

# Studies on Herbal treatment of Thyroid by the Rural population of Akola district in Maharashtra

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## ABSTRACT

Development of Thyroid disease is presenting great challenges to countries worldwide. In India too, thyroid disorders are a major concern these days. This increase in thyroid disorders may be due to more and more frantic life style that people engage themselves in today (Verma and Jameel 2012).and similarly because of the lack of suitable nutrients in the soil. Hypothyroidism and Hyperthyroidism are the two main disorders caused by a variety of conditions and passes through the generations by inheritance. Millions of people in the world are suffering from thyroid disorders. A woman is about seven to ten times more likely to be more likely to be diagnosed with a thyroid condition than men. Medicinal plants are part of the social life of people and play a crucial role in the health management. The study showed that the herbal remedies to the thyroid disorders are less expensive harmless, easy to assess, eco-friendly and potentially effective. In present study we aim to focus on effective of select herbs on curing thyroid disorders and study their effects on thyroid disorders with respect to following parameters: blood pressure, body temperature, body mass index and pulse rate in thyroid patients. Herbal remedies in thyroid patients moderate these parameters and the main benefit of new herbs in thyroid disorders are discussed in the present study.

**Keywords:** Thyroid disorders, herbal remedies, medicinal plants, parameters.

## INTRODUCTION

Thyroid disease is one of the most common endocrine disorders found worldwide. In India, it is expected that about 42 million people suffer from thyroid diseases. (pmc/article Dec.2015). The thyroid gland synthesis, store and discharge the thyroid hormones which are thyroxin (T<sub>4</sub>) also called tetraiodothyronine, triiodothyronine (T<sub>3</sub>) and thyrocalcitonone. The abnormalities in secretion of thyroid hormone will leads to thyroid disorders or diseases. (Health/2012 Dec.2015). When this hormone is secreted by very little it may lead to hypo-thyroids. And when this hormone is secreted too

much it may lead to hyper-thyroids. Both excess and less thyroid hormone secretion causes health problems and sometimes may lead to death. (Ozymilmaz et al. 2002).

Thyroxin is the main metabolic hormone in the body. It maintains basal metabolic rate (BMR) by increasing glucose oxidation and energy production known as calorogenic effect. It also controls the physical growth, development of gonads and development of mental faculties. It controls tissue differentiation. It controls body weight, respiration rate, heart rate, blood pressure, temperature, digestion etc.

Thyroid diseases can affect anyone men, women, infants, teenagers, and elderly also. In author's survey the baby of 16 days was suffering from thyroid disorder. These facts are taken into considerations, looking into the feasibility, utility and availability of target population and severity of the diseases. Thyroid disorders are more common in women than men (Vanderpump, 1995).

India has very rich biodiversity (Rao, 1989, 1994). In India many people have traditional knowledge of Ayurveda and herbal medicines. Till date, many people in rural areas use herbal remedies and its known that they are less expensive, harmless, easy to access and eco-friendly. These herbal remedies, as are mentioned in the present study, are easily available in every kitchen. So, economically weak people can also get much benefited from its use. The researchers have enumerated these remedies from 'Aajibaicha Batwa.'

(Aajibaicha Batwa literally means 'the purse of grandmother.' In India, traditionally, herbs are used to tackle with the health problems. The knowledge of herbal use is derived from experience and is passed to next generations orally. This tradition exists in Maharashtra as well. Older people in household are wiser in this knowledge as they are more experienced. This traditional knowledge of herbal remedies, proved with experience, in Maharashtra is called 'Aajibaicha Batwa.')

## MATERIALS AND METHOD

Present study is based on the survey and collection of data from the people in rural areas who have knowledge about

the uses of herbal remedies with their botanical names, the local names, and the uses in detail.

The patients regularly visit the clinics to know the status of thyroid and test blood parameters. The parameters such as BMI, BP, Pulse rate and temperature of the patients were personally recorded. Questionnaire method was also used for the data collection.

**Study area:** The area selected for study is specially Akot region of District Akola as it comes under the saline tract area.

**Discussions:** Herbal remedies are proved to be very effective in management of the human health issues. Some of the plants are seen to be effective in management of thyroid disorders. The select plants under study are discussed here. The plant species were enumerated with its botanical name, local name, parts used and mode of intake and use.

### 1. Flaxseed

Botanical Name: *Linum usitatissimum*

Local Name: Aalsee

Parts used: Seeds

Doses: One teaspoon of the Aalsee seed powder is to be consumed in daily diet.

Flaxseed is beneficial for individual with thyroid issues because it is rich source of Omega 3 fatty acids which have anti-inflammatory properties. Also, it helps to maintain wait control blood pressure and cholesterol

### 2. Pumpkin

Botanical Name: *Cucurbita maxima*

Local Name: Kaddu ke bij

Parts used: Seeds

Doses: One teaspoon twice a day.

Pumpkin seeds are also beneficial for thyroids. Eating an ounce of dried Pumpkin seeds a day is a healthful way to meet your daily need for zinc, which is a mineral needed for thyroid hormones production.

### 3. Sunflower

Botanical Name: *Helianthus annuus*

Local Name: Surajmukhi / Suryaful

Parts used: Seeds

Doses: One teaspoon twice a day or used as cooking oil.

Selenium in Sunflower seeds is an essential nutrient for thyroid function. Therefore, eating food high in selenium such as sunflower seeds help to promote selenium in the body to aid in the functioning of the thyroid gland.

#### 4. Turmeric

Botanical Name: *Curcuma longa*

Local Name: Haldi / Halad

Parts used: Rhizome

Doses: One teaspoon twice a day in lukewarm water or milk.

This golden spice is pack with the goodness of antioxidants and an active compound known as curcumin, which not only help in healing pain but a regular consumption of turmeric drink can help in managing thyroid. (A. Rakha et al.2022)

#### 5. Cumin

Botanical Name: *Cumin umcyminum*

Local Name: Jeera

Parts used: Seeds

Doses: One teaspoon a day in hot water in powdered form on empty stomach.

Jeera helps to those, with an underactive thyroid, combat their conditions. (Michael, 2021)

#### 6. Ginger

Botanical Name: *Zingiber officinale*

Local Name: Adrak

Parts used: Rhizome

Doses: One teaspoon a day through ginger tea or with meal as spice.

Is rich in essential minerals like potassium and magnesium and so it is helpful to combat inflammation. It is also beneficial effects in weight reduction and regulation of liquid profile in hypothyroid patient. (Sanavi and Afshar, 2010)

#### 7. Carom seeds

Botanical Name: *Trachyspermum ammi*

Local Name: Ajwain

Parts used: Seeds

Doses: One teaspoon of churna daily with lukewarm water before or after a meal.

Carom seeds can also help treat hypothyroidism because they contain carvacrol and thymol, two compounds that

lower inflammation in the body and increase immune function. (Springer, 2022)

#### 8. Cloves

Botanical Name: *Syzygium aromaticum*

Local Name: Lawang

Parts used: Whole clove

Doses: One half teaspoon in powder form in lukewarm water or one fourth teaspoon of oil per day.

Cloves are good for thyroid health. Cloves improve blood circulation and reduce blood pressure and boost immunity. Cloves are antioxidant. (Lanjekar, 2020)

#### 9. Cardamom

Botanical Name: *Elettaria cadamomum*

Local Name: Elaichi

Parts used: Seeds

Doses: Two pods a day.

Green Cardamom are good scavengers of free radicals and can be used as a supplement along with I<sup>131</sup> in thyroid patient as radioprotective agent. (Rakha et.al.2022)

#### 10. Holy Basil

Botanical Name: *Ocimum sanctum*

Local Name: Tulsi/ Tulas

Parts used: Leaves, flowers, seeds

Doses: Decoction of five to seven leaves on an empty stomach.

Tulsi is used as a herb to treat thyroid just as powerful as the Tulsi flowers, it's leaves are equally powerful. Using holy basil improve thyroid health by balancing the cortisol level first. The plant assists the body by protecting it from toxins. (Yadav, 2016)

#### 11. Pippali

Botanical Name: *Piper longum*

Local Name: Pippali

Parts used: Whole fruit

Doses: 2-3 pinches of powder in hot water after meals.

Pippali is efficacious in reducing the signs and symptoms of primary hypothyroidism and has a positive impact on the thyroid profile. (Shah, 2022)

#### 12. Ashwagandha

Botanical Name: *Withania somnifera*

Local Name: Ashwagandha, Askand

Parts used: Roots, leaves, fruits

Doses: One table spoon of powder in hot water or lukewarm milk after meals for three weeks.

This herb helps to control stress level. Studies found that it helps to treat hypothyroidism by lowering levels of stress hormone. (Hawra, 2022)

### 13. Cinnamon

Botanical Name: *Cinnamomum verum*

Local Name: Elaichi

Parts used: Seeds

Doses: Chewing two pods a day as raw or may be used as spice in cooking or tea.

Cinnamon supplementation resulted in lower serum total T3 level accompanied by normal T4 and TSH level it also helps to boost metabolism. (Lopes, 2018)

### 14. Coriander/cilantro

Botanical Name: *Coriandrum sativum*

Local Name: Kothimbir

Parts used: Leaves, flowers, seeds, stem

Doses: as per choice

Coriander has antioxidant properties. It is also helpful in managing cholesterol. It is also help in effective weight loss in such a way coriander is one of the best herbs for thyroid. (Tiwari and Manigauha, 2018)

### 15. Fennel Seeds

Botanical Name: *Foeniculum vulgare*

Local Name: Saunf

Parts used: seeds

Doses: Two teaspoon for chewing raw or powder in warm water after meals.

To reduce high blood pressure, fennel seeds which are an essential source of potassium can help. It reduces the tension on the blood vessels by dilating them. This result in the reduction of blood pressure. It also promotes weight loss. In the way it helps to reduce thyroid parameters.

## RESULTS

During the survey of Akola District in Maharashtra, 15 plants were recorded as effective remedies used by rural people to treat the thyroid problems. The use of plants to cure diseases and relieve physical suffering has started from the earliest times of human history (Hill 1989). The

use of plants as a way of treatment is still very important and significant for human being (Kutur, 2007).

## CONCLUSION

The use of studied herbal medicine in thyroid disorders showed to moderate the studied parameters such as temperature, blood pressure, body mass index and pulse rate. Hence, the use of these herbal medicines is significantly beneficial in thyroid disorders.

**Conflicts of interest:** The authors stated that no conflicts of interest.

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