

IMPORTANCE OF PHYSIOLOGY IN LEARNING HOMOEOPATHY

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**READER & HOD – DEPARTMENT OF PHYSIOLOGY &
BIOCHEMISTRY**

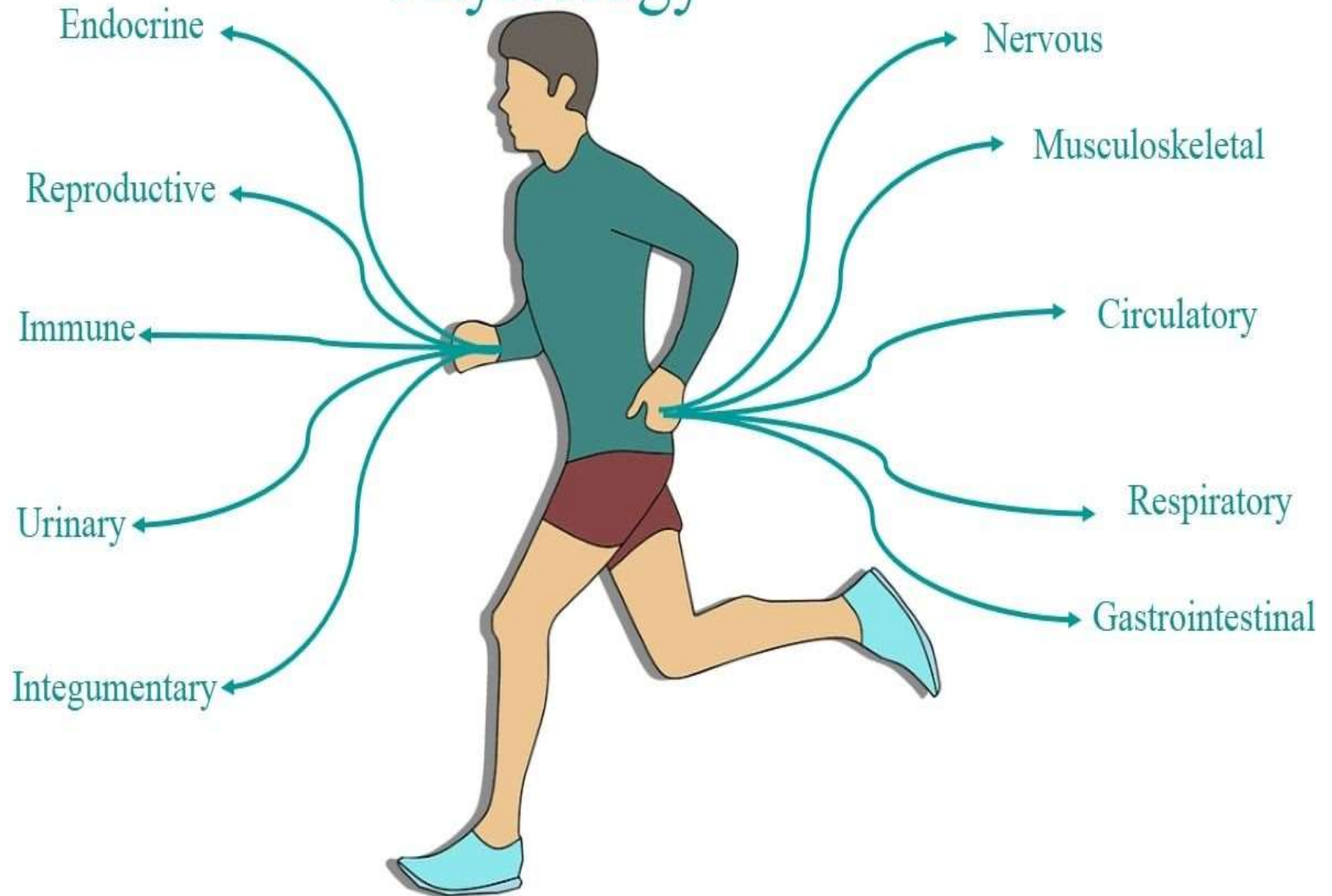
**GOVERNMENT HOMOEOPATHIC MEDICAL COLLEGE AND
HOSPITAL ,DETHALI, SIDDHPUR , PATAN , GUJARAT**

- **INTRODUCTION**
- **PHYSIOLOGY AND HOMOEOPATHY**
- **HOW TO APPLY KNOWLEDGE OF
PHYSIOLOGY TO UNDERSTAND
HOMOEOPATHY**

INTRODUCTION

- Physiology is the study of body functions, their mechanisms and regulations in all living organisms.
- Human physiology is the study of functions of various cells, organs, and organ systems of human body. It encompasses the integration and control of organ systems that help in smooth functioning of body systems as a single unit.
- Medical physiology is the application of knowledge of human physiology in the management of dysfunctions and diseases in human beings.
- It involves the application of the knowledge of physiological properties to restore core stability.

Physiology



ANATOMY VERSUS PHYSIOLOGY

Anatomy is a branch of science, which studies the structure of humans, animals, and plants, especially revealed by dissection and separation of body parts

Focuses on the size, shape, and the location of the body structures in living organisms

Static study

The understanding of the anatomy of a living organism is obtained by dissection and separation of body parts of a living organism

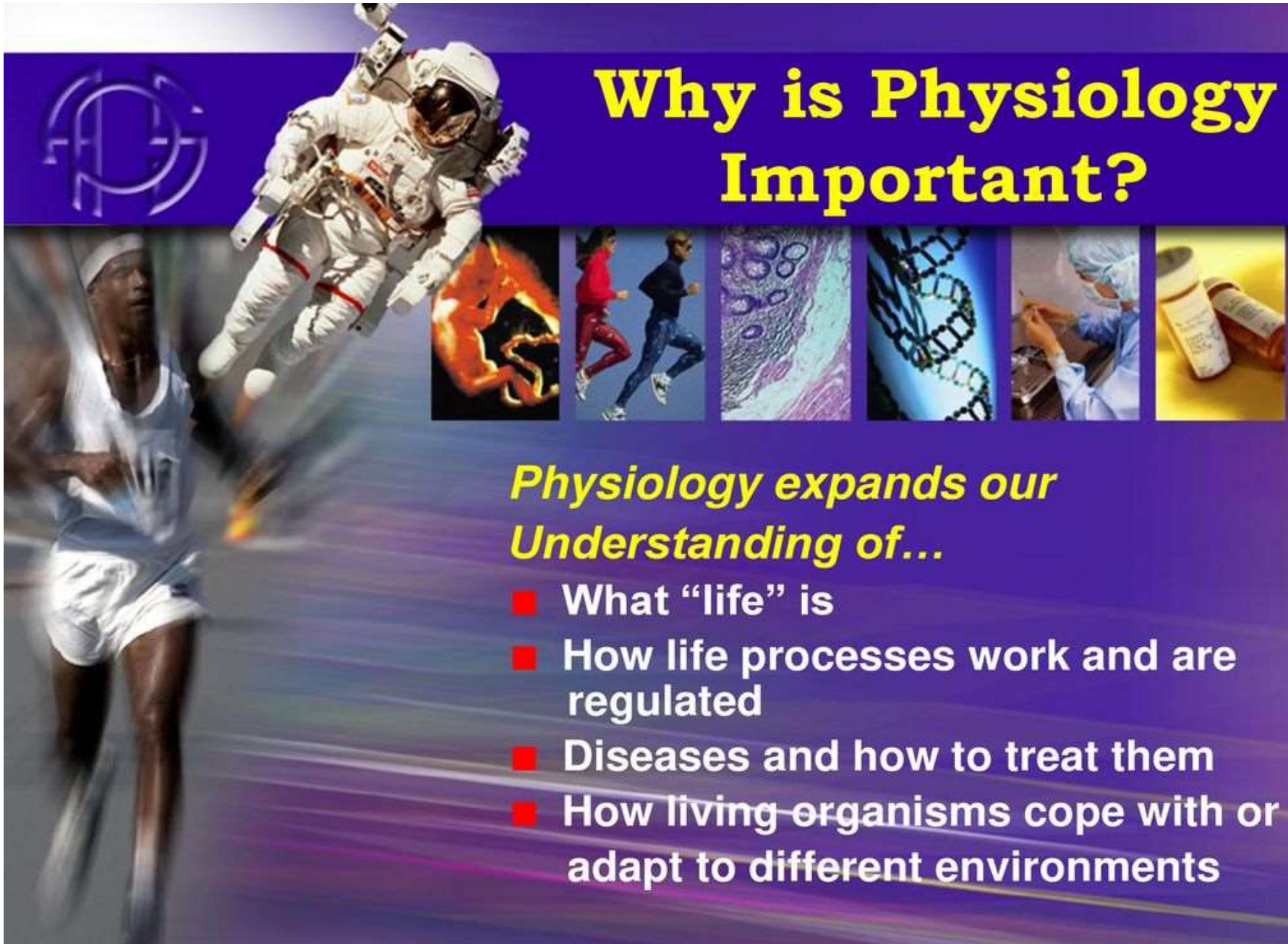
Physiology is the branch of biology which studies the functions of living organisms and their parts

Focuses chemical, physical and electrical process in the body of organisms

Dynamic study

The understanding of the anatomy of the living organism is critical in studying the physiology of that particular living organism

Why is Physiology Important?

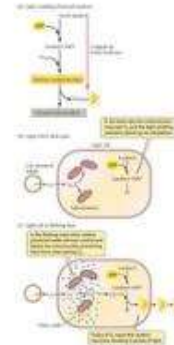


Physiology expands our Understanding of...

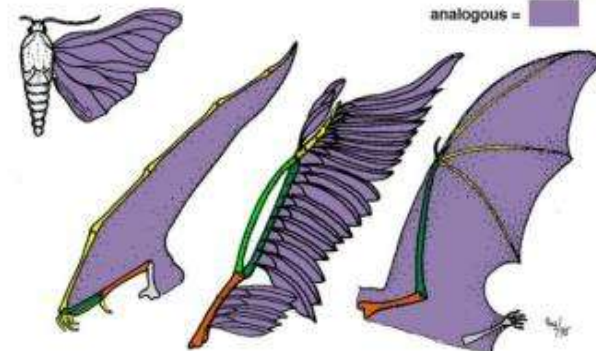
- What “life” is
- How life processes work and are regulated
- Diseases and how to treat them
- How living organisms cope with or adapt to different environments

The importance of physiology

- **The study of mechanism:** How do modern day animals carry out their functions? → study of organ, cell functions and metabolism
- **The study of origin:** Why do modern-day animals possess the mechanisms they do? → they inherited it from ancestors + it was beneficial → adaptation through selection
- **Mechanism and adaptative significance** are distinct concepts that do not imply each other: Adaptation can be achieved through different mechanisms



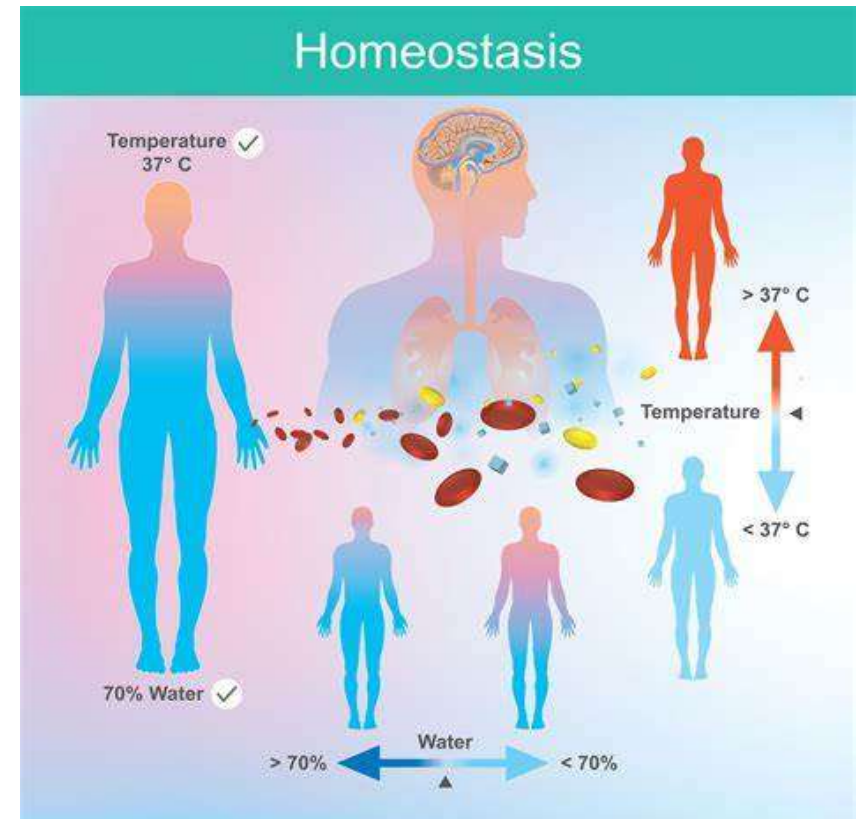
Animal Physiology 2e, Figure 1.2



PHYSIOLOGY FOR LEARNING MEDICINE

Physiology, the Mother of Medicine-

- **Physiology** provides the essential knowledge to understand the process of homeostasis, which is defined as the constancy of the internal environment of the body.
- **Homeostasis** is the state of internal harmony among the body systems.



- **Physiology teaches**
- **ABOUT WHAT TO EAT, HOW MUCH TO EAT, WHEN TO EAT AND HOW TO EAT ALSO HOW MUCH TO SLEEP, WHEN TO SLEEP, WHEN TO DEFECATE, WHEN AND HOW TO URINATE AND SO ON.**
- **ABOUT WHAT CLOTHES TO WEAR AND HOW THEY INFLUENCE OUR LIFE.**
- **WHICH EXERCISE, HOW MUCH EXERCISE AND WHEN AND HOW TO TAKE AND ITS BENEFITS OR SIDE EFFECTS ON BODY AND MIND.**
- **HOW MUCH WATER TO DRINK AND THE EFFECTS OF COLD AND WARM WATER! IT ALSO TELLS US ABOUT EFFECTS OF COLD BATH, WARM BATH, SPONGING JAKUZEE ETC.**
- **ABOUT YOGA PRINCIPLES AND THEIR JUDICIOUS USE TO BENEFIT US.**
- **ABOUT SUN LIGHT ITS EFFECTS IN GENERAL AND BENEFITS WITH RESPECT TO OUR HEALTH.**
- **ABOUT THE EFFECTS OF CLIMATE, AGING, OTHER CONDITIONS SUCH PREGNANCY AND THE CARE TO BE TAKEN FOR BETTER HEALTH.**
- **PHYSIOLOGY ALSO INFORMS ABOUT THE EFFECTS OF FRAGRANCE, COLORS, MUSIC, DANCE, MASSAGE AND SO ON ON LIFE.**

Physiology for Integral Knowledge

- Physiology provides the knowledge to obtain and maintain good health. Physiology teaches us how various organ systems in the body work interdependently for maintaining an effective homeostasis.

Physiology for Spiritual Progress

- The fundamental aim of our terrestrial existence is to attain perfection; the perfection in physical growth, perfection in beauty, perfection in mind and intellect, and perfection in inner disciplines.
A progressive evolution of consciousness is spirituality. (**higher purposes of our existence.**)
- To study human physiology is an opportunity, to become a physiologist is a privilege, to encourage others to practice physiological means of health-promotion is a unique occasion, and to practice physiology for integral progress is the supreme reality in life.

• **PHYSIOLOGY FOR MEDICAL PRACTICE**

Becoming a Good Physician

- The knowledge in physiology guides a physician to understand the principles of medical practice and the rationality of disease management.

For Disease Prevention and Health Promotion

- Pathophysiology elucidates the physiological basis of pathology. A physician with physiology knowledge understands the measures that prevent occurrence of diseases.

- A disease is an expression of functional disharmony of the systems that usually occurs due to prolonged disturbances of any kind.
- Understanding the nature of disturbance is critical to comprehend the pathophysiology of a disease and the physiological basis of management of the disease. Therefore, to learn any branch of medicine, it is essential to acquire the basic knowledge of systemic physiology related to the specialty.
- Therefore, the great physiologist EH Starling had said “Physiology of Today is the Medicine for Tomorrow”.
- A practitioner should have basic knowledge in physiology to become a good physician. Also, a physiologist by virtue of his knowledge and experience is inherently a good physician. Therefore, I always profess “A good physician is a physiologist, and a good physiologist is a physician”.
- Action of all drugs also has a physiological basis. Knowledge of physiology also helps to promote community health.

INTEGRATION OF KNOWLEDGE OF PHYSIOLOGY & HOMOEOPATHY

INTEGRATION OF KNOWLEDGE OF PHYSIOLOGY & HOMOEOPATHY HELPS US

- For understanding health
- For understanding disease
- For Individualistic approach of treatment
- For Understanding actions of Homoeopathic medicines
- For Research -Clinical outcomes and case studies and Homeopathic drug proving, or Homoeopathic Pathogenetic Trials (HPTs)

For understanding health and disease

- Homeopathy is a holistic way of medicine that treat patients by taking into account their physical(body), emotional, and mental states . Human physiology, on the other hand, focuses on the co ordination of functions of various systems within the body, explaining how they maintain homeostasis and respond to external and internal changes.
- Integrating homeopathic education with the study of human physiology allows practitioners to deepen their understanding of disease origins, pathology, and healing mechanisms, resulting in more effective and individualized patient care.
- As per principles of Homoeopathy , Health is harmonious play of mind, body and soul and same way physiology teaches us how harmonious play of life is going on by synchronizing different life processes.

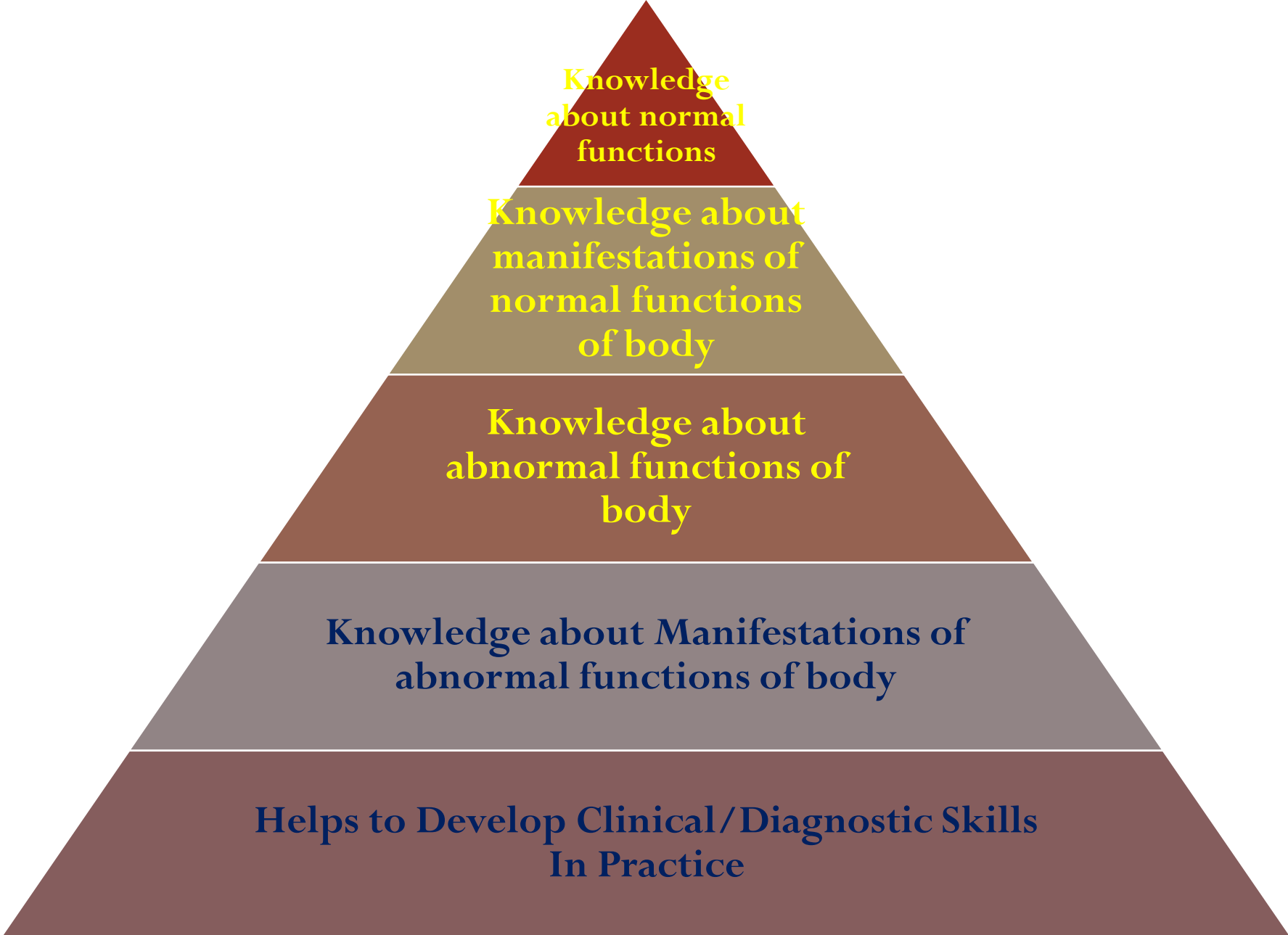
Aph.9

- In the healthy condition of man, the spiritual vital force (autocracy), the dynamis that animates the material body (organism), rules with unbounded sway, and retains all the parts of the organism in admirable, harmonious, vital operation, as regards both sensations and functions, so that our indwelling, reason-gifted mind can freely employ this living, healthy instrument for the higher purposes of our existence.

- let's move on to the tenth aphorism.
- *The material organism, without the vital force, is capable of no sensation, no function, no self-preservation¹, it derives all sensation and performs all the functions of life solely by means of the immaterial being (the vital force) which animates the material organism in health and in disease.*
- *It is dead, and only subject to the power of the external physical world; it decays, and is again resolved into its chemical constituents.*

- Homeopathy views the body as a dynamic, self-regulating system with an innate capacity to heal itself, emphasizing that health is a state of equilibrium or homeostasis where the physical, mental, and emotional dimensions harmonize.
- The principle of dynamism in homeopathy refers to the vital force or energy that animates the body, believed to guide the self-healing process and adapt to stressors. When this dynamism is disturbed, symptoms emerge, signaling a shift from homeostasis.
- Homeopathic remedies are selected based on their ability to stimulate this vital force, nudging the body back toward its natural balance, rather than simply suppressing symptoms

- By Integrating homeopathy and human physiology one can easily understand disease processes
- Guyton and Hall emphasize the role of physiological knowledge in decoding the interactions between different bodily systems, such as the immune and endocrine systems [
- Vithoulkas also states that by integrating these fields, homeopathic remedies can be more effectively applied when there is an understanding of how the body functions on a cellular and systemic level



**Knowledge
about normal
functions**

**Knowledge about
manifestations of
normal functions
of body**

**Knowledge about
abnormal functions of
body**

**Knowledge about Manifestations of
abnormal functions of body**

**Helps to Develop Clinical/Diagnostic Skills
In Practice**

Improvement in diagnostic skill

- The integration of physiology into homeopathic education improves diagnostic accuracy.
- By learning how organs and systems function, practitioners can make more precise correlations between patients' symptoms and their physiological states.
- i.e, homeopathic treatments for cardiac problem can be effectively handled when the practitioner understands how the heart and blood vessels operate under normal and pathological conditions.
- Physiological knowledge allows healthcare providers to interpret clinical signs within the context of organ systems, cellular functions, and biochemical pathways, making diagnosis more accurate and personalized.
- It also helps in Prognosis of disease -disease progression,

KNOWLEDGE ABOUT
PHYSIOLOGY SUBJECT

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graph TD; A[KNOWLEDGE ABOUT PHYSIOLOGY SUBJECT] --> B[PATHO-PHYSIOLOGICAL ACTION OF HOMOEOPATHIC MEDICINES]; A --> C[HELPS TO BUILD BASE FOR DIAGNOSTIC / CLINICAL EXAMINATION SKILLS];
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PATHO-PHYSIOLOGICAL
ACTION OF
HOMOEOPATHIC
MEDICINES

HELPS TO BUILD BASE
FOR DIAGNOSTIC
/ CLINICAL
EXAMINATION SKILLS

Individualistic approach of treatment

- **By understanding the patient's unique physiological makeup such as variations in their immune response or hormonal levels homeopathic practitioners can select remedies more effectively.**
- **This helps more in deciding treatment of chronic disease**

KNOWLEDGE ABOUT
STRUCTURE

KNOWLEDGE ABOUT
FUNCTIONS

UNDERSTANDING
ABOUT REMEDIAL
ACTION

KNOWLEDGE ABOUT ALTERED
STRUCTURE & FUNCTION

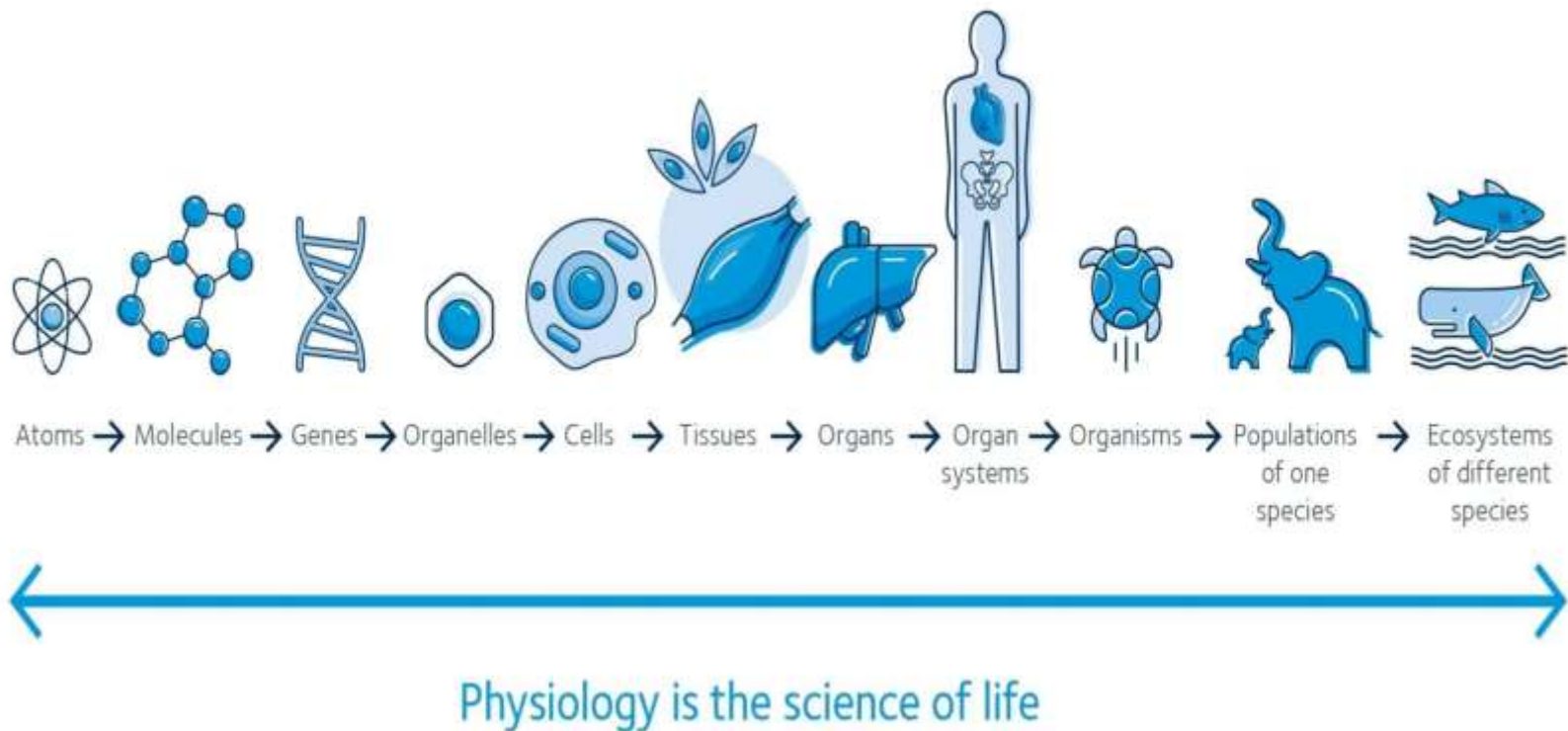
ACTION & MANIFESTATION OF
SYMPTOMS

Research -

- **Clinical outcomes and case studies**
- **Homeopathic drug proving, or
HomoeopathicPathogeneticTrials (HPTs)**

Understanding actions of Homoeopathic medicines

The action of homoeopathic medicines does occur at sub-cellular levels. Hence an in-depth understanding and correlation of the processes in health and disease can open up a whole new way of understanding Homoeopathic drugs and their far-reaching effects.



Physiology helps you to understand-

- Step -1 — Manifestations of disease (Sign & Symptoms)
- Step-2 — Group Symptoms of Particular disease (ex. GERD)
- Step-3- Pathognomic Symptoms of Disease(e.g. Koplik Spots in Measles)
- Step-4- Developing Ability to differentiate Pathognomic & Non-Pathognomic (Individualistic symptom) of Case.

- The first thing to learn about a drug is its physiological and pathological action upon the healthy human organism.
- To know what tissues it acts upon, and just how it affects, them, leads directly to its curative action; and for drugs, like men, have characteristics by which they can be known and distinguished one from another.

- One drug acts upon the nerves of motion, another upon the nerves of sensation; one relaxes, another contracts; one acts upon the mucous membranes, another upon the bones, -each one producing certain pathological conditions in localized parts; and, from, these localized affections, by reflex action, the whole system is implicated.
- The knowledge of this localized action gives us the key to its therapeutics; for a reflex symptom is far less valuable than a primary or idiopathic one.

- Capsicum annuum and Atropa Belladonna both belong to the family Solaneae, and yet how different is their physiological action upon the brain.
- Both the melon and the colocynth belong to the family Cucurbitaceae; yet the one is a delicious fruit, and the other a poisonous drug.

Contributions of Pioneers/ their work in this field

- Dr. Blackwood in his book
- Example of Convallaria Majalis
- This agent acts upon the heart and upon the gastro-intestinal tract, producing emesis and purging.
- - At first it slows the contractions of the heart, while later the cardiac pulsations are quickened and the arterial pressure is further increased.

According to Dr. Burt

- Through the cerebro-spinal nervous system, Arnica has six special centers of action:
- - I.SKIN.Vesicular and Erysipelatous Inflammation.
- - II.VENOUS SYSTEM.Stimulating Absorption.
- - III.MUSCULAR SYSTEM.Paresis and Myalgia.
- - IV.DIGESTIVE ORGANS.Gastro-Intestinal Inflammation.
- - V.SEROUS MEMBRANES.Inflammation and Effusion.
- - VI.CIRCULATION.Accelerated, with Higher Temperature.

e.g Aconite

- **Mechanisms of toxicity:** The cardiotoxicity and neurotoxicity of aconitine due to their actions on the voltage-sensitive sodium channels of the cell membranes of excitable tissues, including the myocardium, nerves, and muscles. Aconitine and mesaconitine bind with high affinity to the open state of the voltage-sensitive sodium channels at site 2, thereby causing a persistent activation of the sodium channels, which become refractory to excitation.

- The electrophysiological mechanism of **arrhythmia induction** is triggered activity **due to delayed after-depolarization** and early after-depolarization. The arrhythmogenic properties of aconitine are in part due to its cholinolytic (anticholinergic) effects mediated by the vagus nerve.
- Aconitine has a positive **inotropic** (increases contractility), effect by prolonging sodium influx during the action potential. It has hypotensive actions due to activation of the ventromedial nucleus of the hypothalamus. Through its action on voltage-sensitive sodium channels in the axons, aconitine blocks neuromuscular transmission by decreasing the evoked quantal release of acetylcholine.
- Aconitine, can induce strong contractions of the ileum through acetylcholine release from the postganglionic cholinergic nerves.

- **Clinical features:** Patients present predominantly with a combination of neurological, cardiovascular, and gastrointestinal features. The neurological features can be sensory (paresthesia and numbness of face, perioral area, and the four limbs), motor (muscle weakness in the four limbs), or both.
- The cardiovascular features include hypotension, chest pain, palpitations, bradycardia, sinus tachycardia, ventricular ectopics, ventricular tachycardia, and ventricular fibrillation.
- The gastrointestinal features include nausea, vomiting, abdominal pain, and diarrhea. The main causes of death are refractory ventricular arrhythmias

LACHESIS .-acts on cerebro-spinal nervous system, to target

- **BRAIN . Congestion; Coma; Sensory Nerve Life Destroyed .**
- **II. CORD . Spasms ; Convulsions ; Sudden Prostration .**
- **III. VAGI. Spasm of Throat. (BRONCHI.) (STOMACH .) Emesis .**
- **IV. BLOOD . Rapid Decomposit'n ; Hemorrhage ; Asthenic Fever.**
- **V. CIRCULATION . Vaso -Motor Par .; Asthenia. (HEART.) Paral.**
- **VI . SKIN. Ecchymosis ; Gangrene ; Hemorrhages ; Jaundice .**
- **VII . GLANDULAR S. All Glands Congested ; Fatty Degeneration .**
- **VIII. SEXUAL O. , FEM. Ovarian Atony ; Scanty, Delayed Menses .**
- **Blood . The rapid decomposition of the blood , and of the tissues locally acted upon by the venom, produces hemorrhages**

GLONOINE -Nitro-Glycerine.

- Special centers of action :
- I. CEREBRO - SPINAL SYSTEM. Centric Vaso -Motor Paralysis .
- II. VAGI . Inhibitory Fibers Paralyzed; Circulation Excited.
- III. GASTRO- INTESTINAL CANAL. Neuroses; Congestion ; Catharsis .

- This powerful remedy acts especially on the cerebral blood-vessels , irritating the brain , medulla oblongata , and vagi .
- No remedy causes so quickly and so violently such a severe congestive, throbbing , and bursting headache . -A feeling as if the head was too large and full of blood ,agg- By motion and heat--- is one of the most prominent symptoms of Glonoine .
- This results from increased action of the heart and arteries ; and it is sometimes attended with nausea and vomiting .

GELSEMIUM SEMPERVIRENS .

Yellow Jessamine .

- CEREBRO- SP . S. Centric Motor and Sen. Paralysis ; Congest.
- II . LUNGS. Paralysis of the Respiratory Center; Asphyxia .
- III. EYES . Diplopia ; Pupil Contr'ted; Mus . Paral'ed; Ptosis .
- IV. HEART. Paralysis ; Blood - Pressure Lessened .
- V. TEMPERATURE. Lowered in Disease.
- VI. SEXUAL O. , MALE . Mus. Paralysis ; Emissions ; Impotence.
- VII. SEXUAL O. , FEMALE . Motor Spasms ; Paralysis ; Neuralgia.
- VIII. URINARY ORGANS. Diuresis ; Sphincter Paralysis ; Enuresis

Great paralyser

- -The grand center of action for this remedy is upon the **motor portion of the spinal cord**, paralyzing motility first, and then sensibility.
- "The retention of consciousness until very late in the poisoning, both in man and the lower animals , shows that the drug has very little power over the higher cerebrum , although the drowsiness and the final loss of consciousness prove that it is not entirely devoid of such influence .

MILLEFOLIUM.

- Through the spinal nervous system , Yarrow has one special center of action :
- I. VENOUS CAPILLARIES . Contraction; Hæmostatic .
- Vascular System . -Upon the venous capillary vessels , Millefolium
- has a powerful styptic action (vasoconstrictor) , as shown by its great curative
- action in arresting active hemorrhages from the nose, lungs , bowels, and uterus .

Scientist contributed

Hippocratic Oath (460 BC to 370 BC) with WHO modification is as follows:

I solemnly pledge to consecrate my life to the service of humanity; I will give to my teachers the respect and gratitude that is their due;

I will practice my profession with conscience and dignity;

The health of my patient will be my first consideration;

I will respect the secrets that are confided in me, even after the patient has died;

I will maintain by all the means in my power, the honor and the noble traditions of the medical profession;

My colleagues will be my sisters and brothers;

I will not permit considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient;

I will maintain the utmost respect for human life;

I will not use my medical knowledge to violate human rights and civil liberties, even under threat;

I make these promises solemnly, freely and upon my honor.



Hippocrates

THANK
YOU

