Actinic keratosis (AK), also known as solar keratosis, is a common skin precancer, affecting more than 58 million Americans. People with a fair complexion, blond or red hair, and blue, green or grey eyes have a high likelihood of developing one or more if they spend time in the sun and live long enough. The closer to the equator you live, the more likely you are to have AKs.

The incidence is slightly higher in men, because they spend more time in the sun and use less sun protection than women do.

Chronic sun exposure is the cause of almost all AKs. Since sun damage is cumulative, even a brief period in the sun adds to the lifetime total. Cloudy days aren’t safe either, because 70-80 percent of solar ultraviolet (UV) rays can pass through clouds. They can also bounce off sand, snow and other reflective surfaces, giving you extra exposure.

The ultraviolet radiation from tanning lamps can be even more dangerous than the sun, so dermatologists warn against indoor tanning.

Occasionally, AKs may be caused by extensive exposure to X-rays or various industrial chemicals.

**SHOULD I BE CONCERNED?**

Actinic keratosis is called a “precancer” because it can be the first step leading to squamous cell carcinoma (SCC). Up to 10 percent of AKs may advance to SCC, and 40-60 percent of SCCs begin as untreated AKs. About 2 to 10 percent of these SCCs spread to internal organs and become life-threatening.

Another form of AK, actinic cheilitis, develops on the lips and may evolve into SCC. The more keratoses you have, the greater the chance that one or more may turn into skin cancer. In fact, some scientists consider AK the earliest form of SCC.

**WHAT AGE HAS TO DO WITH IT**

Because time spent in the sun adds up year by year, people over age 50 are most likely to develop AKs. However, some individuals in their 20s are affected. Individuals whose immune defenses are weakened by cancer chemotherapy, AIDS, organ transplantation or excessive UV exposure are also more likely to develop AKs.

**Your Smartest Move: PREVENTION**

The best way to prevent actinic keratosis is to make sun safety part of your daily health care routine.

- When outdoors, seek the shade, especially between 10 AM and 4PM.
- Wear sun-protective clothing, including a wide-brimmed hat and UV-blocking sunglasses.
- Use a high-SPF, broad spectrum (UVA/UVB) sunscreen with an SPF of 15 or higher every day. For extended outdoor activity, use a water-resistant, broad spectrum sunscreen with an SPF of 30 or higher.
- Apply 1 ounce (2 tablespoons) of sunscreen to your entire body 30 minutes before going outside. Reapply every two hours or after swimming or excessive sweating.
- Never use tanning beds.
ACTINIC KERATOSIS
For more images and further information on skin cancer prevention, detection, and treatment, please visit SkinCancer.org.

HOW DO I RECOGNIZE AN AK?

An AK is a scaly or crusty growth, most often appearing on the bald scalp, face, ears, lips, backs of the hands and forearms, shoulders, or neck – any frequently sun-exposed part of the body. You’ll often see the plural, “keratoses,” because there is seldom just one.

AKs are at first often so small that they are recognized by touch rather than sight. It may feel like running a finger over sandpaper. People usually have many times more invisible AKs than visible ones on the skin surface.

AKs usually reach a size from 1/8 to 1/4 of an inch. Early on, they may disappear only to reappear later. Most become red, but some will be light or dark tan, pink, a combination of these, or skin-colored. Occasionally they itch or produce a prickling or tender sensation. They can also become inflamed and surrounded by redness. In rare instances, AKs can bleed.

AKs indicate that you have sustained sun damage and could develop any kind of skin cancer — not just SCC.

Examples of typical AKs are shown here, so examine your skin regularly for lesions that look like them. However, many AKs have quite a different appearance, so if you find any unusual or changing growth, see your doctor promptly.

40-60% of squamous cell carcinomas begin as untreated AKs

Treatment Options

Though not all AKs turn malignant, there is no way to know which AKs are precursors to skin cancer. Fortunately, there are many effective treatments. Before selecting one, the physician takes a biopsy specimen to determine if an AK is actually malignant. The top of the lesion is shaved off with a scalpel or scraped off with a curette. Local anesthesia is required. Bleeding is usually stopped with a styptic agent.

Treatment options include: topical medications (5-fluorouracil, imiquimod, diclofenac with hyaluronic acid, and ingenol mebutate gel), cryosurgery, combination therapies, chemical peeling, laser surgery, and photodynamic therapy (PDT).