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Microbe -Human Interaction

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In my study, I have seen that Human host is constantly in contact with a myriad of Microorganisms in the environment. Some organisms can be opportunistic pathogens that causes infections, when the resistance of the body to the infection is decreased. The skin is composed of the epidermis at the outer surface and of the connective tissue layer ,dermis underneath it. The outer layer of the epidermis is constantly in contact with the bacteria from the surrounding environment and it is normally impermeable to bacteria however cuts, abrasions, or burns allow bacteria to penetrate. Microbes may contribute to many non- infectious diseases. There are different types of bacteria found on skin, they are as, follows. propionibacterium macnes, corynebacterium, staphylococcus epidermidis, streptococcus pyogenes, staphylococcus aureu. skin is infected by millions and billions of bacteria . There are three species of bacteria which infect the skin areas which include the sebaceous or oily areas such as head, neck and trunk or moist areas, such as toes and elbow and the dry which include arms and legs. Acute and chronic infections of Microbe-human interaction, Infection is caused by pathogenic micro-organisms which penetrate the host body, enter the tissue surfaces and multiply in the body, And disease is caused by disruption of the tissue or organ where as infectious disease is caused by infection from the microbes and the highest number of bacteria is found in large intestine. And pathogens are the parasitic microbes that causes infection and disease to the host. whereas, pathogenicity is caused due to microbes potential to cause disease or infection. pathogens are of two types , True pathogens and opportunistic pathogens, True pathogens causes disease in healthy persons with normal immune defenses example cold-(influenza virus), Malaria (malarian protozoan). opportunistic pathogens causes the disease when the host defenses are compromised. Acute infection comes rapidly with severe effects whereas chronic infection progress for a long period of time. signs of inflammation is rise in temperature, pain, redness ,edema and loss of function. And signs of infection in the body is caused by leukocytosis-increase in WBC and leukopenia is decrease in WBC. And septicemia are microorganisms ,which multiply in blood and are found in large numbers whereas, Bacterimia are small numbers of bacteria present in blood which do not multiply. And a carrier is a person who shelters a pathogen and spreads to other people but a chronic carrier is an individual with latent infections and it shelters the infectious agent for a long period. And the passive carriers are contaminated individual, where pathogens are transferred to other patients. Exogenous agents originate from outside the body and Endogenous infections are caused by normal biota. An infection is caused by pathogenic micro-organisms they penetrate the host body enter the tissue surfaces and multiply. A disease is caused by disruption of a tissue or organ. And an infectious disease is caused by microbes which causes deviation in health of humans. And more number of bacteria is found in large intestine of the human body. Patterns of infection: Microbe -human interaction are caused by infection and disease. Infection is transmitted by 3 ways. (1) Vector transmission 2) Vehicle transmission (3) Contact transmission. There are two types of vectors, Mechanical vectors and biological vectors. vectors are live animals that transmit diseases to human beings. Mechanical vectors are caused by micro-organisms, which are carried outside vector body and biological vectors are carried inside vector body - Mosquitoes and malaria. vector transmission is carried out by microbe from its reservoir to a host. vehicle transmission is caused by a non living carrier of a microbe from its reservoir, host example water, soil, and food. contact transmission is caused by three ways, Indirect transmission, Direct transmission and Droplet transmission. Direct transmission is caused vertical and horizontal transmission and it is caused by direct body contact between individuals. Indirect transmission is caused by non living object that can transmit the disease. Droplet transmission is caused when a person cough or sneeze, the dried mucous travel less than 1m. There are different types of infectious diseases, such as cold is caused by(Rhinovirus) ,TB. Tuberculosis bacterium -(Mycobacterium tuberculosis)-German measles (Rubella-virus)- Malaria (plasmodium falciparum protozoa)-chicken pox (varicella zoster-virus)-Bubonic plague (yersinia pestis - bacterium)- whooping cough (Bordatella pertussis bacterium)- Ringworm (Trichophyton rubrum fungus).

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Biography

Dr. Kaneez Fatima working as a senior consultant physiotherapist at Kazim Memorial Amaan Hospital (A multi-speciality centre) , India. She has completed Internship from Nizam's Institute Of Medical Sciences, Hyderabad,India .Her Project Work Dissertation on –"Rheumatoid Arthritis in Hand."Project Completed at Rheumatology Center Hyderabad , under the guidance of Dr .U.R.K. Rao, MD. Rheumatologist and Head of Department.

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