Microplastics in Haircare Products can Harm Your Health

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In the modern beauty world, microplastics are the hidden culprit you didn't see coming. While they boost texture and hold in hair products, they carry risks you can't ignore for your scalp and your health. Let's break down what science is uncovering about this invisible threat and how you can protect your hair.

WHAT ARE MICROPLASTICS?

Microplastics are small plastic particles (typically less than 5 mm) intentionally added to cosmetics for film-forming, thickening, smoothing, or conditioning functions. In hair care, common synthetic polymers like acrylates copolymer, polyethylene (PE), and polypropylene (PP) are used for hold, texture, and shine.

These polymers may remain on hair or scalp.

How to Avoid Microplastics: Smarter Beauty Choices

Read ingredient labels carefully
Watch for PE, PP, acrylates copolymer, polymethyl methacrylate (PMMA), etc.

Choose Biodegradable Products
Many green brands now explicitly omit synthetic film-formers or use sustainable alternatives.

Look for Micro-plastic free
leave-on or rinse-off formulations that specify no microplastics.

Support regulatory action
Campaigns like Beat the Microbead have already influenced microbead bans, and more holistic polymer restrictions are emerging globally.

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Microplastics don't belong in your hair.

Health & Scalp Risks for Microplastics

1. Scalp Irritation & Barrier Disruption

Microplastics can accumulate on the scalp's surface, irritating sensitive skin and potentially upsetting its natural barrier. Larger particles may sit atop the skin, while nanoparticle forms might penetrate deeper especially in vulnerable or inflamed areas. Chronic irritation can weaken scalp health, leading to conditions like dryness, flaking, or even increased hair shedding.

2. Toxin Carriers & Chemical Exposure

Microplastics are not just inert particles, they can act as vehicles for harmful chemicals (like phthalates, bisphenols, PFAS) and absorb pollutants from the environment. When they sit on skin or travel through pores, there is a theoretical risk these toxicants could reach deeper layers of tissue or enter systemic circulation.

Though research into direct human health impacts is still emerging, laboratory and animal studies suggest oxidative stress, inflammation, and genotoxic changes may follow exposure.

3. Dullness, Dryness & Reduced Moisture Penetration

Over time, microplastic buildup on hair strands may form a semi-impermeable film, blocking moisture and beneficial ingredients from reaching the inner hair cortex. The result: dry, brittle, lackluster hair that is more prone to breakage.

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Bikiaris, N., Nikolaidis, N. F., & Barmpalexis, P. (2024). Microplastics (MPs) in Cosmetics: A Review on Their Presence in Personal-Care, Cosmetic, and Cleaning Products (PCCPs) and Sustainable Alternatives from Biobased and Biodegradable Polymers. Cosmetics, 11(5), 145. https://doi.org/10.3390/cosmetics11050145

Marco Giustra, Linda Barbieri, Giulia Sinesi, ET AL. (2024). Microplastics in Cosmetics: Open Questions and Sustainable Opportunities. Chemistry: A European Journal. 10 (1002), pages 1-181. https://doi.org/10.1002/CSSC/202402065

MPR Labs. (n.d.).Microplastics in Cosmetics - An Invisible Threat to the Environment & Health. Retrieved October 10th, 2025, from https://mpr-labs.com/