



## **ACTINIC KERATOSES**

### **DEFINITION**

Incorrect growth of sun damaged skin results in the formation of roughened areas known as actinic keratoses. Sun damaged skin is caused by many repeated ordinary sun exposures rather than occasional sunburns. Actinic keratoses are not a malignancy or cancer, although they can go on to become skin cancer if left untreated. Therefore, it is important to treat actinic keratoses when they appear.

### **TREATMENT**

The basic principle of treatment is destruction of the actinic keratoses. When keratoses are small, destruction can best be accomplished by application of liquid nitrogen to freeze the lesions. This causes shedding of the sun damaged skin which is then replaced by cells from deeper layers that have not suffered sun damage. When lesions are deep, surgical removal may be necessary. Sometimes it is difficult to determine from the appearance exactly what type of growth is present. When this occurs, we prefer to superficially remove the growth with subsequent microscopic analysis (biopsy) of the tissue removed. Healing after removal takes about two to three weeks depending on the size and depth of the lesion. The final appearance is usually very good.

When there are numerous actinic keratoses, a topical medication (5-fluorouracil, imiquimod) can be used to selectively destroy the keratoses. Topical treatment usually takes a month or more. During that time, the treatment area may become raw and uncomfortable. However, this method has the advantage of bringing out and clearing up many early actinic keratoses before they become larger and more noticeable.

### **PREVENTION**

Sun damage is permanent! Once sun damage has progressed to the point where actinic keratoses develop, new keratoses will appear even without further sun exposure. Nevertheless, it is important to avoid further sun damage in order to minimize future development of keratoses. This can be accomplished best by avoiding repeated prolonged exposure to direct sunlight, wearing protective clothing, and applying a sun block lotion on exposed areas such as the face and backs of the hands before going out in the sun.

Complete sun blocking ointments leave a visible coating on the skin; these include zinc and titanium oxide ointments. Partial sun blocking can be accomplished with clear or vanishing base sunscreens. The best of these are labeled "broad spectrum" and block both UVA (ultraviolet A light) and UVB (ultraviolet B light). You should aim for a sun protection factor (SPF) of at least 30. It should be applied 30 minutes before sun exposure and every 2 hours while outside in the sun. There are really no bad brands as long as you use them regularly and they have sufficient protection value. Some of the best brands include:

Neutrogena with Helioplex  
Solbar  
Shade

Aveeno  
Oil of Olay  
Presun

Ombrelle  
Anthelios  
Cetaphil

