

CLs can alter ocular bacteria

Contact lenses (CLs) may alter the natural microbial community of the eyes, according to a study published in *mBio*, an online open-access journal of the American Society for Microbiology. In a study of 58 adults seeking outpatient eyecare, researchers at New York University School of Medicine found that CLs make the eye microbiome more skin-like, with higher proportions of the skin bacteria *Pseudomonas*, *Acinetobacter*, *Methylobacterium*, and *Lactobacillus* and lower proportions of *Haemophilus*, *Streptococcus*, *Staphylococcus*, and *Corynebacterium*. Researchers used 16S rRNA sequencing to compare the bacterial communities of the conjunctiva (the eye surface) and the skin under the eye from 58 adults. They also analyzed samples from 20 of the study participants (9 lens wearers and 11 non-lens wearers) at 3 time points over the course of 6 weeks. Looking at 250 samples in the lab (116 from cotton swabs of the conjunctiva, 114 from cotton swabs of skin under the eye, and 20 contact lenses), researchers found a higher diversity of bacteria on the ocular surface than on the skin under the eye or on the CLs. The ocular surface microbiota of those who wore CLs was more skin-like compared to those who did not wear lenses. The study was supported by the Research to Prevent Blindness Foundation.