

## **A Review On Herbal Medicines Turmeric and Echinacea**

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### **Abstract:**

Herbal medicine has become a popular form of healthcare. Even though several differences exist between herbal and conventional pharmacological treatments, herbal medicine can be tested for efficacy using conventional trial methodology. Several specific herbal extracts have been demonstrated to be efficacious for specific conditions. Even though the public is often misled to believe that all natural treatments are inherently safe, herbal medicines do carry risks. Ultimately, we need to know which herbal remedies do more harm than good for which condition. Because of the current popularity of herbal medicine, research in this area should be intensified.

### **Keywords:**

Medicinal plant , Herbal drug, Botanical medicine, Phytomedicine, Herbal supplement, Natural remedies, Infectious disease

**Introduction :**

Herbal medicine (HM) is the alternative medicine, which in recent times is increasingly gaining widespread popularity all over the world. The use of HM cuts across gender, social and racial classes in both developing and developed countries of the world. Due to the increasing popularity of HM, stakes in the world markets (local and international) are also rapidly increasing and the annual sale is rapidly approaching US \$62 billion. An important driver in this is it includes low cost, the wide acceptance due to its status of being a natural product with the acclaim of low toxicity, efficacy in certain challenging diseases, flexibility in its accessibility, preparation and use.

HM includes preparations of biologically active natural products that consist largely of herbs or herbal materials, some recipes may contain materials such as fungal and bee products, as well as minerals (kaolin, bentonite), ash, shells, insects and animal parts, and are used for the maintenance of health and management of various diseases. HMs can elicit numerous benefits just as some can cause adverse effects. The pharmacologic and most of the toxic effects that are elicited by HMs have been linked to the activities of the secondary metabolites. In many instances, HMs have been appropriately used, misused and sometimes misunderstood. The benefits of HMs as a means of healthcare depends largely on the correct and adequate knowledge, and experiences while misuse as well as misunderstanding have been tracked to the knowledge gap on herbal medicines especially as it relates to their benefits and potential drawbacks by the primary healthcare professionals doctors, pharmacists, nurses and the public.

The attraction to herbal medicine will continue to increase across the globe for various reasons, hence the urgent need for appropriate and enough information on HM especially that which highlights on important topics such as:

**Benefits:**

- Efficacy
- Safety
- Toxicity
- Research and Development
- Formulation
- Regulation,
- Analytical techniques of Quality control
- Economic, etc.

**Types of Herbal medicines:**

- **ECHINACEACA:** Also called the purple coneflower, this herb is used to treat coughs, bronchitis, and the common cold.



- **TURMERIC:** Turmeric is a deep, golden-orange spice known for adding color, flavor and nutrition to foods. A relative of ginger, turmeric comes from the rhizome (root) of a native Asian plant and has been used in cooking for hundreds of years. It has also been used in ayurvedic and other forms of traditional medicine in China and India.



Herbal products have been the source of many bioactive compounds with therapeutic potential, of which many eventually have been developed into drugs that are consumed worldwide for diverse disorders, including inflammatory and autoimmune diseases. A variety of herbal products belonging to the traditional systems of medicine are either already being used by patients with autoimmune diseases, including RA, with or without the primary physician's knowledge, or are under investigation for their therapeutic potential.

Thus, the utilization of phytoconstituents which are effective in relieving the inflammation and thereby alleviate the chances of occurrence of side effects associated with allopathic drugs, could be a potential alternative such as sinomenine, total glucosides of paeony, and triptolide. Thus, there is an urgent requirement to quest for more effective, safe, and economical drugs for relieving pain in joints and improving the quality of life of Rheumatoid Arthritis patients.

### **Pathophysiology of Herbal Medicines:**

Herbal medicine can interact with the body in various ways, producing therapeutic effects, but also potential adverse effects. Here's an overview of the pathophysiology of herbal medicine:

### ➤ **Absorption and Distribution**

1. Absorption: Herbal compounds can be absorbed through the gastrointestinal tract, skin, or mucous membranes.
2. Distribution: Absorbed compounds can be distributed throughout the body via the bloodstream, affecting various tissues and organs.

### ➤ **Mechanisms of Action**

1. Receptor Binding: Herbal compounds can bind to specific receptors, influencing cellular signaling pathways.
2. Enzyme Modulation: Herbal compounds can modulate enzyme activity, affecting metabolic pathways.
3. Antioxidant activity: Herbal compounds can neutralize free radicals, reducing oxidative stress.
4. Inflammation Modulation: Herbal compounds can influence inflammatory responses, affecting immune function.

### ➤ **Potential Adverse Effects**

1. Allergic reactions: Herbal compounds can cause allergic reactions, such as skin rashes or anaphylaxis.
2. Interactions with medications: Herbal compounds can interact with prescription medications, exacerbating side effects or reducing efficacy.
3. Toxicity: Some herbal compounds can be toxic, especially in high doses or with prolonged use.
4. Hormonal influences: Herbal compounds can affect hormone levels, potentially leading to hormonal imbalances.

### ➤ **Specific Herbal Compounds**

1. Alkaloids: Compounds like atropine (belladonna) and quinine (cinchona) can affect the nervous system and cardiovascular function.

2. **Glycosides:** Compounds like digoxin (foxglove) and ouabain (strophanthus) can affect cardiovascular function and electrolyte balance.
3. **Terpenes:** Compounds like menthol (peppermint) and thymol (thyme) can affect the nervous system and gastrointestinal function.
4. **Flavonoids:** Compounds like quercetin (ginkgo biloba) and kaempferol (tea) can affect inflammation, antioxidant activity, and cardiovascular function.

### ➤ **Factors Influencing Herbal Medicine Effects**

1. **Dose and duration:** The dose and duration of herbal medicine use can significantly impact its effects.
2. **Individual variability:** Genetic and environmental factors can influence an individual's response to herbal medicine.
3. **Interactions with other substances:** Herbal medicine can interact with other substances, such as medications, foods, and other herbal compounds.

### **Advantages of Herbal Products:**

Herbal medicine, also known as botanical medicine or phytomedicine, has been used for centuries to treat various health conditions. Here are some benefits of herbal medicine:

#### ➤ **Physical Health Benefits**

1. **Antioxidant properties:** Many herbs, such as turmeric and ginger, have antioxidant properties that help protect the body against free radicals and oxidative stress.
2. **Anti-inflammatory properties:** Herbs like willow bark and meadowsweet contain salicylic acid, which has anti-inflammatory properties similar to aspirin.
3. **Cardiovascular health:** Herbs like garlic, ginger, and hawthorn may help lower cholesterol and blood pressure, reducing the risk of heart disease.
4. **Digestive health:** Herbs like peppermint, chamomile, and licorice root may help soothe digestive issues like IBS, bloating, and indigestion.

#### ➤ **Mental and Emotional Health Benefits**

1. **Anxiety and stress relief:** Herbs like passionflower, kava, and valerian root may help reduce anxiety and promote relaxation.

2. Mood enhancement: Herbs like St. John's Wort, ginkgo biloba, and saffron may help alleviate symptoms of depression and improve mood.
3. Sleep improvement: Herbs like valerian root, chamomile, and lavender may help promote relaxation and improve sleep quality.

➤ **Other Benefits**

1. Cost-effective: Herbal medicine can be a cost-effective alternative to conventional medications.
2. Low risk of side effects: Herbal medicine is generally considered safe when used properly and in moderation.
3. Holistic approach: Herbal medicine often takes a holistic approach to health, addressing the underlying causes of illness rather than just treating symptoms.
4. Environmental benefits: Herbal medicine can promote sustainable and eco-friendly practices, as many herbs can be grown and harvested locally.

**Disadvantages of Herbal Medicines:**

While herbal medicine can be beneficial, it's essential to acknowledge the potential disadvantages:

➤ **Safety Concerns**

1. Interactions with medications: Herbal medicine can interact with conventional medications, exacerbating side effects or reducing efficacy.
2. Allergic reactions: Some individuals may be allergic to specific herbs, which can cause adverse reactions.
3. Contamination and adulteration: Herbal products can be contaminated with heavy metals, pesticides, or other substances, which can be hazardous.

➤ **Efficacy and Quality Control**

1. Variable potency and quality: Herbal products can vary significantly in potency and quality, affecting efficacy.
2. Lack of standardization: Herbal products may not be standardized, making it difficult to ensure consistent results.
3. Inadequate labeling and instructions: Herbal product labels may be incomplete or inaccurate, leading to misuse.

### ➤ **Regulatory and Oversight Issues**

1. **Lack of regulation:** Herbal medicine is often less regulated than conventional medicine, which can lead to inconsistent quality and safety.
2. **Inadequate oversight:** Herbal products may not undergo rigorous testing or clinical trials, making it difficult to assess efficacy and safety.

### ➤ **Other Disadvantages**

1. **Delayed medical treatment:** Relying solely on herbal medicine may delay seeking conventional medical treatment, potentially worsening health outcomes.
2. **Inadequate education and training:** Some herbal medicine practitioners may lack proper education and training, which can lead to misdiagnosis or ineffective treatment.
3. **Cultural and linguistic barriers:** Herbal medicine practices can be influenced by cultural and linguistic factors, which can create barriers to effective communication and treatment.

### **Uses of Herbal Medicines:**

Herbal medicine is used to treat a variety of health conditions, including:

- **Allergies:** Herbal medicines can help with hay fever and other allergies.
- **Skin conditions:** Herbal medicines can help with eczema, acne, and skin injuries.
- **Digestive issues:** Herbal medicines can help with irritable bowel syndrome and other digestive problems.
- **Menstrual problems:** Herbal medicines can help with premenstrual syndrome, period pain, and menopause symptoms.
- **Immune system:** Herbal medicines can help stimulate the immune system and fight infection.
- **Cardiovascular health:** Herbal medicines can help lower blood pressure and cholesterol levels.
- **Brain health:** Herbal medicines can help with tinnitus and memory.
- **Depression:** Herbal medicines can help with depression and anxiety.
- **Cancer:** Herbal medicines are a popular complementary and alternative therapy for cancer.

### **Precaution of Herbal Medicines**

To ensure safe and effective use of herbal medicine, consider the following prevention and precautionary measures:

### ➤ **Pre-Purchase Precautions**

1. Consult a healthcare professional: Before using herbal medicine, consult with a qualified healthcare professional, especially if you have a pre-existing medical condition or take prescription medications.
2. Research the herb: Learn about the herb's potential benefits, risks, and interactions with other medications.
3. Choose a reputable supplier: Select a reputable supplier that adheres to good manufacturing practices (GMPs) and provides clear labeling and instructions.

### ➤ **Safe Usage Precautions**

1. Follow recommended dosages: Adhere to the recommended dosage and preparation instructions to avoid adverse effects.
2. Monitor your health: Regularly monitor your health and report any adverse effects to your healthcare professional.
3. Avoid excessive use: Avoid using herbal medicine excessively, as this can lead to adverse effects or interactions with other medications.

### ➤ **Potential Interactions and Contraindications**

1. Interactions with medications: Inform your healthcare professional about all medications, including prescription, over-the-counter, and herbal supplements, to avoid potential interactions.
2. Pregnancy and breastfeeding: Consult with a healthcare professional before using herbal medicine during pregnancy or breastfeeding, as some herbs may pose risks to the fetus or baby.
3. Surgery and anesthesia: Inform your healthcare professional about any herbal supplements you're taking before undergoing surgery or anesthesia, as some herbs may interact with anesthetics or increase bleeding risk.

### ➤ **Quality Control and Regulation**

1. Check for third-party certification: Look for third-party certifications, such as NSF International or (link unavailable), which ensure the product meets certain standards for quality and purity.

2. Follow local regulations: Familiarize yourself with local regulations regarding the use and sale of herbal medicine.

### ➤ Other Precautions

1. Allergic reactions: Be aware of potential allergic reactions to herbal medicine, and seek medical attention if you experience any symptoms.
2. Contamination and adulteration: Be cautious of contaminated or adulterated herbal products, which can pose serious health risks.
3. Lack of standardization: Be aware that herbal products may not be standardized, which can affect their quality and efficacy.

### Conclusion:

Herbal medicine represents a significant aspect of traditional healing practices and has gained increased interest in modern health care due to its potential therapeutic benefits. While many herbs show promise in treating various conditions, further scientific research is essential to fully understand their efficacy, safety, and appropriate usage. It is crucial for individuals to consult healthcare professionals before using herbal remedies, especially in combination with conventional treatments, to avoid potential interactions or side effects. As part of a holistic approach to wellness, herbal medicine can complement other therapies but should be used with caution and knowledge.

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