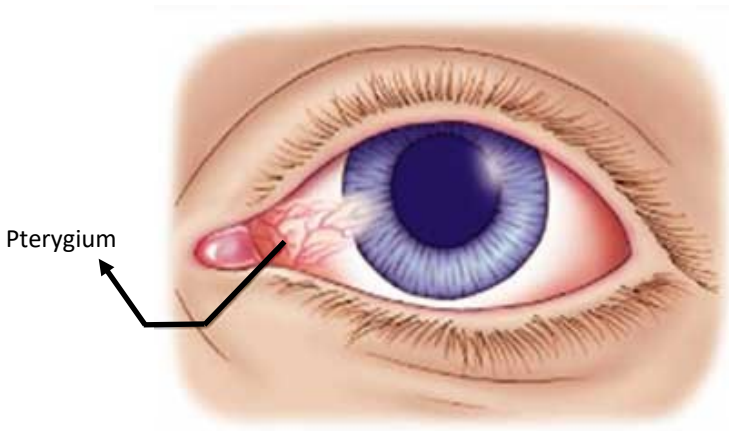
Pterygium

Over the past few years CalAgrAbility has received a number of calls from farmers regarding a condition called Pterygium. This is a noncancerous growth of the clear thin tissue that lays over the white part of the eye or conjunctiva (nih.gov/medline). It commonly grows from the nasal side of the sclera.

Pterygium comes from the Greek word, *pterygos*, which means “little wing.” A pterygium in one’s eye resembles the wing of a small insect or bird. Pterygium is pronounced ter-ig-ee-um and the plural is pterygia. Symptoms include a burning sensation, gritty feel, itchiness, or redness. At times, severe cases can affect the cornea causing impaired vision, and even blindness.

In many cases, pterygia is not a serious condition and can be treated topically with over the counter eye drops or prescribed steroid drops. These drops can help remove redness and reduce irritation. However, in severe cases, a surgical procedure may be needed to remove the growth. This is usually necessary if other treatments have failed or there are other risks with your eyesight. Pterygia can grow back and, at times, can return more than once. Consult your doctor first before trying any treatment or if you think you have an eye illness.

Pterygium is caused by ultraviolet-light exposure (e.g. sunlight), dry eyes, and dust. It occurs most frequently in people exposed to excessive sun, dust, and wind. Farms are an optimal place for pterygium to form because farm workers, farmers, and ranchers are exposed to extreme conditions with more sun and dust than normal. Those living close to the equator or male between ages 20 to 40 are also more susceptible in developing this condition.



Picture from *Plano Informativo*

A National Center for Farmworkers Health study in North Carolina surveyed 304 farmworkers on the severity of pterygium. Researchers found only “19.3% [knew] what sunscreen was. More than 90% did not wear sunglasses or any sun-protection equipment. 75% reported not wearing a wide-brimmed hat, which leaves ears, neck and face exposed to ultraviolet rays.” Researchers determined that farmworkers who did not wear protection had at least a 23% higher chance to develop pterygia in at least one eye and a 9.5% higher chance to develop the condition in both eyes. Wearing proper protective wear, such as sunscreen or sun glasses, would significantly reduce sun related illnesses as well as medical treatment bills in the future.

Sun-Protection Equipment and Tips

1. **Use Sunscreen**

Use sunscreen that has a SPF of 30 or higher. SPF is the Sun Protection Factor which measures how well the sunscreen can protect you from UV rays. Apply the sunscreen at least 20 minutes before going outside because UV rays can damage your skin in as little as 15 minutes. Reapply your sunscreen every two hours.

2. **Wear Sunglasses**

Check labels on the sunglasses to make sure it is blocking out 99-100% of UV rays. You can invest in a good pair at Wal-Mart ® for $10-20. Wear sunglasses year-round as the sun can damage your eyes even during the winter.

3. **Wear a Hat that has at Least a brim of 3 Inches**

A hat with a brim can protect your ears, head, and back of your neck from sun exposure. Using a hat helps because it is harder to apply sunscreen to these areas.

4. **Wear Clothing with more Coverage**

Clothing, such as long sleeves and pants, will limit sun exposure on the skin. To prevent overheating, coveralls are recommended. Coveralls are loose fitting garments that cover, at a minimum, the whole body except for the head, hands, and feet.

5. **Wear SPF Lip Balm**

It is also important to protect your lips from the sun with a recommended lip balm of SPF 15-30.

6. **Be Aware of your Time and Environment**

During the summer, UV rays are at peak from 10 am to 4 pm. If possible, find shade under trees, patios or shades provided by your employer during these hours to reduce sun exposure. Although the sun is not as intense during the other seasons, sun damage can still occur so protection is still necessary. The environment can also increase your risk to sun damage. The sun can reflect (glare) off of snow, water, or sand which increases your chances of sun damage.

How to Test for Good Sunglasses

The Glaucoma Research Foundation published a guide to sunglasses with recommendations:

- Sunglasses should screen out 75-90% of visible light. If you can see your eyes in a mirror, the sunglasses are probably too light.
- Look for uniform tint. To check for imperfections, hold the sunglasses at arm's length, and then look through them at a straight line (such as the edge of a door). Slowly move the lens across the line. If the straight edge distorts, sways, curves or moves, the lens is flawed.

What should I look for in Sunglasses

Construction sunglasses are a good option because these provide safety for eyes that is needed in the field. Here are some features you should look for in sunglasses.

- 99-100% UV protection or UV400
- Impact and scratch resistant
- Wrap around or head strap so it will not easily fall off your head

Special Features of Sun glasses

Polarized	Polarized lenses cut reflected glare when sunlight bounces off smooth surfaces, like pavement or water. Polarization is unrelated to UV protection, so you still need to ensure UV absorption of the lenses.
Photochromic	This lens automatically darkens in bright light and becomes lighter in low light. It takes a few minutes to adjust to different light conditions.
Impact Resistant	While no lens is truly shatterproof, plastic lenses are less likely to shatter upon impact. Polycarbonate plastic is even more impact resistant than regular plastic, but scratches easily.

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Supported by USDA, NIFA project number CA-D-BAE-2271-OG.