition that caused rectal irritation.**

Stimulant Laxatives

- **Do not use castor oil to treat constipation except under the advice of a primary care provider.**

Lubricant Laxatives

- **Do not give mineral oil to children younger than 6 years of age, pregnant patients, older patients, or patients taking anticoagulants.**
- **Do not take mineral oil with emollient laxatives.**
- To avoid delaying the absorption of foods, nutrients, and vitamins, do not take mineral oil within 2 hours of eating.



Do not take laxatives if you have any symptoms of appendicitis (i.e., abdominal pain, nausea, vomiting), rectal bleeding, painful anal or rectal conditions, bloating, or cramping. See a primary care provider immediately.



If symptoms of constipation are unrelieved by nondrug measures or by 1 week of any laxative treatment, see a primary care provider. Chronic constipation may be a symptom of an underlying medical condition.

HINTS AND TIPS BOX 7.6: CONSTIPATION

Administration of
suppositories

1. Wash your hands.
2. Lie on one side with your knees pulled up towards your chest.
3. Gently push the suppository, pointed end first, into your back passage with your finger.
4. Push the suppository in as far as possible.
5. Lower your legs, roll over onto your stomach, and remain still for a few minutes. If you feel your body trying to expel the suppository, try to resist this. Lie still and press your buttocks together.
6. Wash your hands.

NOTE: For some suppositories, such as glycerol, it is recommended that the suppository be dipped in water before insertion.

Sachets containing
ispaghula husk

Once the granules have been mixed with water, the drink should be taken as soon as the effervescence subsides because the drink sets and becomes undrinkable.

Prolonged use of lactulose

In children, this can contribute to the development of dental caries. Patients should be instructed to pay careful attention to dental hygiene.

Lactulose taste

The sweet taste is unpalatable to many patients, especially if high doses need to be taken.

Bisacodyl

Bisacodyl tablets are enteric-coated, and patients should be told to avoid taking antacids and milk at the same time because the coating can be broken down, leading to dyspepsia and gastric irritation.

Laxative abuse

Some people, especially young women, use laxatives as a slimming aid. Any very slim person who is regularly purchasing laxatives should be politely asked about why they are taking the laxatives. An opening question could be phrased, 'We've noticed that you have been buying quite a lot of these, and we are concerned that you should be better by now. Is there anything we can do for you to help?'

Onset of action

Stimulants are the quickest-acting laxative, usually within 6–12 hours. Lactulose and bulk-forming laxatives may take 48–72 hours before an effect is seen. Stool softeners are the slowest in onset, taking up to 3 days or more to have an effect.

Which laxative to use in
pregnancy?

Fibre supplementation and bulk-forming agents are considered to be safe and should therefore be first-line treatments wherever possible. Stimulant laxatives and macrogols also appear to be safe in pregnancy. Stimulant laxatives are more effective than bulk-forming laxatives but are more likely to cause diarrhoea and abdominal pain.

Avoid drinks with caffeine

These can act as a diuretic and serve to make constipation worse.

Combining laxatives

There is little evidence on the beneficial effect of combining different classes of laxatives. However, in refractory cases, this approach might be justifiable.