

Namaste ! नमस्ते !

ॐ सर्वे भवन्तु सुखिनः
सर्वे सन्तु निरामयः।
सर्वे भद्रणिपश्यन्तु
मा कश्चिद्दुःख भाग भवेत्॥

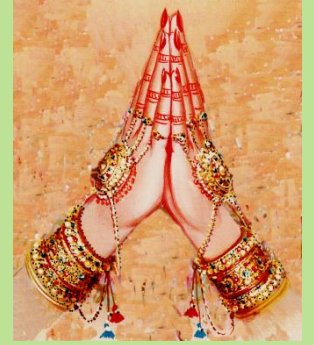
(Brihadaraanyaka Upanishad 1.4.14)

May all be happy.

*May all enjoy health and freedom
from disease.*

*May all have prosperity and good
luck.*

May none suffer.



Buddha बुध्द



अस्तो मा सद् गमय तमसो मा ज्योतिर्गमय
मृत्योन् मा अमृतं गमय् ॐ शांति शांति शांति

O Lord, Lead Us From Untruth To Truth, Lead
Us From Darkness To Light, Lead Us From
Death To Immortality.

(Bṛhadāraṇyaka Upaniṣad 1.3.28)

“If there are problems,
Problems have causes,
And there is remedy to
those causes.”



Mount Everest

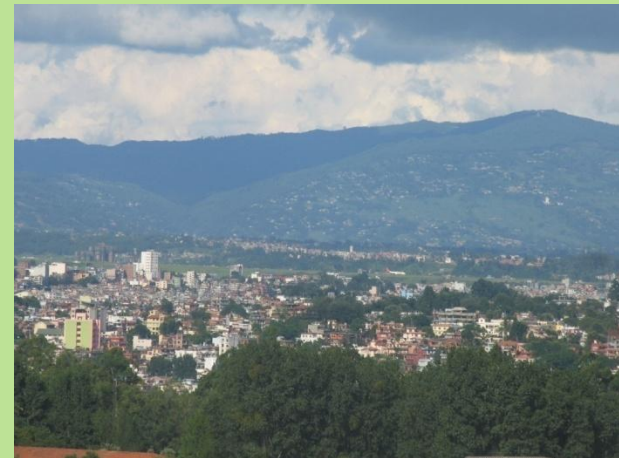


नेपाल Nepal

A low socio-economy but a rich natural-cultural-human resource in between two Giant Leaders of the Time.



Temples in
Kathmandu



Kathmandu Valley

Introduction to Ayurveda Practice in Nepal

Prof. Dr. D.B. Roka

Chief, Ayurveda Campus

Institute of Medicine, T.U., Nepal

Dr. Aseem Baidya

Dr. Shiva Ram Khatiwoda

Correspondence:

Ayurveda Campus, IOM, TU

Email : aseemunlimited.asm@gmail.com

Ayurveda and Herbs



यार्सागुम्बा
Cordyceps



अडेर
Castor



हृदपत्री
Digitalis



तुलसी
Ocimum

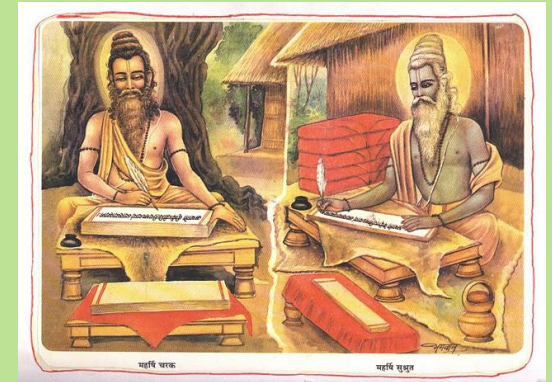


बेसार
Turmeric



Ayurveda आयुर्वेद

- **Oldest medicine** - It seems that human being first attempted for health and happiness in the name of Ayurveda.
 - **History dates back to time immemorial.**
 - **Assumed to be around 6000 BC.**
- **Aims:**
 - Preventing risk factors
 - Promoting health
 - Treating disease/patient
- **Aspects:**
 - Medicines, Detoxification therapy, Surgery, Food and Life Style Management, Yoga and Meditation, Education, Good conduct etc.



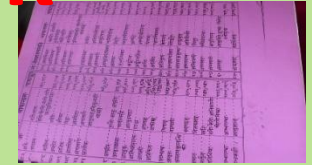
Some Important Classical Texts

Text	Specially Deals with
Charak Sahmita	Internal Medicine
Sushruta Sahmita	Surgery
Astanga Hridaya	Medicine, Surgery
Madhav Nidan	Diagnosis
Sharangadhar Sahmita	Pharmacology
Bhav Prakash Nighantu	Materia medica
Kashyap Sahmita	Pediatrics, Gynecology, Obstetrics

Classical Branches of Ayurveda (8)

Branch	Deals with	Main Text
Kaya Chikitsa	Internal Medicine	Charak Sahmita
Kaumar Bhritya	Pediatrics, Obstetrics and Gynaecology	Kasyap Sahmita
Shalya Bigyan	Surgery	Sushruta Sahmita
Shalaky Tantra	ENT, Dentistry, Ophthalmology	Bhel Sahmita
Agad Tantra	Toxicology, Forensic Medicine	
Graha Bigyan	Psychiatry, Demonology	
Jara Bigyan	Geriatrics	
Vrisha Bigyan	Rejuvenation and Aphrodisiac	

Charak Samhita: an outlook



Section	Deals with	Chapters
Sutra Sthan	General Principles	30
Nidan Sthan	Pathology	8
Viman Sthan	Diagnostics	8
Shaarir Sthan	Anatomy and Physiology	8
Indriya Sthan	Prognostics	12
Chikitsa Sthan	Therapeutics	30
Kalpa Sthan	Pharmaceutics	12
Siddhi Sthan	Successful Treatments	12

Special Features of Ayurveda

- Culturally accepted
- Concerned with everyday life
- Growing interest of all type of people
- Source of many modern medicine
- Meeting point of many systems of medicine: Yoga, Naturopathy, Evidence based medical systems etc.
- Time tested medicine

Definition

□ Ayurveda:

- The science, knowledge and technology that deals with the betterment and prolongation of life

□ Swasthya: Health

- Balance of all components of physical body
- Normal functioning of all metabolic activity, normal intake of nutrition, normal excretion of byproducts
- Sound soul, mind and senses

Few Basic Principles in Ayurveda

Panchamahabhoota (Five Great Elements)

- **Akash:** Ether
- **Vayu:** Air
- **Tej:** Fire
- **Jala:** Water
- **Prithvi:** Earth

Tridosha: Three bio-regulatory principles

- Vata
- Pitta
- Kapha

Three Manasik (Mental) Properties:

- Sattva
- Raja
- Tama

Dhatus: Tissue Component

- Rasa: Fluid, Lymph
- Rakta : Blood
- Mamsha: Muscles
- Meda: Adipose
- Asthi: Bones
- Majja: Marrow
- Shukra: Semen

Mala: Excretory Products

- Mutra: Urine
- Purisha: Stool
- Sveda: Sweat

Causes Of Diseases

- **Asatma indriyarthā**
 - Improper use of senses
- **Prgyapradhā**
 - Crime against knowledge
- **Parinam**
 - Conduct against time

Sad Kriya kala: Pathogenesis

- **Sanchaya:** Accumulation of vitiated factor
- **Prakop:** Aggravation of vitiated dosha
- **Prasar:** Propagation
- **Sthansamshraya:** localization
- **Vyakti:** Manifestation
- **Bheda:** Complication

Examination of Patient

- **Trivid: Three main**
 - Darsan: Inspection
 - Sparsan: Palpation
 - Prasna: Question



Probably the South Asians were the first to detect heart beat as pulse and use it in medical practice, modern education does not like to know this history - just not to acknowledge the contribution of them.

Asthavid: Eight points

- **Nadi:** Pulse
- **Mala:** stool
- **Mutra :** urine
- **Jiwaha:** tongue
- **Shabda:**
sound/ascultation
- **Sparsha:**
Touch/palpation
- **Drik :** Inspection/seeing
- **Akriti:** Appearance

Dashvid Pariksha: Ten fold examination

- **Prakriti:** Body constitution
- **Vikriti:** Morbid factor
- **Saar:** Prominence of body component
- **Samhanan:** General body built
- **Satmya:** Adaptability
- **Sattva:** Mental status
- **Vaya:** Age factor
- **Aaharshakti:** Digestive power
- **Vyam shakti:** Physical strength
- **Pariman:** Measurement e.g. height, weight etc.

Treatment

- **Nidan Parivarjan:** Avoid causative factors
- Counseling
- Use of Proper food
- Use of Proper Herbal, Mineral medicine
- Detoxification, Rejuvenation
- Yoga, Meditation etc.

Panchakarma: Detoxification process

- Svedan, Snehan
- Vaman
- Virechan
- Vasti: Anuvasan, Asthapan
- Shirovirechan



Who practice Ayurveda?

- Two groups:
 1. Traditional - Those who learned it informally from their family background/profession from generation to generation
 2. Formal Education – Those who got academic courses of different level
 - Paramedical Courses: AAHW, AHA etc.
 - Medical Courses: BAMS, MD, MS, PhD etc.

Ayurveda in Practice

- Can be divided into three sectors:
 1. Education:
 2. Service:
 - >> Medical check ups, consultation, treatment etc.
 3. Medicine/Drug Production:
 - >> harvesting, processing, distribution

Religion and Ayurveda

- Some people regard Ayurveda to be **Hindu** system of Medicine. In reality it is the medicine of people of any religion , and also those of no-religion.
- Many luminarie/Acharyas like Bagbhatta and Nagarjuna, who hold highly respectable position in history of Ayurveda, were **Buddhist**.
- Ayurveda is a dynamic tradition. There was exchange of knowledge with **Arabs** and **Tibet**, and then to **Europe** and **Africa**. For example **Yunani** medicine 'Hujral Yahud Bhasma' is used by Ayurvedic practitioners.
- In modern days, many people of different religious background learn, use, practice, and play role to develop Ayurveda, with an aim of improving human health, enhance human sphere of knowledge etc.
- So Ayurveda is not bound to certain religion. Now it must be clear to all that it is an attempt to keep life better, keep environment better, and respect all types of civilizations. Everyone can benefit from it, and can contribute for its development.

Model of ownership and management

1. Government
2. Private
3. Community

Central Regulation of Service

Ministry of Health and Population



- Department of Ayurveda
- Department of Drug Administration
- Nepal Ayurveda Medical Council

Central Regulation of Education

Ministry of Education



- » Universities (TU, NSU)
- » Boards : **CTEVT**

Along with

- » **Nepal Ayurveda Medical Council**

History of some formal events

- According to UNESCO report, first official Technical Education starts from Ayurveda in Nepal.
- First School in 1985 BS
- Nardevi Hospital in 1974 BS
- Singadurbar Vaidyakhana in 1950 BS
- Nepal Ayurveda Medical council in 2054 BS

Services



Service Centers by Government

Service Centre	Main Manpower	Total in the country	Main Service	Location
Ayurveda Aushadhlaya	AAHW, AHA	216	Preventive, Curative, Health promotive	In VDC
Jilla Ayurveda Swasthya Kendra	BAMS, AHA, AAHW	61	Preventive, Curative, Health promotive	District
Anchal Ayurveda Aushadhalaya	BAMS, AHA, AAHW	14	Preventive, Curative, Health promotive	Zonal
Chikitsalaya	MD, MS, Nursing Staff, AHA, AAHW	2	Specialization, Preventive, Curative, Health promotive	Regional and Central

Ayurvedic Manpower in the country

Type or Level	Number
Traditional Practitioners	19 (Many are not listed in the Council)
AAHW	166 (Others are registered in other official body)
AHA	624 (Others are registered in other official body)
BAMS , MD, MS, PhD	361

*Source: Nepal Ayurveda Medical Council
(2068 BS/ 2011 AD)*

Ayurveda Health Policy 2052 BS

- There shall be 1 Ayurveda Rural Dispensary in the mid of 5 VDCs.
(If so we need about 700 more rural health centers)
- There shall be 4 regional hospitals.
- There shall be herbs processing and medicine manufacturing centers in each regions.

Yet to be completely implemented.

Top 10 Problems/Disease treated in Government Ayurveda Health Centre

1. Amlapitta: (Gastritis including peptic ulcer)
2. Kamala: (Hepatitis, jaundice)
3. Prabahika: (Acute and Chronic Dysentry)
4. Vatavyadhi: (Neurological, and Musculo skeletal problems)
5. Pinas: (Sinusitis)
6. Pachan janya Vikar: (Indigestion related Disorders)
7. Pradar: (DUB in females)
8. Bibandha:(Constipation)
9. Asmari: (Calculi)
10. Jwar: (Different febrile illness)

Source: Department of Health Services, Ministry of Health and Population

Other Common Problems in Ayurveda Health Centers

- APD
- Hepatitis
- Constipation, Indigestion
- Sinusitis
- COPD
- Febrile illness
- Stress
- Anxiety
- HTN
- DM
- CVA
- Arthritis of various type
- Hemorrhoids, Fistula, Fissure etc.
- DUB, PID
- Sexual dysfunction
- Infertility
- Maternal and Child health problems
- Geriatric problems
- Skin problems
-etc.

What does a Government Ayurvedic Health centre do?

- Check ups, Treatment, Counseling, Referral etc.
- Conservation of natural resources
- Medicine/Drug production
- Health Awareness: School, Community
- Collaboration with other units of government and non-government sectors
- Collaborate with Medical schools and research institutions

Government service of checkups and most of medicines/drugs are free.

Education



Education

- Paramedical courses: AAHW, AHA
- Medical Course: BAMS

- Lacking / Trying for
 - MD/MS
 - Training, researches, service in wide range

Educational Centers in Nepal

College	Board / University	Total colleges	Courses	Seats available
Colleges for Paramedical Courses	CTEVT, NSU	6	AAHW, AHA	
Bachelor level colleges	TU, IOM (in Kathmandu and Birgunj)	2	BAMS	28 + 40
	NSU (in Janakpur)	1	BAMS	40

BAMS: Bachelor of Ayurvedic Medicine and Surgery

Phase /Professional	Duration	Deals with
First Phase	1 ½ years	Basic Science
Second Phase	1 ½ years	Subclinical Sciences
Third Phase	1 ½ years	Clinical Sciences
Internship	1 year	Hospital based practice under guidance of experts

Note: Every subject is taught in terms of both Ayurvedic and Western Sciences. If it is not possible to correlate some distinct ideas, they are taught separately.

What is in BAMS syllabus?

- Structurally similar to other medical courses like MBBS:- Basic Science, Pre-clinical, Clinical Phases, Internship
- Contains
 - General Medicine: Ayurveda and Western Medicine
 - Basics of Surgery (Ayurveda and Western)
 - Detoxification and rejuvenation therapy of Ayurveda
 - Emergency medicine of Modern system
 - All useful knowledge and skill of Ayurveda
 - Yoga
 - Naturopathy
 - Basic introduction to other systems of medicine

Subjects - First Phase of BAMS

Subject	Theory Lecture 1 hours	Practical /Demonstration 1 ½ hours	Deals with
Sanskrit	150		Sanskrit Language
Itihas	60		History
Padartha Vigyan	150	30	Basic Pinciples
Shareer Rachana	210	210	Human Anatomy, Embryology
Shareer Kriya	210	90	Human Physiology, Biochemistry
Astanga Sangraha	60		Principles and Practice of Ayurveda

Subjects - Second Phase of BAMS

Subject	Theory Lecture 1 hours	Practical /Demonstration 1 ½ hours	Deals with
Swasthavrit	180	50	Preventive and Community Medicine, Epidemiology, Yoga, Naturopathy
Rog tatha Vikriti Vigyan	180	90	Clinical Medicine, Microbiology, Pathology
Rasashastra tatha Bhaishajya Kalpana	180	90	Alchemy, Pharmacy
Dravya Guna Vigyan	180	90	Pharmacognosy, Materia medica, Pharmacology
Charak Sahmita Purwardha	100		Principles and Practice of Medicine
Agad Tantra tatha Vyabhar Ayurveda	100	50	Toxicology, Forensic Medicine

Subjects - Third Phase of BAMS

Subject	Lecture hours	Hospital Training Months	Deals with
Kaya Chikitsa and Panchakarma	300 + 100	9 + 3	Internal Medicine, Psychiatry, Detoxification and Rejuvenation
Shalya Vigyan	210	6	General Surgery
Shalakya Tantra	210	4	Oto-rhino-laryngology, Dentistry, Ophthalmology
Bal Rog	90	1	Pediatrics
Stri Rog and Prasuti Tantra	150	3	Obstetrics, Gynecology
Charak Sahmita Uttarardwha	100		Principles and Practice of Medicine

Medicine/Drugs



अमला
*Embellica
officinale*



Ayurvedic Drugs/Medicine

- Forms: tablet, syrups, powder, paste, decoction, oil
 - (important lacking is injectable form of medicine; can be a concern to researchers)
- Use of animal products, herbal products, minerals
- Wide classification of food and behavioral aspects
- Very useful in prevention and treatment
- Range from herbal tea, home remedies and first aid to specific treatment

Government company

Singha Durbar Baidyakhana Vikash Samiti

- Established in 1950
- Comes under a few government companies that are in profit
- Trusted company
- Provides only about 20% of the demand

Private Sector

- There are many
 - Dispensaries
 - herbal harvesting
 - hospitals
- Many national and Indian multinational companies compete in the market

Ayurveda in the market; besides hospitals and clinics

- **Sanitation: Soaps, Shampoos**
- **Cosmetics**
- **Health-food supplements**
- **Herbal tea**
- **Oils and perfumes**
- **Organic Fruits and vegetables**
- **Health clubs: Yoga, Massage, Shirodhara, Spa**
- **etc.**

Who prescribe these drugs?

- Ayurvedic doctors and health assistants
- Doctors of Western medicines and health assistants
- Over the counter drugs by anyone
- Home remedies by anyone

Who prefer Ayurvedic products

- Almost all people, people from all walks of life
- They want to use it, learn it, help people live better utilizing it
- Everyone wants to see its development better in coming days

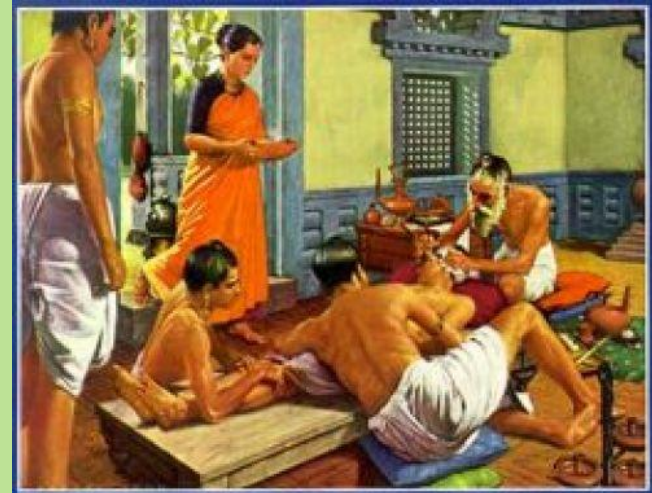
Classical Ayurvedic Surgical Instruments

- Yantra: Blunt instrument
 - Total 101 in number
- Shastra: Sharp instrument
 - Total 20 in number

Note: In Nepal only some basic surgery and ano-rectal surgeries are carried out in Ayurvedic centres. Specialized surgery is not done. While in some of the Ayurveda centers in India they have strengthened the service as competently as that of hospitals in western countries.

Sushruta & Surgery

- Given credit of being father of plastic surgery- in west-dominated views. Many like to give him the credit of being the pioneer of surgery in human history.
- His contributions are in -
 - Clinical training
 - Medical ethics
 - Dissection
 - Preservation of dead body
 - Fracture management
 - Wound closure
 - Prosthetics
 - Enema
 - Catheterization
 - Cataract extraction
 - Fetoscope
 - CS to deliver babies
 - .. etc.



(A simple version of a sushruta sahmita can be found in website of library of University of Toronto, Microsoft digitalization)

- How can we reestablish the dignity and diligence of Sushruta in Practice (As some of the Ayurveda practitioners are yet to learn basics of clinical procedures. The more we strengthen the knowledge and skill in practitioners, the better service will be delivered)

Surgical Theatre at TUATH (Tribhuvan University Ayurveda Teaching Hospital)





Research

Gratitude
towards China
and
her people!



Research Centre

- China has gifted a construction of Research centre in Kirtipur within Ayurveda Campus (IOM/TU) premises.
- First of its kind formally in Nepal.
- Largest setup of its kind.
- Shall develop ground for development through researches and trainings.
- Opportunity to : Doctors of different systems of medicine, Ayurvedic doctors, biochemists, pathologists, statisticians, nutritionist, pharmacist, microbiologists, botanists.... etc.
- **Studies/researches Shall eliminate unproven blames/claims.**
- **Trainings shall strengthen the quality of service**

WHO: Traditional medicine

- In some Asian and African countries, 80% of the population depend on traditional medicine for primary health care.
- Herbal medicines are the most lucrative form of traditional medicine, generating billions of dollars in revenue.
- Traditional medicine can treat various infectious and chronic conditions: new antimalarial drugs were developed from the discovery and isolation of artemisinin from *Artemisia annua* L., a plant used in China for almost 2000 years.
- Counterfeit, poor quality, or adulterated herbal products in international markets are serious patient safety threats.
- More than 100 countries have regulations for herbal medicines.

<http://www.who.int/mediacentre/factsheets/fs134/en/>

Modern Drugs of Botanical Origin

Modern Medicinal Compound	Plant origin (botanical name)	Action
Atropine	<i>Atropa bellodena</i>	Anticholinergic
Codeine	<i>Papaver somniferum</i>	Analgesic, antitussive, antidiarrheal
Colchine	<i>Colchium autumnale</i>	Antitumor agent, antigout
Digoxin	<i>Digitalis purpurea</i>	Cardiotonic
Ephedrine	<i>Ephedra distachy</i>	Sympathomimetic, antihistamine
Reserpine	<i>Rauwolfia serpentina</i>	Antihypertensive, tranquilizer
Salicylic acid	<i>Salix spp</i>	Anti-inflammatory
Taxol/Paclitaxel	<i>Taxus brevifolia</i>	Antitumor agent
L-Dopa	<i>Mucuna pruriens</i>	Aniparkinsonism
Quinine	<i>Cinchona ledgeriana</i>	Antimalarial, anti-inflammatory, analgesic

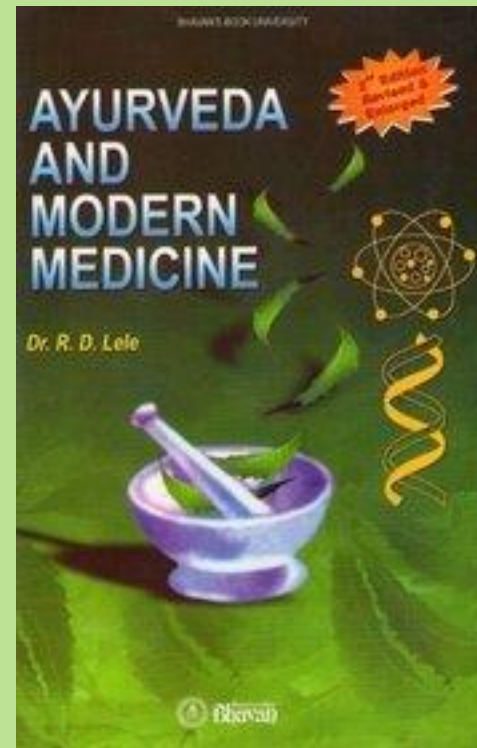
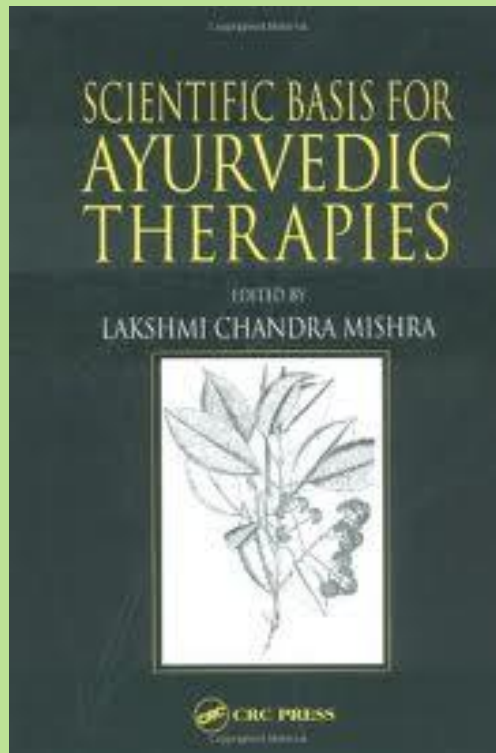
Benefits of Herbs to Nepalese

- 1. Health:** Anyone can use in primary care. WHO has already produced manual for South Asia. Evidence based medication is also possible.
- 2. Economy:** Cultivation and conservation of plants has provided a lot of support. It has made possible to send many **children to school**, and provided money for food, clothing, health service etc. Many people get **employed**.
 - Helps to achieve Millennium development goals.
- 3. Environment Protection:** Source of Oxygen, balance in ecosystem, conservation of water resources.

Science should be the base of therapy

- Its not the allopathy or ayurveda who should decide which works and which not

L C Mishra,
Ph. D.



Dr. R D Lele,
MBBS, MD,
FRCP

Health is the Goal

Medical Systems are the means

- Keep learning, researching.. from each other



Doctor vs Disease in Nepal

Simultaneous Prevalence of

- Communicable
- Non-communicable



People	Place	Doctors
100,000	Kathmandu	98
100,000	Rural area	2.5
75 districts	Some Villages	No doctor

http://nsi.edu.np/nsi/page.php?page=nepal_health_situation (Nick Simon's Institute)

In the Name of Development?

Unlike many other books on third world development, this book serves as a voice to the voiceless, the silent **victims of development**.

It highlights real life stories rather than lifeless data as indices of development.

<http://www.abebooks.com/NAME-DEVELOPMENT-Reflection-Nepal-Shrestha-Nanda/1422831443/bd>

Donor determined mentality. Syllabus made by some foreigners, and probably for foreigners.



**Nanda R
Shrestha.**

Published by:
Dr U N Pathak
Education
Enterprise

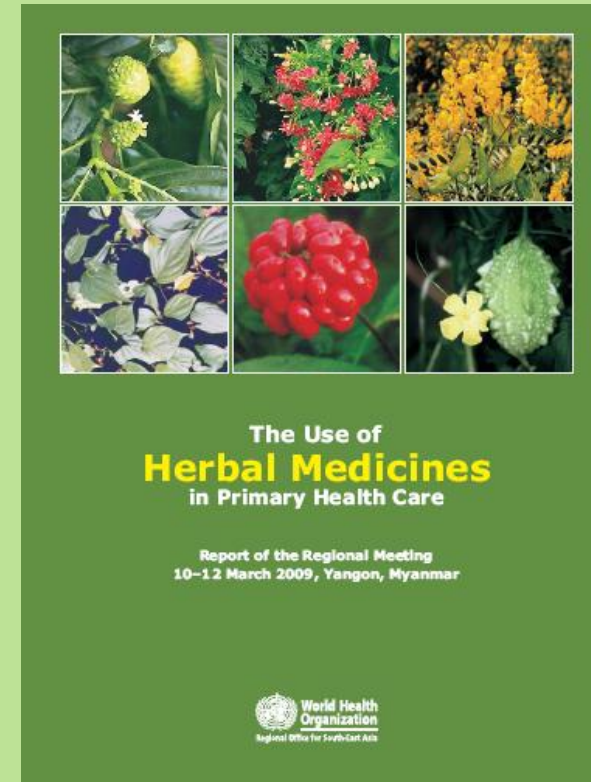
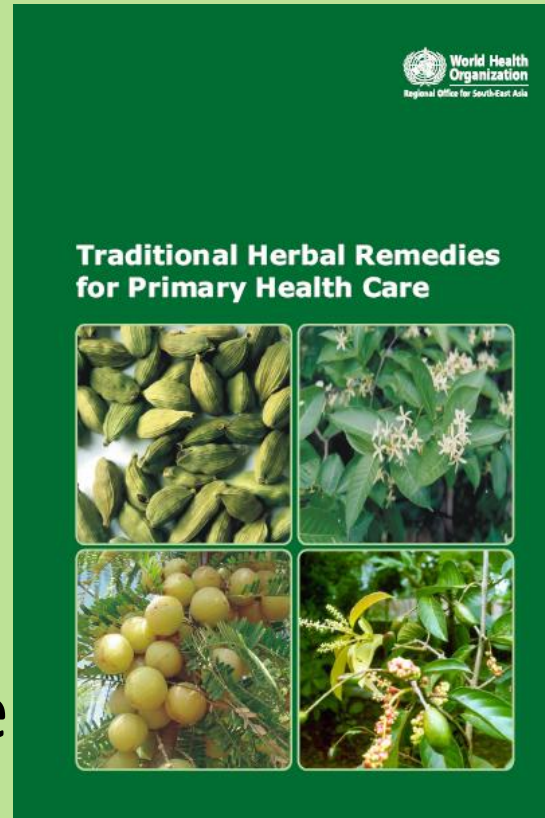
Also available in Google Books

WHO says

- WHO and its Member States cooperate to promote the use of traditional medicine for health care. The collaboration aims to:
 - ✓ support and integrate traditional medicine into national health systems in combination with national policy and regulation for products, practices and providers to ensure safety and quality;
 - ✓ ensure the use of safe, effective and quality products and practices, based on available evidence;
 - ✓ acknowledge traditional medicine as part of primary health care, to increase access to care and preserve knowledge and resources; and
 - ✓ ensure patient safety by upgrading the skills and knowledge of traditional medicine providers.
- <http://www.who.int/mediacentre/factsheets/fs134/en/>

At least Primary health care can be strengthened using some Safe Herbal Remedies

- WHO has published guidelines for South Asia region
- Doctors also can learn these things and Use



Government Plan on Ayurveda

There is a policy to take Ayurveda Hospitals up to the village level and accordingly there is a plan to establish 100 dispensaries, 50 health centers, 3 regional hospitals, 5 regional directorate, 1 training center and 5 herbal garden one in each region.

http://www.moHP.gov.np/english/function/dept_ayurveda.php

Acknowledgement

- Google
- Respective websites
- Dr. Surya Upadhyaya
- Dr. Vijay Bhurtel

Thanks for your Co-operation

