

### **First Line of Defense against Infectious Agents is Your Skin**

The skin, which is your body's largest organ, is the first line of defense against many invading pathogenic (disease causing) microorganisms. Bacterial and fungal organisms live on the skin and usually do not invade the body, unless there is a break in the skin. Changes to the skin occur as one ages. Some are minor, some are irritating, and some are serious to one's health. A couple of years ago, I wrote an article on protecting the skin from sun and skin cancer. This *Health Notes* article covers the issues of wrinkles, dry and itchy skin, age spots, and bruising. Suggestions are given for maintaining healthy skin. Two major references are used: National Institute of Arthritis and Musculoskeletal and Skin Diseases Clearinghouse ([www.niams.nih.gov](http://www.niams.nih.gov)) and Age Pages from the National Institute on Aging ([www.niapublications.org/agepages/skin.asp](http://www.niapublications.org/agepages/skin.asp)).

**Wrinkles.** "Over time, the sun's ultraviolet (UV) light damages the fibers in the skin called elastin. The breakdown of these fibers causes the skin to lose its ability to snap back after stretching. As a result, wrinkles form. Gravity also is at work, pulling at the skin and causing it to sag, most noticeably on the face, neck, and upper arms" (Age Page, December 2005). Another contributing factor that researchers have noted is the effect of cigarette smoking. Increases in face wrinkles seem related to the amount of cigarettes and number of years of smoking. Do products on the market "revitalize aging skin"? "According to the American Academy of Dermatology, over-the-counter "wrinkle" creams and lotions may soothe dry skin, but they do little or nothing to reverse wrinkles. At this time, the only products that have been studied for safety and effectiveness and approved by the Food and Drug Administration (FDA) to treat signs of sun-damaged or aging skin are tretinoin cream and carbon dioxide (CO<sub>2</sub>) and erbium (Er:YAG) lasers" (Age Page). People interested in treatment should discuss options with a dermatologist.

**Dry Skin and Itching.** Generally the areas of the body where older people experience dry skin are the lower legs, elbows, and forearms. Rough and scaly skin is accompanied often by an intense itchiness. What can lead to dry skin? Overheating living quarters in the winter and air conditioning in the summer lead to low humidity. Overuse of soaps, antiperspirants, perfumes, or hot baths often make the problem worse. Other factors include loss of sweat and oil glands, dehydration, sun exposure, smoking, and stress. Dry and Itchy skin makes one irritable! It also interferes with a good night's sleep. It may be a symptom of diabetes or kidney disease. Medications can make itchiness worse. What to do? "The most common treatment for dry skin is the use of moisturizers to reduce water loss and soothe the skin. "Moisturizers come in several forms — ointments, creams, and lotions. *Ointments* are mixtures of water in oil, usually either lanolin or petrolatum. *Creams* are preparations of oil in water, which is the main ingredient. Creams must be applied more often than ointments to be most effective. *Lotions* contain powder crystals dissolved in water, again the main ingredient. Because of their high water content, they feel cool on the skin and don't leave the skin feeling greasy. Although they are easy to apply and may be more pleasing than ointments and creams, lotions don't have the same protective qualities" (Age Page).

**Age Spots (solar lentigo).** Age spots are flat, brown spots and are bigger than freckles. Years of sun exposure is considered to be the cause. Generally these spots are seen more in the sun-exposed areas (i.e., face, hands, arms, back, neck, and feet) of fair-skinned people. Dermatologists report that available treatments include skin-lightening, or "fade" creams, cryotherapy (freezing), and laser therapy. To prevent further damage to the skin, a sunscreen or sun block is recommended.

**Bruising** of the skin, particularly on arms and legs, may occur in older people. More than likely this occurs because the skin becomes thinner as one ages. Also, a loss of fat and connective tissue affects the support area around blood vessels, making the vessels more susceptible to injury. Older persons notice that it takes longer for the skin to heal. Important to note that if bruising occurs in other areas of

the body, an individual should consult a physician because the bruising may be due to medications or illness.

**What to do to keep skin healthy!** The best way to keep skin healthy is to avoid unnecessary sun exposure (especially between 10 a.m. and 3 p.m.). Use sun screen in the 15 to 30 range of SPF. Other suggestions include wearing protective clothing and hats when out in the sun, avoiding artificial tanning lamps and beds, and checking skin often to look for changes in birthmarks and moles. But, in a previous article on Vitamin D, it was suggested that 15 to 20 minutes in the sun without sun screen allows Vitamin D to be “manufactured” in the body.

***Be Sure to Wash Your Hands!***