

# HERBAL MEDICINE

## MEDICINE EXCLUSIVELY MADE FROM PLANTS.

It is the oldest still the most widely used systemm of medicine in the world today.

- 6000 plants have medicinal applications
- 25% of “modern” prescription drugs have botanical origins

# WHY HERBAL MEDICINE

- It is being used by about **80%** of the world population primarily in the developing countries for primary health care.
- **SAFETY**, **EFFICACY**, **CULTURAL ACCEPTABILITY** AND **LESSER SIDE EFFECTS**.
- Ancient literature also mentions herbal medicines for age-related diseases namely Memory Loss, Osteoporosis, Diabetic Wounds, Immune And Liver Disorders, etc. for which no modern medicine or only palliative therapy is available.



# WHY DO PEOPLE USE HERBAL MEDICINES?

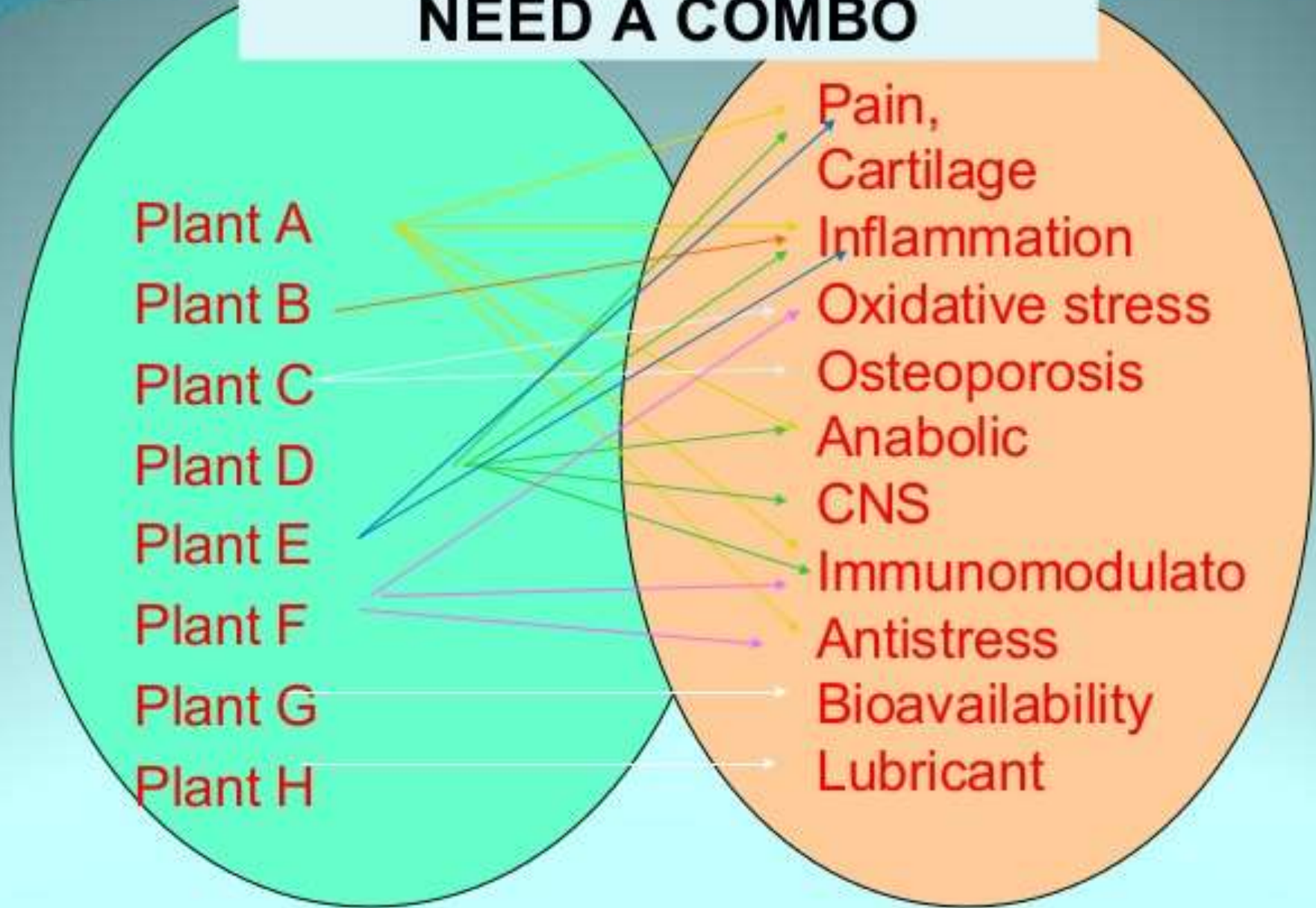
- Because it is natural and everybody believe that nature provides solution to good health.
- Unlike synthetic pharmaceutical medicine herbs are easily absorbed in body and blood stream leaving minimal residual and side effects.
- In most cases it is based on the recommedation.

- **PERCEPTION OF NATURAL = SAFE**

- **Used in developing countries where cost of drugs is prohibitive, poor accessibility to drugs in rural areas, shortage of physicians.**



# MULTIPLE TARGETS NEED A COMBO



# HERBAL DRUGS IN INDIA

- More than **70%** of INDIA'S 1.1 billion population is still using non-alopathic .
- In India, nearly **9,500 registered herbal industries** and a multitude of unregistered cottage-level herbal units depend upon the continuous supply of medicinal plants for manufacture of herbal medical formulations based on Indian Systems of Medicine.
- It is estimated that more than **6,000** plant species forming about 40% of the plant diversity of the country are used in its codified and folk healthcare traditions.

# POPULARITY

- More than **95 %** of the population in the least developing countries use herbs for health and other purposes.
- More than one third of Americans and Europeans use herbs for health purposes, spending **over 7.0 billion annually**.
- More than **25 %** of modern pharmaceutical drugs have botanical origins.

# HEALTH RISK WITH HERBAL MEDICINES

- **DELAY IN EFFECTIVE TREATMENT** for serious condition.
- Interference with vital treatment
- **Overloading** patient with multiple medications
- Unexpected rare but serious liver toxicity
- Toxic plants used
- Interactions with other medicines
- **Contamination during manufacturing process**
- **Confusion** over standards
- Weak or missing information



# Difference between Herbal and Conventional Medicines

## ▪ Conventional medicine

- contains one active principle in high concentration
- is simple with single indication

## ▪ Herbal medicine

- contains several active principles in low concentrations.
- is complex promoted for several divergent uses.

# Herbal medicinal Product

- Herbal medicinal products are medicinal products where the active ingredient consists exclusively of herbal substances or herbal preparations.
- Natural remedies are medicinal products where the active ingredient is of natural origin and consists of an animal part, a bacterial culture, a mineral or a salt.

# Herbal Drug Preparation

- **Herbal preparations** are the basis for finished **herbal** products and may include comminuted or powdered **herbal** materials, or extracts, tinctures and fatty oils of **herbal** materials. They are produced by extraction, fractionation, purification, concentration or other physical or biological processes.

# SOUCES OF HERBS

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- A. ROOTS - Acoite, Licorice, Rhubarb, Ginger
  - B. BARK - Quinine, Slippery, Cinnamon
  - C. LEAVES - Belladonna, Cocaine, Digitalis, Oregano
  - D. FLOWERS - Chamomile, Hops, Saffron, Clove
  - E. FRUITS & SEEDS - Opium, Nux Vomica, Fennel, Mustard
- ❖ USED as aromatic agent, flavouring agent, to improve digestion, as anti oxidants, anti-inflammatory agent and have many other medicinal use.

# HERBAL MATERIALS

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## ❖ IDENTIFICATION –

Herbal material should be described by national pharmacopeias or material medica.

## ❖ SELECTION CRITERIA –

- Herbal reference extract should be prepared in accordance with standard operating procedures and the active constituents should be well demonstrated on chromatograms ( obtained by instrumental analytical methods such as TLC, High performance thin layer chromatography [ HPTLC ], HPLC, GC ) and spectra such as NMR ( Nuclear Magnetic Resonance ) under specified conditions.
- Herbal extracts, preparations and their main constituents should be stable using available analytical instruments and analytical methods.

# HERBAL MATERIAL

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## ❖ AUTHENTICATION –

Herb authentication is a quality assurance process that ensures the correct plant species and plant parts are used as raw materials for herbal medicines. It is most important which gives safety and efficacy of herbal medicines.

- Chemical reactions.
- Chromatography procedures such HPLC, HPTLC, GC and TLC.
- Spectroscopic and spectrometric methods.
- Combination of B & C