

Tear research focused on contact lens risks, benefit

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Contact lenses are great for sight, but do they have an impact on general eye health? Researchers at the University of Alabama at Birmingham (UAB) School of Optometry are working to answer that question by analyzing tears.

Biological changes in the eye can be measured through minor fluctuations in the level of inflammatory proteins called cytokines, which are present in the tear film. Cytokines are strong indicators of overall eye health, especially in contact wearers.

For the UAB study, volunteers were prescribed a type of contact lens called silicone hydrogels to wear daily or for a 30-day schedule, said Lucy Kehinde, a UAB doctoral student in the Vision Sciences Graduate Program and the lead researcher. Her early tear-research results show that even minor changes in eye biology can inform lens-wear prescribing and patient preference.

"It is helping us to understand and get a clearer picture of eye health during the course of a month, which is the length of time some people choose to keep in their extended-wear contacts," Kehinde said. "The choice between lenses should be taken seriously in terms of reducing the risk of eye infections and other sight problems."

Kehinde presents her research at the Association for Research in Vision and Ophthalmology (ARVO) annual meeting May 3-7 in Fort Lauderdale, Fla.

The study included 80 volunteers who collected their [tears](#) in ultra-thin glass tubes smaller than a coffee stirrer. The participants were trained to hold the collection end of the tube very close to the ocular surface without touching the [eye](#). Study tears must be non-stimulated since cytokine levels are skewed by stimulated or emotional tears.

The research also is helping to narrow down the cytokine markers important to eye-disease prevention and treatment, Kehinde said. "We may be able to use this data to develop new diagnostic tools that would identify good candidates for extended-wear lenses, or find those who are better suited for daily-wear lenses," she said.

Source: University of Alabama at Birmingham ([news](#) : [web](#))

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