

PATIENT HANDOUT for ACTINIC (SOLAR) KERATOSIS

What are actinic keratoses (AKs)? An AK is a flat, scaly growth on the skin that most often forms on portions of the body exposed to direct sunlight. AKs can be skin-colored, reddish-brown, or yellowish-black and may be as small as a pinhead to over several inches across. The surface of the AK is dry and rough and may be more easily identified by feel than by sight. Occasionally, an actinic keratosis may itch or feel prickly, especially after sun exposure.

Why should I be concerned about AKs? **AKs are the earliest stage in the development of skin cancer.** Left untreated, 10% to 15% of AKs may develop into a form of skin cancer called squamous cell carcinoma (SCC). These are usually not life-threatening if they are diagnosed and treated at an early stage. If they are not treated, they can grow larger and invade the surrounding tissues. They can also, in rare instances, spread to internal organs.

Who gets AKs? **One in six people will develop an AK during their lifetime.** AKs are commonly found in people with fair skin, and blond or red hair. AKs tend to appear after age 40, following years of chronic sun exposure. However, in areas with high-intensity sunlight (like Kentucky), AKs are now found in persons as young as their twenties.

What causes AKs? AKs are most commonly caused by long-term exposure to the sun's harmful rays. They appear when, after many years, sun damage causes skin cells to grow at an abnormally rapid rate. As with most conditions of this type, early detection and treatment are key to maintaining good skin health.

How can I avoid AKs? The best way to prevent AKs is to minimize exposure to the sun, particularly during the hours of 11:00 am to 4:00 pm, when the sunlight is most direct. If you do go out, **wear a wide-brimmed hat and long sleeves and apply sunscreen with a sun protection factor (SPF) of at least 30.** The use of sunscreen should not be used as an excuse to spend more time in the sun. Even if sunscreen is applied, **excessive sunlight (or tanning beds) will cause premature aging of the skin.**

Should I follow-up? Yes. An AK is skin cancer's warning signal. Once your skin has had enough sun damage to develop an AK, you have an increased chance of developing more AKs and an increased risk for developing skin cancer. Come in if new spots appear.

The American Academy of Dermatology, the American Cancer Society, and the Skin Cancer Foundation recommend an annual full skin exam for all patients over age 40.

If you have certain risk factors, such as an AK, extensive sun (or tanning bed) exposure, a history of two or more severe (blistering) sunburns, a family or personal history of skin cancer, or numerous moles, you should start your screening earlier. Regular follow-up visits are usually needed when there are many AKs.

What are the basic types of treatment for AKs?

1. **Cryosurgery** is the most commonly used treatment. Liquid nitrogen “freezes” surface skin, which flakes off and is replaced by new skin. *Skin redness is the main side effect, and a blister, a scar, or a permanent skin color change may occur.* A hard freeze to the skin overlying a superficial nerve can cause *numbness* of the skin area that the nerve supplies. The feeling nearly always returns to normal within a few weeks or months.
2. **Photodynamic Therapy** involves application of a natural chemical. After a few hours, the skin is exposed to “blue” light that activates the chemical to destroy the actinic keratoses. *The most common side effects include itching, stinging, burning, redness, scaling, crusting, and changes in skin color that do not always go away.*
3. **Topical therapy** requires avoiding the corners of the eyes, eyelids, nose and mouth. Hands should be washed thoroughly after each application. During the treatment period, no other medications, moisturizing creams, or cosmetics should be applied on the affected area. Prolonged exposure to sunlight and sunlamps should be avoided. Only Diclofenac 3% gel (Solaraze©) is allowed in women who are or may become pregnant.

- **5-Fluorouracil** 5% cream (*Efudex©*, applied twice daily),
 1% cream (*Fluoroplex©*, applied twice daily) or
 0.5% cream (*Carac©*, applied once daily)

Is used for 2 to 6 weeks and works by directly attacking the precancerous cells.

Treatment leaves the affected area temporarily reddened and raw.

Side effects also can include pain, itching, burning, irritation, allergic contact dermatitis, scarring, changes in skin color that do not always go away, and visible enlargement of small blood vessels.

- **Imiquimod 5% cream (Aldara©)**

Is applied Monday and Thursday for a full 16 weeks, left on skin for approximately 8 hours and removed by washing the area with mild soap and water.

Imiquimod stimulates your immune system and helps recognizing the precancerous cells.

The most common side effects involve skin reactions in the application area.

These include redness, swelling, a sore, blisters, or ulcers, skin that becomes hard or thickened, skin peeling, scabbing and crusting, itching burning, and changes in skin color that do not always go away.

- **Diclofenac 3% gel (Solaraze©)**

Is a non-steroidal anti-inflammatory drug (NSAID). Treatment is twice daily for 60 to 90 days.

Diclofenac gel is our preferred product because it can provide significant decreases in actinic keratosis lesions without the unpleasant side effects frequently associated with 5-Fluorouracil. Diclofenac gel is well-tolerated by most patients.

In some cases, patients may experience *itching, inflammation, redness, rash, dry skin, scaling and peeling.*

Diclofenac gel should be given with caution to patients with **aspirin triad**, a syndrome involving the combination of asthma, nasal polyps and aspirin intolerance. **Stomach ulcers, stomach bleeding, kidney or liver problems** may require extra caution when using diclofenac gel.

Contact Dr. Esche immediately if you experience a rash on the skin, open sores on the skin (ulcers), swelling of eyelids, face, or lips, eye redness or swelling (conjunctivitis), stomach pain, muscle pain or difficulty breathing.