



# Therapeutic Potential of Aqueous Extract of Carob in Treating Irritable Bowel Syndrome

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## Abstract

**Introduction:** Irritable bowel syndrome (IBS) is a prevalent disease worldwide without curative and successful treatment. Its etiology is not fully understood.

**Study objectives:** The main objective of the present study was to report the experience of treating patients with IBS using the aqueous extract of carob.

**Methods and subjects:** Aqueous extract of carob was prepared through roasting and grinding carob seeds to prepare the hot aqueous extract. A total of 9 patients with IBS drank 2 cups of the extract daily for 10-15 days.

**Study findings:** At the end of the experimental schedule, patients reported positive health impacts. They were more comfortable from medical, psychological, and social aspects.

**Conclusion:** The aqueous extract of carob can be used successfully to ameliorate the symptoms of IBS.

**Keywords:** Irritable Bowel Syndrome; Carob; Extract; Gastrointestinal Extract; Symptoms

## Introduction

Irritable bowel syndrome (IBS) exists in patients and it is clinically presented to exhibit some chronic abdominal pain symptoms as well as and altered bowel habits. No well-established organic cause has been yet identified Alammari and Stein [1]. IBS is considered as an alteration in the function of the gastrointestinal tract (GIT); it affects about 3% to 22% of overall world population Torpy and Colub [2]. IBS has various adverse effects including initiation of inflammatory processes, oxidative conditions, and alterations of immune system Chey et al. [3]; Stern and Brenner [4]. IBS is a cause of a variety of complications such as psychological distress, and social isolation Koloski and Talley [5]. From a pathophysiologic point of view, the cause of IBS is not well understood, but it seems to be resulting from various factors. One of suggested reasons is the increasing sensitivity of the GIT to distension. Another possible cause is stress involving autonomous nervous system. Gastroenteritis is a predisposing factor for IBS

Enck et al. [6]; Farmer and Ruffle [7]. Several medications have been suggested to treat patients with IBS including serotonergic agents, Tachykinin receptor antagonists, opioid receptor ligands, and others. These agents purposed to ameliorate symptoms rather treating the disease itself De Ponti [8]. In traditional Chinese medicine, various trials were described for the treatment of IBS such as SiNiSan Yi et al. [9]; Chang et al. [10]. In the present study, we are sharing our experience in treating patients with IBS using Carob extract. Carob tree, also known as, *Ceratonia siliqua* L is a member of the Leguminosae family Petkova et al. [11]. Carob flour can be used for medical purposes, and its chemical properties depended on origin and time of harvesting Rtibi et al. [12]. There are certain pharmaceutical applications for carob including laxatives and diuretics Calixto and Canellas [13]. Other medical uses of carob were reported as a regulator for hypocholesterolemia and hypoglycemia, as well as antioxidant compound Hariri et al. [14].

## Study Objectives

The main objective of this study is to express the experience in successful treatment of patients with IBS using the extract of carob.

## Methodology

### Preparation of Carob Seed Extract

Two hundred grams of carob seeds were brought from the local Attar, and then the seeds were roasted and grinded. The extract was then prepared by boiling, as in Arabic coffee (sweet coffee) for five minutes. Patients were advised to take two cups daily, morning and evening, for 10-15 days.

### Patients

Over a period of 6 months, 9 patients (5 males and 4 females) with IBS as diagnosed by their physicians were recommended to use the extract of carob as described in methodology section for 10-15 days. Patients had typical symptoms of IBS such as abdominal pain, accumulation of gases, psychological and social impacts. They tried conventional treatments, but they did not report successful improvements.

After using the extract, they reported good feelings and improvements. One of male patients reported curative therapeutic results. Other patients were satisfied and recommended other patients to use this extract as a curative measure for IBS. Patients were very satisfied and felt more sociable.

### Discussion

People since ancient times have searched their environment to cure diseases Barberis et al. [15]. IBS is one of the diseases that impact people worldwide Theophilou et al. [16].

In the present study, we reported the experience of patients with IBS using aqueous carob extract. The positive influence of this extract may due to the effects on GIT movement Rtib et al. [12]. We further think that aqueous carob extract can of beneficial treatment for IBS due to other chemical properties such as being anti-inflammatory and antioxidant since IBS underlying reasons could have inflammatory actions and oxidative processes Theophilou et al. [16].

### Conclusion

The aqueous extract of carob has therapeutic potential to treat IBS successfully.

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