



Good Health Begins with Your Skin

By Lori R. Stepan

Which do you think is the largest organ in the human body? Ask your family and friends to see if they know the answer.

You may be surprised to learn that the answer is ... your skin! The average adult has 22 square feet of skin on their body, slightly larger than the area of your twin-sized bed! All this skin weighs about 8 pounds.

Your skin is made up of three layers: epidermis, dermis, and hypodermis, as shown in the picture. Why should you care about your skin? Your skin protects you from injuries and helps keep out infections and diseases. It controls your body temperature (through sweat), oozes out oil, and prevents the loss of moisture. Your skin also helps your body produce vitamin D, which is important for healthy bones, teeth, muscles, and more.

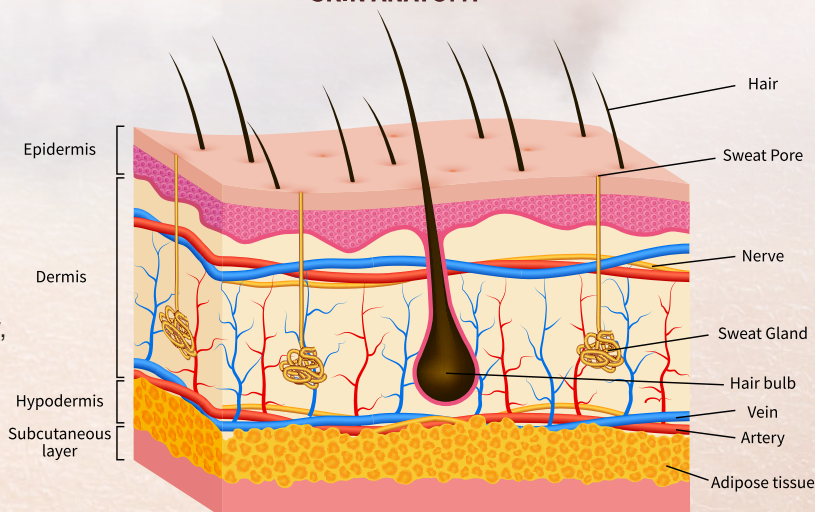
In order for your skin to keep you healthy, you must also keep your skin healthy. Above all, moisturizing is vital! If your skin gets too dry, it can easily become cracked, reducing the effectiveness of our largest barrier to infection.

Chemistry can help with dry skin! Most moisturizing skincare products are designed to penetrate only the top layer, the epidermis, and they soften dry skin. Many body lotions contain chemicals that are already part of the skin's natural moisturizing system.

Some kids and adults may have a skin condition called eczema that is linked to an overactive immune system. Eczema can cause inflammation that weakens the skin's immunity. The symptoms of eczema include dry, red, really itchy skin, swelling and cracking of skin, and patches of thickened skin. Prescription ointments can help. They contain chemicals that repair the skin barrier, such as those that add moisture back to the skin, those that add back oils to lubricate and soften the skin, and those that prevent water loss from the skin.

Another thing you can do to keep your skin healthy is to rub sunscreen on it for protection from ultraviolet (UV) radiation when you go out in the sun! When you are exposed to too much UV radiation, it can lead to skin cancer. But once again, chemistry comes to the rescue! Many sunscreens contain

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zinc oxide (which scientists abbreviate as ZnO) or titanium dioxide (TiO₂). These wonderful compounds block UV rays from penetrating your epidermis and causing sunburn damage.

Be sure to take care of your skin today, with the help of chemistry!

Did you know that your skin can heal itself?

Ever wonder what your body does when you get a cut on your skin? If a cut is deep enough, it can make you bleed. In a few seconds, the blood vessels in the area start to shrink to reduce blood flow and stop the bleeding.

Red blood cells, along with other proteins come together to form a kind of screen or shield that stops the wound from bleeding and protects it from getting infected. These blood cells, proteins, and **enzymes** in the blood slowly make the blood thicker and turn it into a gel (or a clot). This forms a scab that acts as a solid "fence" protecting the fragile wound from the external environment.

Next, new blood vessels form in and around the wound. They can supply oxygen and nutrition needed to speed up the healing process. Eventually, the wound heals and the skin, with some minor discoloration, is back to normal.

So the next time you get a cut, remember the wonderful things your skin is doing to heal itself as you put on that bandage!

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