

# The Review of Importance and Nutritional Value of Caper (*Capparis spinosa* L.), and Its Health Benefits

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**Abstract:** Caper (*Capparis spinosa* L.) is one of the utmost and dominant medicinal plant in Greco-Arabic, Chinese, Iranian, and Ayurvedic medicinal systems. The chemical components found in this medicinal plant were flavonoids, lipids, tannins, alkaloids, lignins, (6S)-hydroxy-3-oxo- $\alpha$ -ionolglucosides, glucocapperin, and polyphenols. The goal of this article is to survey on natural benefits and medicinal values of Asafoetida. A literature search was done in Google Scholar, PubMed, Science Direct, Springer, Medline, and Wiley Online Library from 1990 to November 2023. The keywords which have been used were the Latin and common names, as well as caper, natural products, traditional Chinese medicine, rutin, and kaempferol. It has shown anti-microbial, cytotoxic, anti-arthritis, anthelmintic, anti-inflammatory, cardiovascular, antioxidant, chondroprotective, hypolipidemic, antidiabetic, anti-allergic, anti-carcinogenic, anti-histaminic, immunomodulatory, and anti-hepatotoxic activities. The main volatile ingredients discovered in caper bud oil were furfural, benzyl alcohol, 4-vinyl guaiacol, ethanol methyl pentyl acetal, octanoic acid, thymol, and methyl isothiocyanate. In traditional medicinal science, caper has been used for treatment of fever, headache, convulsions, diabetes, toothache, menstruation, kidney disease, skin disease, liver disease, rheumatism, ulcers, hemorrhoids, and sciatica. The leaves and fruits have anti-diabetic impacts, and fruits also exert cholesterol-lowering, anti-obesity, and anti-hypertensive impacts. Shoots, stem barks, fruits, and roots have shown antimicrobial effects, and roots, fruits, and leaves contain anti-inflammatory activity. In this article we have introduced caper as a major medicinal plants as well as a super-food by considering its natural products in both traditional and modern majors.

**Keywords:** caper; medicinal plants; kaempferol; natural products; rutin ; health benefits.