

# A REVIEW ON EFFECTIVENESS OF GINKGO BILOBA IN TREATMENT OF VITILIGO DISEASE

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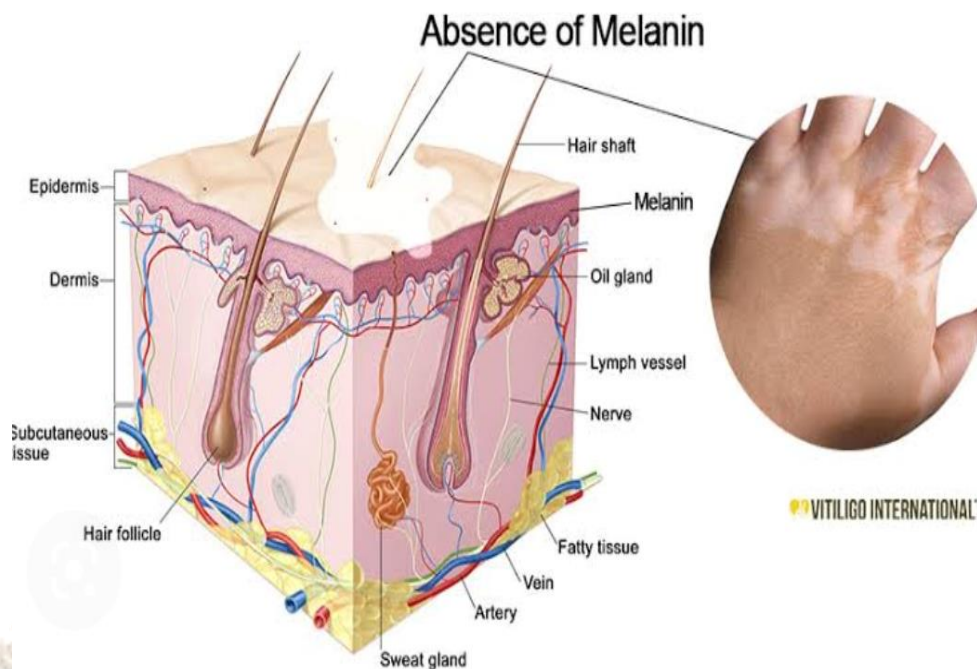
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**Abstract :-** Vitiligo is a chronic disease of unknown etiology that causes progressive cutaneous depigmentation. Current pharmacological treatments have limited success and present significant risks. Many efforts have been made in recent years to explore new anti-vitiligo therapeutic strategies, including herbal-based therapies. The objective of the present review is to provide an updated overview on the most frequently used medicinal plants in the treatment of vitiligo. Our search, the highest number of published studies comprise plants commonly used in traditional herbal medicine, highlighting the usefulness of ethno pharmacology in the discovery of new therapeutic agents. The use of Ginkgo Biloba plant has huge impact on relive a skin condition , as it contain anti-inflammatory ,immunomodulatory and Antioxidants properties , by this pigment production starts to restore over vitiligo spot.

**Keyword:** Vitiligo, Ginkgo Biloba , Regimentation Treatment

## Introduction:

Vitiligo, a depigmenting skin disorder, is characterized by the selective loss of melanocytes, which in turn leads to pigment dilution in the affected areas of the skin. The characteristic lesion is a totally amelanotic, nonscaly, chalky-white macule with distinct margins. Considerable recent progress has been made in our understanding of the pathogenesis of vitiligo, and it is now clearly classified as autoimmune disease, associated with genetic and environmental factors together with metabolic, oxidative stress and cell detachment abnormalities. The understanding of the etiology of vitiligo has advanced significantly in recent years. It is now categorically recognized as an autoimmune disorder associated with metabolism and oxidative stress, including cellular detaching diseases, as well as hereditary and environmental factors. The overall loss of melanocytes in vitiligo patients appears to be caused by three major factors. The argument is that people with vitiligo have three “vitiligo” alleles that predispose them to melanocyte degeneration. Because no two people can have the same three alleles, there are potentially many different combinations of three genes that can cause vitiligo. The second anomaly ultimately affects these melanocytes. Melanocytes from vitiligo patients differ from those from non-vitiligo patients. Skin color is determined by the number of pigment cells (melanocytes) in the skin. The more melanocytes, the darker the skin color. Vitiligo occurs when melanocytes die. We are unsure why the melanocytes die or why it happens in some people and not in others. Vitiligo affects people of all skin types, but it may be more noticeable in people with brown or Black skin. The condition is not life-threatening or contagious. It can be stressful or make you feel bad about yourself



## Causes and Symptoms

Vitiligo occurs when pigment-producing cells (melanocytes) die or stop producing melanin — the pigment that gives your skin, hair and eyes color. The involved patches of skin become lighter or white. It's unclear exactly what causes these pigment cells to fail or die. It may be related to:

- A disorder of the Immune system (autoimmune condition)
- Family-friendly history (heredity)
- A trigger event, such as stress, severe sunburn or skin trauma, such as contact with a chemical

Scientists believe that vitiligo is an autoimmune disease in which the body's immune system attacks and destroys the melanocytes. In addition, researchers continue to study how family history and genes may play a role in causing vitiligo. Sometimes an event – such as a sunburn, emotional distress, or exposure to a chemical – can trigger vitiligo or make it worse. genetics: an estimated 20% of those diagnosed with vitiligo have a first degree relative with the condition

It has been found that this condition has a higher probability of developing in your body in the early ages, especially between 10 to 30 years of age and has not shown up if someone has crossed the age of 40 years. Family heredity plays an important role in the development of such a condition. People with someone in the family who has vitiligo or suffers from premature grey hair have a higher chance of being affected by the same. Apart from these those with Type I Diabetes or Hashimoto's Thyroiditis are more prone to vitiligo.

## Symptoms

Vitiligo can start at any age, but usually appears before age 30. Vitiligo can develop anywhere on a person's skin. When vitiligo begins, the patches usually appear on the Face, Arms, Hands, Feet. In due course, the blotches may remain the same in size or may start turning bigger with multiple cycles of pigmentation loss and stability. Once the white patches start developing, there is little chance of getting back the pigmentation once again.

The main symptom of vitiligo is loss of natural color or pigment, called depigmentation.

- Patchy loss of skin color, which usually first appears on the hands, face, and areas around body openings and the genitals
- Hair, which can turn white in areas where the skin is losing pigment

- Eyelashes or eyebrows losing color and turning white
- Loss of color in the tissues that line the inside of the mouth and nose (mucous membranes)

People with vitiligo can also develop:

- Low self-esteem or a poor self- image from concerns about appearance, which can affect quality of life.
- Uveitis, a general term that describes inflammation or swelling in the eye.
- Inflammation of the ears or eyes, leading to hearing loss and vision problems, according to NIAMS

## Diagnosis and Treatment

### Medical History and Exam

If Your doctor respondents you have vitiligo, he or she will inquire about your medical history, scrutinize you and try to rule out other medical problems, such as dermatitis or psoriasis. He or she can use a special lamp to shine ultraviolet light onto the skin to determine whether you have vitiligo.

### Skin Biopsy and Blood Draw

Your doctor may:

- Take a small sample (biopsy) of the affected skin.
- Draw blood for lab tests to look for underlying autoimmune conditions, such as anemia or diabetes. □
- Wood's light is very useful to diagnose the vitiligo.

### Treatment

Many treatments are accessible to benefit restore skin color or even out skin tone. Results vary and are unpredictable. Some treatments have serious side effects. Sometimes doctor may recommend that, you first try improving the appearance of your skin by applying self-tanning products or makeup. Even if treatment is successful for a while, the results may not last or new patches may appear.

- Medicines or medicated skin creams, such as corticosteroids
- Use of light (phototherapy) to help return color to the skin.
- Depigmentation can be an option when the affected area is widespread, covering more than half of the body or more, and works by reducing the skin color in unaffected parts to match the whiter areas.
- By using Skin grafts a surgeon carefully removes healthy patches of pigmented skin and uses them to cover affected areas.
- Natural ingredients that are beneficial for vitiligo includes Turmeric, Honey, Ginger, Ghee, Mustard oil.
- Kapalbhathi is helpful in treatment of Vitiligo
- Tattooing (Micro pigmentation)

### Ginkgo Biloba

It is commonly known as ginkgo or ginkgo also known as the maidenhair tree, is a species of tree native to China. It is the last living species in the order Ginkgoales, which first appeared over 290 million years ago.

Ginkgo (*Ginkgo biloba*) is one of the oldest living tree species. It is also one of the best-selling herbal supplements in the United States and Europe.

## Biological source

The leaves of Ginkgo are obtained from the dioecious tree Ginkgo biloba, belonging to family Ginkgoaceae.

## Geographical Source

It is a native to China and Japan and cultivated ornamentally in many temperate regions.

## Characteristics

The leaves are bilobed, each lobe being triangular in outline with a fine radiating, fan-like venation. The leaf is glabrous, petiolate and has an entire margin.



Ginkgo leaves contain flavonoids and terpenoids, which are both antioxidants. In your body, harmful particles called free radicals build up as you age, and may contribute to heart disease, cancer, and Alzheimer disease. Antioxidants like those found in ginkgo fight off free radicals, and stop them from damaging DNA and other cells.

## Effective in Treating the Vitiligo Disease

In the last few years, Ginkgo Biloba (seeds and leaves) has emerged as a simple, inexpensive therapy for people with vitiligo. Ginkgo Biloba leaf, which is known anti-inflammatory, immunomodulatory, and antioxidant properties, is often recommended by natural therapists. The leaf extract along with seeds of the maidenhair tree has been reported to be effective in halting the progression of the skin condition in many cases. In some cases, the use of the same has even resulted in re-pigmentation.

Over the years, different studies have suggested different causes of vitiligo, including oxidative stress theory. Many studies conducted in these years seem to suggest that the cause of the skin condition is an over accumulation of hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) in the skin, also known as oxidative stress. In many studies, low catalase is found in vitiligo patients, which triggers reactive oxygen species (ROS), accumulation of which can induce the loss of functionality of enzymes that play a crucial role in monogeneses.

With-it Anti-inflammatory, Immunomodulatory and antioxidant .Properties, Ginkgo Biloba can potentially impact the oxidative stress mechanisms of vitiligo and relieve/pause symptoms of the skin condition. In fact, in a double-blind placebo-controlled trial conducted in 2003, the efficacy of Ginkgo biloba extract has been established in controlling the activity of the depigmentation process in some vitiligo patients with limited and slow-spreading vitiligo and in inducing repigmentation of vitiliginous skin.

### How it works

Skin cells (Melanocytes) are responsible to make skin color by producing melanin. In vitiligo, melanocytes lose their function or destroyed leaving white patches on the skin. Natural extract of herbs & plants formulated in Vitiligo Organics™ absorbs into the skin and helps melanocytes to resume their natural function resulting uniform natural skin Color.

### Side Effects

Just because Ginkgo biloba is a natural product, it does not mean it is without side effects. Ginkgo biloba has a number of potential and real interactions with medications including

- blood thinners,
- high blood pressure medications,
- antidepressants
- Dizziness
- Nausea and headache

### Uses of ginkgo biloba

Ginkgo is used as an herbal remedy to treat many conditions. It may be best known as a treatment for dementia, Alzheimer's disease, and fatigue. Other conditions it's used to treat are:

- Vitiligo
- Anxiety and depression
- Schizophrenia
- Insufficient blood flow to the brain
- Blood pressure problems
- Altitude sickness
- Erectile dysfunction
- Asthma
- Neuropathy
- Cancer
- Premenstrual syndrome
- Attention deficit hyperactivity disorder (ADHD)
- Macular degeneration

### NEED OF STUDY

- The goal of studying Ginkgo biloba leaf extract seem to be a simple, safe and fairly effective therapy in treating the vitiligo
- Ginkgo biloba leaf extract is known to have a anti- inflammatory , immunomodulatory and antioxidants property thus potentially impact the oxidative stress mechanism of vitiligo .

## Other Herbs For vitiligo Treatment

Natural Vitiligo Treatment involving Herbs helps to rectify the root cause. Role of Herbs for Vitiligo are extraordinary. The choice of herbs for vitiligo treatment assure immunity stabilization along with pigmentation over the white spots. The immunity balancing work is monitored by herbs which are rich in providing better immunity by controlling the body metabolic process. The results of immunity improvement can be seen in few weeks after administration of such herbs. This helps in spreading control in vitiligo.

Pigmentation centric Herbs are having photosynthetic nature. By this pigment production starts to re-store over the vitiligo spots. As a results brown dots formation or side wise squeezing can be seen on vitiligo affected areas after few weeks of treatment ex. Tinospora – cordifolia, Withania somnifera, Azadirachta – Indica , Basil-herb(ocimum Sanctum), Curcuma- longa, Liquorice, Khellin, Green tea polyphenols etc.

## Conclusion

Vitiligo is an skin disorder in which devastation of melanocytes by different means happens. Present medical besides surgical therapies for vitiligo , particularly when used in combination , have shown certain accomplishment in the regimentation of Vitiligo . The Ginkgo Biloba plant has positive antioxidant and immunomodulatory features on vitiligo treatment. Ginkgo extract has been repeatedly shown to be highly effective against these two causes (oxidative stress and autoimmune destruction).

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