

Top Stories in Research

By Irma Shaboian

What's new on the research front? The articles from which these summaries of the latest in skin research are taken are so hot off the press the ink has barely dried.

Relationship between skin observations and polycystic ovary syndrome



Polycystic ovary syndrome (PCOS) is an endocrine disorder that primarily affects the way women's ovaries work. The cause of PCOS is unknown, but there is believed to be a genetic component. Women with PCOS may have small, fluid-filled lumps on their ovaries, among other characterizations. These are caused by an underlying hormonal imbalance, in which the ovaries make more androgens (male hormones) than normal.

While there is some understanding regarding how the bodies of those with PCOS function differently to those without the condition, researchers at the University of California were interested in looking at alterations in the skin. To do this, the researchers examined the skin of 401 women who were suspected of having PCOS, as well as conducting other laboratory tests. The researchers noted that that women with PCOS were more likely to have excessive and abnormal hair growth on their bodies, known as hirsutism. In addition, hyperpigmentation and dark discoloration was often observed in skin creases, primarily in the armpits.

While acne is more common in women with PCOS, the researchers

found that it could not be used as a clinical marker to identify the condition. Instead, the researchers proposed hirsutism and skin discoloration in skin creases as more reliable clinical signs.

Link between hard water and eczema in children?

Eczema is a chronic skin disorder in which inflammation causes itchy skin. It has been speculated that damage to the skin as a barrier is a contributing cause, in addition to dry skin. While dry skin can have a genetic component to it, environmental factors can also contribute. Hard water is water that contains a lot of minerals. It is commonly found in many households and, while typically considered safe, some research suggests that it can be a risk factor for eczema.

Researchers in the UK wanted to know if there could be a link between chlorine (a known irritant that is found in hard water) in household water and the risk of eczema in children (through damage to the skin's natural barrier). More than 1,000 infants were included in the study and data regarding the hardness of their water were also collected. The researchers found that living in an area with hard water presented up to an 87 per cent



risk of an infant developing eczema by three months of age.

Interestingly, the levels of calcium carbonate, another type of chemical, more strongly correlated with eczema risk than chlorine levels. The researchers proposed that while more research is needed, using a water softener might be helpful.

A second synthetic skin?

Scientists at MIT have developed a synthetic material that, while appearing invisible when applied on the skin, mimics the flexibility and movement of healthy human skin. The new material, called XPL, is described as having both cosmetic and clinical uses.

The synthetic skin has been studied as a way of reducing the appearance of eye bags, which commonly form with aging. To do this, the synthetic material provides enough compression when applied on the skin to tighten the skin for up to 24 hours. Another benefit of this second-skin material is its ability to allow the skin to keep its moisture and prevent it from drying out. The scientists hope that topical applications of XPL will also be able deliver medicine to the body. While more research is being conducted, there is no doubt that such a versatile product has endless possibilities! 



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