

# NEWSLETTER

## Knowledge of herbs – *Asparagus racemosus*

*Asparagus racemosus* belongs to the family of Liliaceae. Also known as Shatavari. Shatavari means who possess hundred husbands. It is considered both a general tonic and a female reproductive tonic. Shatavari is the main rejuvenative tonic for females as is Withania for the male. Shatavari is however used for sexual debility and infertility in both sexes it is also used for menopausal symptoms and to increase lactation.

### Taxonomy Hierarchy

Kingdom	Plantae
Clade	Angiosperms
Clade	Monocot
Order	Asparagales
Family	Asparagaceae
Genus	<i>Asparagus</i>
Species	<i>A.racemosus</i>



### Other common names

Beng. – shatmuli , Eng.- wild asparagus , guj.- satavari , hind.- satavar,satavari,satmuli , Kan.- Shatavari

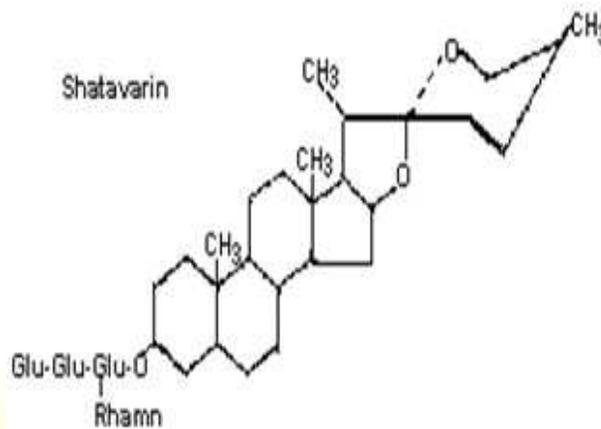
### Description

It is an under-shrub, climbs up to 1-3 m high, with stout and creeping root stock. The root occurs in clusters or fascicle at the base of the stem with succulent and tuberous rootlets. The stem is scandent, woody, triquetrous, striate, terete and climbing. The young stem is delicate, brittle and smooth. The spines are long, sub-recurved or straight. Cladodes are in tufts of 2-6 in a node, slender, finely acuminate, falcate divaricate. The flowers, solitary or fascicles, simple or branched racemes of 3 cm long. The pedicel is slender and jointed in the middle. Perianth lobes

white, fragrant and 3 mm in length. The anthers minute and purple. The berry globular or obscurely 3 lobbed, purple-reddish, seeds hard with brittle testa.

### Biologically Active Constituents

Apart from saponins, the material contains alkaloids, proteins, starch, tannin, mucilage and diosgenin. The type of saponin varies with the geographical distribution of the species. Plants found in south India have saponin-A4 fraction but not in north Indian samples<sup>1</sup>. Steroid saponin, shatavarin - is the major glycoside with 3 glucose and rhamnose moieties attached to sarsasapogenin, whereas shatavarin-IV has 2 glucose and one rhamnose moieties with sarsasapogenin. Vanillin, coniferin and sarsasapogenin were also identified from the roots.



The plant contains triterpene saponins - Shatavarin I - IV, which are phytoestrogen compounds.

### Medicinal uses.

*Asparagus racemosus* is an important medicinal plant of tropical and subtropical India. Its medicinal usage has been reported in the Indian and British pharmacopeia it is mainly known for its phytoestrogenic properties. In Ayurveda, *Asparagus racemosus* has been described as a rasayana herb and has been used extensively as an adaptogen to increase the non-specific resistance of organisms against a variety of stresses. Besides use in the treatment of diarrhea and dysentery, the plant also has antioxidant, immunostimulant, anti-dyspepsia and antitussive effects.

The roots are used in Ayurvedic medicine, it is generally used as a uterine tonic, as a galactagogue (to improve breast milk), in hyperacidity, and as a general health tonic.

### Pharmacological activities

*A. racemosus* is a well established galactagogue both in animals and humans treatment of duodenal ulcer with *A. racemosus* is reported. Antioxidant action of this plant has been documented and immunomodulatory effects are ascribed to the root.

## Adulterants/substitutes

*Asparagus adscendens* Roxb. and *A. curillus* Buch Ham. ex Roxb. are substituted in North Indian market.

## Safety aspects

The drug is traditionally considered to be safe in the dosage mentioned.

## References

1. *Germplasm Resources Information Network*. USDA. August 6, 2002. Retrieved April 25, 2009.
2. Robert Freeman (February 26, 1998). "LILIACEAE - Famine Foods". *Centre for New Crops and Plant Products, Department of Horticulture & Landscape Architecture*. Purdue University. Retrieved April 25, 2009.
3. *Asparagus racemosus*--ethno pharmacological evaluation and conservation needs. [Review] [77 refs] Bopana N. Saxena S. *Journal of Ethnopharmacology*. 110(1):1-15, 2007 Mar 1.
4. T.N. Pandey and S.S. Rajagopalan -- *Journal of Research in Ayurveda and Siddha* -- Vol-XV. No. 1-2. pages 23–34
5. Evaluation of antibacterial activity of *Asparagus racemosus* wild. Root. Mandal SC. Nandy A. Pal M. Saha BP. *Phytotherapy Research*. 14(2):118-9, 2000 Mar.

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