

Microbiology and Wellness

Wellness is a way of life. It is a process of optimal functioning and creative adaptation involving all aspects of life. Doctors of chiropractic have traditionally been wellness doctors by promoting the health of their patients. Wellness is generally used to mean a healthy balance of the mind-body and spirit that results in an overall feeling of well-being. Without individual responsibility, wellness is not possible. Guidance and encouragement from trained health educators are important components of health promotion and wellness education.

Knowledge of microorganisms and their processes help to understand their role in health and wellness. This course illustrates function of microorganisms in health and wellness.

Following are the topics which will be covered in this course related to Microbiology and Wellness.

Human and microbial world

- Ignaz Semmelweis demonstrated that puerperal fever was a contagious disease transmitted from physicians to their patients. Washing hands decreased incidence of puerperal fever. Today we emphasize on washing hands to prevent diseases and promote health and wellness.

Molecules of life

- To understand how cells live and interact with one another and with their environment one must understand the molecules that compose all living matter

Functional anatomy of Prokaryotes and Eukaryotes

- Learning about structures and functions of prokaryotes and Eukaryotes

Dynamics of Prokaryotes

- Prokaryotes are found in harshest climate and the most severe conditions. Environments where humans can not survive, Prokaryotes are found

Genetics

- Learning processes used to replicate DNA and convert the information encoded within it into proteins

Diversity of Prokaryotes

- Highlights the remarkable abilities of prokaryotes and convey a sense of appreciation for the environment they inhabit and the essential roles they play in our biosphere, groups of microorganisms are described according to their metabolic characteristics and other physiological traits.

Normal bacterial flora and their role in health and disease.

- Immune stimulation, improves phagocytic activity, alleviates atopic eczema, prevents diarrhea in children and traveler's diarrhea.
- "Probiotics"--from the Greek, meaning literally "for life"--is the term most often applied to a group of "friendly bacteria" or "microflora" that work to maintain a healthy intestinal tract and help fight illness and disease.
- **Probiotics** are dietary supplements containing potentially beneficial bacteria or yeasts. According to the currently adopted definition by FAO/WHO, probiotics are: *'Live microorganisms which when administered in adequate amounts confer a health benefit on the host'*.

Mode of transmission of diseases

- Knowing mode of transmission of diseases help in preventing many diseases for example diseases that have oral-fecal transmission can be prevented by washing hands and by preventing contamination of food. Diseases which can be transmitted via respiratory droplets can be prevented by covering mouth while coughing and etc.