

## Normal Flora

**Commensal:** An association between two species in which one benefits and the other is neither harmed nor benefited.

**Symbiont:** An association between two species in which each benefits the other

**Pathogen:** an agent (a microorganism) that cause disease

**Indigenous flora:** microorganisms native or belonging naturally to a region

- Many bacteria commonly regarded as commensals are in fact beneficial to their host because they make it difficult, by their presence and their metabolites, for potential pathogens to colonize its surfaces.
- Some species of bacteria are not found in healthy individual and their detection is diagnostic of disease.
- Many species with very clear pathogenic potential do not cause disease in every individual whom they colonize.
- Other species that are part of the normal bacterial flora of the body and some environmental saprophytes may cause sever infections.
- The bacterial population of a single human body is approximately  $10^{14}$  cells. (There are around  $10^{12}$  bacteria in a gram of feces)

### Indigenous Flora by Anatomic Region

REGION	COMMENSAL FLORA
Skin	<i>S. epidermidis</i> , <i>Propionibacterium acnes</i> , diphtheroids, <i>Cl. Perfringens</i> , <i>S. aureus</i> , <i>Candida</i> , group A streptococci <i>Pityrosporon (Malassezia) ovale</i>
Nasopharynx	Viridans streptococci, <i>S. epidermidis</i> , diphtheroids, <i>H. influenzae</i> & <i>H. parainfluenzae</i> (35-65%) <i>S. pneumoniae</i> , <i>S. aureus</i> , <i>N. meningitidis</i> , <i>S. pyogenes</i>

