

Ex # 27, p 70-71

Bacteria of the Skin

Isolation, Cultivation of Fastidious Bacteria

Staphylococcus, Micrococcus, Propionibacterium acnes, Corynebacterium, yeasts

Additional references:

1. Textbook
 - a. Ch 14, p 421-422
 - b. Ch 21, p 615
2. Photo Atlas
 - a. p 3, 4, 5, 6
 - b. p 48-49; BAP p 48-49

Terms:

Catalase
Coagulase
Dermis
Epidermis
Normal flora
Blood fibrin



Researchers at the National Institutes of Health's (NIH) new Human Microbiome Project sequenced genes from skin samples from volunteers and found bacteria from:

- 19 different phyla
- 205 different genera
- And more than 112,000 individual gene sequences
- The forearm had an average of 44 different species, higher than any other location on the body

Table 1. Bacteria commonly found on the surfaces of the human body.

BACTERIUM	Skin	Conjunctiva	Nose	Pharynx	Mouth	Lower Intestine	Anterior urethra	Vagina
<i>Staphylococcus epidermidis</i> (1)	++	+	++	++	++	+	++	++
<i>Staphylococcus aureus</i> * (2)	+	+/-	+	+	+	++	+/-	+
<i>Streptococcus mitis</i>				+	++	+/-	+	+
<i>Streptococcus salivarius</i>				++	++			
<i>Streptococcus mutans</i> * (3)				+	++			
<i>Enterococcus faecalis</i> * (4)				+/-	+	++	+	+
<i>Streptococcus pneumoniae</i> * (5)		+/-	+/-	+	+			+/-
<i>Streptococcus pyogenes</i> * (6)	+/-	+/-		+	+	+/-		+/-
<i>Neisseria sp.</i> (7)		+	+	++	+		+	+
<i>Neisseria meningitidis</i> * (8)			+	++	+			+
<i>Enterobacteriaceae</i> * (<i>Escherichia coli</i>) (9)		+/-	+/-	+/-	+	++	+	+
<i>Proteus sp.</i>		+/-	+	+	+	+	+	+
<i>Pseudomonas aeruginosa</i> * (10)				+/-	+/-	+	+/-	
<i>Haemophilus influenzae</i> * (11)		+/-	+	+	+			
<i>Bacteroides sp.</i> *						++	+	+/-
<i>Bifidobacterium bifidum</i> (12)						++		
<i>Lactobacillus sp.</i> (13)				+	++	++		++
<i>Clostridium sp.</i> * (14)					+/-	++		
<i>Clostridium tetani</i> (15)						+/-		
Corynebacteria (16)	++	+	++	+	+	+	+	+
Mycobacteria	+		+/-	+/-		+	+	
Actinomycetes				+	+			
Spirochetes				+	++	++		
Mycoplasmas				+	+	+	+/-	+

++ = nearly 100 percent + = common (about 25 percent) +/- = rare (less than 5%)
 * = potential pathogen

<http://bioinfo.bact.wisc.edu/themicrobialworld/NormalFlora.html>