

COCONUT OIL & HAIR CARE

A study on the effect of mineral oil, sunflower oil, and coconut oil on prevention of hair damage showed that Coconut oil, being a triglyceride of lauric acid (principal fatty acid), has a high affinity for hair proteins and, because of its low molecular weight and straight linear chain, is able to penetrate inside the hair shaft. Mineral oil, being a hydrocarbon, has no affinity for proteins and therefore is not able to penetrate and yield better results. In the case of sunflower oil, although it is a triglyceride of linoleic acid, because of its bulky structure due to the presence of double bonds, it does not penetrate the fiber, consequently resulting in no favorable impact on protein loss.¹

A study on the secondary ion mass spectrometric investigation of penetration of coconut and mineral oils into human hair fibers: relevance to hair damage showed that coconut oil penetrates the hair shaft while mineral oil does not. The difference may be due to the polarity of the coconut oil compared to the nonpolar nature of the mineral oil. The affinity of the penetrant to the protein seems to be the cause for this difference in their behavior. This study also indicates that the swelling of hair is limited by the presence oil. Since the process of swelling and deswelling of hair is one of the causes of hair damage by hygral fatigue, coconut oil, which is a better penetrant than mineral oil, may provide better protection from damage by hygral fatigue.²

1. *Effect of mineral oil, sunflower oil, and coconut oil on prevention of hair damage by Rele A. S and Mohile R. B - J Cosmet Sci. 2003 Mar-Apr;54(2):175-92.*

2. *Secondary ion mass spectrometric investigation of penetration of coconut and mineral oils into human hair fibers: relevance to hair damage by Ruetsch S. B, Kamath Y. K, Rele A. S and Mohile R.B - J Cosmet Sci. 2001 May-Jun;52(3):169-84.*

