



VERY
*Skin*interesting

Surprising discoveries in skin health

By Anna D. Guanche, MD

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is teeming with blood vessels to regulate our temperature and nerves to let us know what is going on — pressure, heat, and so on — as well as a complex immune system to protect against ever-present bacteria, fungi, and viruses. Plus, it turns out that the skin is even more complex than we realize, and we are discovering new, interesting, and unbelievable findings about it. We know that the skin communicates. Yellow means something's wrong with the liver (or you are eating too many carrots!). Red reveals that you are embarrassed or over-heated, among other things. A pale color can mean you are about to pass out. When your brow moistens ever so slightly and your pulse races, emotion is betrayed. But can the skin tell you more? What is the connection between ear creases and heart disease, left arm moles and breast cancer, Viagra use and melanoma? Can your skin directly detect smell? It turns out there are interesting new discoveries that can give us clues about our health and aid in treatment and prevention.

Skin Can Smell

Your nose isn't the only part of your body capable of taking a whiff. In the past decade, scientists have discovered olfactory (scent) receptors lingering in strange places — in sperm, in the spine, in the prostate gland, and even in the kidneys. Now, researchers in Germany have identified scent receptors somewhere much more accessible: the skin. What's more is that these receptors appear to be involved in turning on and off gene expression. This is important because when the receptors are stimulated or blocked, body processes can be controlled. Blocking these receptors may block unwanted processes, while stimulating them can encourage desired outcomes. One study showed a 35-percent increase in collagen production by skin cells bathed in a specific scent. Hopefully, this discovery will be harnessed in a positive way in order to aid in collagen production and wound healing.

Viagra and Melanoma

What does a sexual enhancement or erec-

tile dysfunction drug have to do with skin cancer? A study published in *JAMA Internal Medicine* found that men who used the erection-enhancing drug sildenafil (Viagra) were 84 percent more likely to develop melanoma, the most dangerous form of skin cancer, over a period of 10 years. The study grew out of laboratory research on how Viagra acts on cell-to-cell signaling pathways. This work demonstrated that the drug mimics key parts of a process that lets melanoma cells spread to other parts of the body. Skin cancer that spreads (metastasizes) is hard to control and can end in death. To clarify, 4.3 of every 1,000 who didn't take Viagra developed melanoma compared to 8.6 of every 1,000 men who took Viagra.

The key for individuals who use this drug is to avoid other triggering factors such as excessive UV exposure, to do body self-exams, and to get skin checks regularly. Men often must rely on their partners to observe mole changes. One study found that 68 percent of melanomas on men were discovered by women whereas zero percent of the melanomas on women were discovered by their male counterpart!

Left-Arm Moles and Breast Health

The number of moles a woman has on her left arm may be tied to her risk of developing breast cancer, according to two new studies. The studies don't prove that moles cause breast cancer or that women with a lot of moles will definitely get breast cancer. Instead, they suggest there may be a genetic or hormonal link between the two. For the studies, the researchers examined data from two cohorts — the Nurses' Health Study that followed 74,523 female nurses for 24 years, and the E3N Teachers' Study Cohort that observed 89,902 women for 18 years. In the Nurses' Health Study, researchers asked participants to report the number of nevi >3mm on their left arm. Researchers found that women with 15 moles on their left arm were 35 percent more likely to be diagnosed with breast cancer than those who reported no moles.

Individuals with more than 15 moles on their left arm should not panic. They should simply be armed with this information and consistently do breast self-exams, annual checkups, and mammograms.

Ear Creases and Cardiovascular Disease

What does the skin on your ear have to do with heart disease? Multiple studies show that a diagonal earlobe crease is a potential indicator of coronary artery disease. This crease is called "Frank's sign," after the lead author of the original study. While a "normal" earlobe is smooth, an earlobe with a crease has a fold,

straight line, or wrinkle that appears to cut the earlobe in half.

Could such a small mark on your ear really have anything to do with heart disease? Yes. A cardiovascular cause of demise was present in 73 percent of people with and 45 percent of people without diagonal creases.

It's not entirely clear why these traits are associated with certain increased cardiovascular risks, and it's not yet known how to counteract these increased risks. But if you have this trait, it probably wouldn't hurt to check with your doctor. Most likely,

he or she will conduct further tests to determine your blood pressure, cholesterol levels, and other risk factors and consult you about making more aggressive lifestyle changes, even if you're already eating some healthy foods and exercising a little. It's possible that you'll need to make more of an effort than most people to protect your heart health.

The skin speaks to us daily about how we feel — cold, hot, nervous, or even itchy. But if we can learn to understand its intricate language, we can see that can say more than a simple blush or blanch. Armed with knowledge, we now know to count left-armed moles and look for ear creases. It does seem unbelievable, but with this information, we can engage in monitoring and prevention in order to protect our health. Those who use Viagra can check their moles more carefully, more frequently. And on the horizon, we may see scents used on the skin to elicit desired outcomes. We will go back to our roots — no pun intended!

With the New Year upon us, it is a great time to take stock of what is going on in our bodies with a simple glance in the mirror. And then, we must commit to follow up on any signs. Do body self-exams, breast self-exams (if applicable), and make sure you are monitoring your health in an informed, directed, empowered way. Cheers! Here's to a fabulous, healthy 2015! ■

Dr. Guanche is not a consultant for, nor receives consulting fees or compensation from, any of the product or device companies mentioned in this article.

