

E. Constipation

Constipation is characterized by findings and complaints that are based largely on the frequency and difficulty of bowel movements.

Constipation is considered to be present when the frequency of bowel movements is less than once in 2-3 days.

Constipation assumes pathologic significance by its subjective features, i.e., straining heavily at stool, painful defecation, and a feeling of incomplete evacuation.

Constipation is often accompanied by other types of discomfort such as abdominal cramping, a feeling of fullness, or autonomic dysfunction.

Constipation alternating with bouts of diarrhea is a feature of IBS.

Treatment of Constipation

- Fibrous foods and teas (laxatives)
- Water
- Exercise
- Abdominal massage

- **In phytotherapy;**
 - **Bulk forming agents**
 - **Linseed**=*Linum usitatissimum*.
 - **Wheat bran**
 - **Psyllium seed**=*Plantago* species.
 - **Agar**
 - **Anthraquinones-containing herbs/teas**
 - **Rhubarb root** (*Rheum palmatum*, *R. officinale*)
 - **Buckthorn bark** (*Rhamnus frangula*)
 - **Senna pods/leaves, Folia Sennae** (*Cassia acutifolia*, *C. angustifolia*)
 - **Aloe spp.**

- **Bulk forming agents;**
 - These products are consisting of bulking and swelling agents, are gentle, low risk laxatives that stimulate the physiologic effects of a high fiber diet.
 - These substances stimulate bowel activity through their mechanical, bulk producing action and hasten the transit of fecal material through the intestinal tract.
 - The celluloses, hemicelluloses, lignins, and pectins contained in bulk-forming agents are resistant to human digestive enzymes so they pass unchanged through the small intestine into the colon.

Treatment of Constipation Bulk forming agents

*Linseed, *Linum usitatissimum*, Keten tohumu*

- Seeds used as drug.
- It is widespread and cultured in Anatolia.
- Seeds contain 3-10 % of mucilage.
- Seeds are used as laxative,
- Infusions are used as protection against inflammation and irritations of the digestive system.
- It is used as emollient topically.
- Use in irritable colon syndrome is approved by Commission E (30 g)

Treatment of Constipation

Linseed, *Linum usitatissimum*, Keten tohumu

- It should be used for 2-3 days at least.
- If abdominal pain occurs or no effect after 48 hours intaken should be stopped.
- It may delay drug absorption.

Treatment of Constipation

Wheat Bran (Bulk forming agent)

- Wheat bran is the outer part of the seeds of *Triticum aestivum*.
- It contains water, protein, fat, carbohydrate, lignan, vitamin and minerals.
- It is not recommended to people who with gluten allergy and under 2 years of age.

Treatment of Constipation (Bulk forming agents)

Plantago lanceolata, Plantain, Karnıyarık otu

- Seeds are used as a laxative drug.
- Contains mucilage and hemicellulose.
- It is effected within 6-12 hours.
- It mechanically stimulates the intestine and accelerates the peristaltic movements.

Treatment of Constipation

Agar

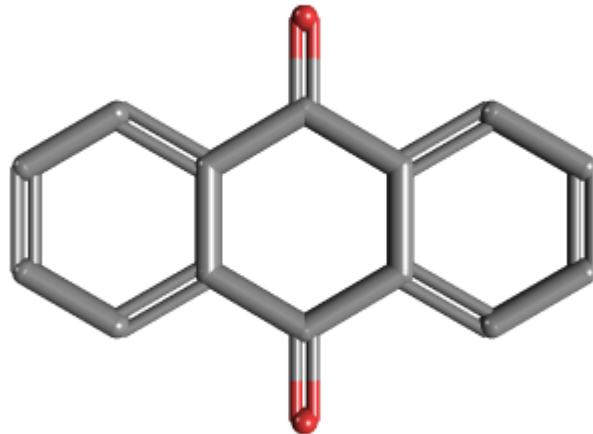
- It is produced from Red Algae.

Gracillaria lichenoides, Eucheuma spinosum, Gelidium amansii

- It contains 65% mucilage.
- It passes through the gastrointestinal tract without digesting.

Treatment of Constipation

- Anthraquinone-containing herbs/teas
 - Rhubarb root (*Rheum palmatum*, *R. officinale*)
 - Buckthorn bark (*Rhamnus frangula*)
 - Senna pods/leaves, Folia Sennae (*Cassia acutifolia*, *C. angustifolia*)
 - *Aloe* spp.



Treatment of Constipation

Anthraquinone-containing herbs/teas

- They increase the colon motility by directly affecting mucosal receptors.
- Standardization is done on anthraquinone glycosides.
- Abdominal pain may occur during long-term use. Electrolyte and water loss can occur.
- They are contraindicated in intestinal obstruction, pregnancy and lactation.
- They might be interacted with cardiac glycosides.

Anthraquinones-containing herbs

Herb	Anthraquinones (%)	Daily dosage (g)
• Rheum	2-3	1
• Sennae (Leaf)	2-3	1
• Sennae (bark)	3-6	0.5-1
• Rhamnus (fruit)	3-4	1
• Frangula(bark)	6-9	0.5
• Cascara	8-10	0.5
• Aloe	20-40	0.1

Treatment of Constipation

Rheum spec. Rhubarb, ravent

- Roots and rhizomes of *Rheum officinale*, *Rheum palmatum* are used as drug.
- *R. ribes* (ışgın) grows in Turkey.
- It contains 3-12 % anthraquinones (emodin, crysofanol, rhein, aloemodin)
- The effect starts 8-12 hours later.

Treatment of Constipation

Rheum spec. Rhubarb, ravenel

- Anthraquinones are converted to active metabolites with hydrolysis by intestinal bacteria.
- Those with irritable colon syndrome may have spasms and cramps.
- Long term use in the elderly makes hypotension and weakness.
- It is not used in patients with intestinal obstruction and dehydration.
- It should not be used for more than 2 weeks.

Treatment of Constipation

Rhamnus frangula, Buckthorn, Barut Ağacı

- This herb consist of the dried bark from the trunk and branches of the buckthorn (*Rhamnus frangula*)
- It contains 6-9% of anthraquinone glycosides, the most important of which are glucofrangulin A and B.
- The cut and dried herb is frequent ingredient in commercially produced specialty teas.
- Powdered extracts are used for instant teas.

Treatment of Constipation

Rhamnus frangula, Buckthorn, Barut Ağacı

- The anthrones in the freshly dried herb are extremely potent, and the bark should be stored for at least one year before use aged artificially by heating it while exposing it to the air.
- **!! Use of the untreated fresh bark can cause severe vomiting and spasms !!**

Treatment of Constipation

Cassia angustifolia, Senna, Sinameki

- Leaves are used as a drug.
- It grows in Africa, India, Sudan wildly.
- It contains 25-35% anthraquinone glycosides.
- The key active compounds are sennosides A and B.
- It is effective laxative in the large intestine.
- Senna leaves are most commonly used in the form of teas, but extracts are frequently used in a wide variety of laxative products.

Treatment of Constipation

Aloe vera, Aloe, Sarisabir

- It grows in Africa, Mediterranean countries and India naturally.
- Latex carries anthraquinones (aloin A,B, barbaloin, emodin) and it has a strong laxative effect.
- Gel (from the body) does not contain anthraquinone. It is used as a moisturiser, emollient and scabicide.

Treatment of Constipation

Aloe vera, Aloe, Sarsaparilla

- The effect starts after 6-12 hours.
- It is not used in children under 10 years of age.
- It should not be used the people who have intestinal obstruction and acute inflammation.
- It should not be used more than 1-2 weeks.
- It can cause a mutagenic effect.
- It can cause the loss of K, therefore it may reduces the effectiveness of cardiac glycoside.

Treatment of Constipation

Suggested formulations

- Laxative tea I
- Senna leaves 60
- Fennelseed 10
- Chamomile 10
- Peppermint leaves 20
- 1-2 teaspoons as an infusion, steep for 10 min.
- 1 cup daily in the evenings.

Treatment of Constipation

Suggested formulations

- Laxative tea II
- Senna leaves 25
- Fennelseed 25
- Chamomile 25
- Buckthorn bark 25
- 1-2 teaspoons as an infusion, sleep for 10 min.
- 1 cup daily in the evenings.