

## **Actinic Keratosis**

With more than one million cases diagnosed annually, skin cancer is the most commonly diagnosed form of cancer. The good news is that skin cancer can generally be successfully treated if detected early enough. Early diagnosis is often possible because there are warning signs that may appear before a cancer actually begins to develop. One of these warning signs is something called an actinic keratosis, AK. This is a skin condition that is believed to be a precursor to certain types of skin cancers, although generally harmless, actinic keratosis may be the first sign of a more serious medical condition which is why it is important that you examine your skin on a regular basis and seek medical advice and attention if you happen to identify any irregularities in your skin. Before you understand what an actinic keratosis is, it is important to understand its underlying cause. While actinic keratosis can be caused by carcinogens or cancer causing agents, like being exposed to radiation and chemicals. However, the most common cause of actinic keratosis is exposure to UV light produced by the sun. Much like squamous and basal cell carcinomas, actinic keratosis is generally caused by long-term, cumulative sun exposure. This is why actinic keratosis is often referred to as solar keratosis. Ultraviolet light damages the DNA of epidermal skin cells, which causes them to develop abnormalities in size, shape, and organization. These changes may cause the cells to divide uncontrollably, resulting in a lesion or plaque on the skin's surface. Left untreated, the damaged cells can become cancerous with time.

### **What is My Risk for Developing Actinic Keratosis?**

Just as certain individuals are at a higher risk for developing sunburn than others, some people are at a higher risk for developing actinic keratosis. In general, those with fair skin and blond or red hair develop actinic keratosis at a higher rate than those individuals with darker complexions. Because actinic keratosis is primarily linked to sun exposure, people who live in sunny areas or who spend a significant amount of time in the sun without proper protection are also at a higher risk of developing the condition. DNA damage that occurs from occasional sun exposure is usually repaired by built-in DNA repair mechanisms in your body. However, long-term sun exposure can lead to DNA damage that is not repaired. This is why the effects of sun damage are not usually evident for many years, and why actinic keratosis is most commonly observed after the age of forty. As actinic keratosis generally develops in areas that have been exposed to large amounts of sun, the condition is most often developed on the face, ears, neck, lips, forearms and hands. Actinic keratosis appear as rough, callous, scaly lesions or plaques on the skin's surface. Although dry, rough patches are characteristic, actinic keratosis may also present as oozing lesions that do not heal or as thick, horny growths. Lesions may vary in color from light beige tones to dark brown and range in size from a small dot to approximately an inch in diameter. In addition, they may seem to appear and disappear periodically, or they may remain in place for a long period of time. Actinic keratosis can look remarkably like certain

types of skin cancer, particularly squamous cell carcinoma. This is why it is important that you contact a dermatologist to determine the nature of any suspicious lesion on your skin.

## **How Do I Prevent Actinic Keratosis?**

Aside from being unsightly, actinic keratosis can lead to the development of skin cancer, predominantly squamous cell carcinoma. Although the lesions themselves are not cancerous, it is important that you take measures to prevent actinic keratosis. Clearly, the best line of defense is to avoid sun exposure. In general, you should avoid being in the sun from 10 AM to 2 PM as the sun's rays are at their most intense during this time. Even on a cloudy day, dermatologists recommend applying a daily broad spectrum UVA and UVB sunscreen of SPF 15 or greater to protect your skin from incidental exposure. Lastly, wide-brimmed hats, long-sleeved shirts, and long pants provide excellent sun protection. A dermatologist will usually be able to diagnose actinic keratosis during a skin examination. However, large, thick or otherwise questionable lesions sometimes require a small sample, called a skin biopsy, to be taken to ensure that it has not become skin cancer. Not all types of keratosis need to be removed, but you should consult with a dermatologist, who will make a determination based on the type of lesion, your health condition, and age. Fortunately, there are a variety of treatments.