

Protect NCDOT workers from the sun

The sun can be dangerous for construction workers who work under its blazing glare and UV rays all day.

Those same UV rays that we crave during the spring and summer months are when they are the strongest – and during peak construction time, too – giving off the greatest UV radiation from 10:00 am to 4:00 pm.

Up to 80% of the sun's UV rays can pass through clouds, even on cloudy days. Plus, working in the sun makes you sweat, upping your skin's photosensitivity and the potential for damage.

Here's why those UV rays can be so dangerous: time in the sun can lead to an increased risk of sunburn, sun poisoning, and, worse, skin cancer.

Construction typically ramps up and is in full swing during warmer weather, so it's imperative to get your PPE and precautions under control to help mitigate heat illness or injury on the job site.

Skin cancer is more common than you think

In fact, skin cancer is the [most common type of cancer in the U.S.](#), with more people being diagnosed each year than all other cancers combined.

Two forms of ultraviolet (UV) rays from the sun that penetrate the earth's atmosphere are the main culprits in skin cancer: UVA and UVB. Though both can cause skin cancer, UVB rays are thought to be the primary cause of most skin cancers, and exposure can happen year-round.

There are [three main types of skin cancer](#):

- 1. Basal cell carcinoma** – A common type of skin cancer and tends to remain localized. About 8 out of 10 skin cancers are basal cell carcinomas.
- 2. Squamous cell carcinoma** – A common type of skin cancer that tends to remain localized. About 2 out of 10 skin cancers are squamous cell carcinomas
- 3. Melanoma** – Not as common, but is the deadliest and most aggressive form of skin cancer that can spread rapidly to other parts of the body, proving fatal if not treated early enough; it accounts for less than 1% of all skin cancers.

The good news is that there are several ways to protect construction workers when working outdoors, limiting their exposure to the sun and UV radiation.

Stop the sun on its way to your skin

Wear proper clothing and gloves

The *number one* way to protect yourself or others from UV rays is to cover the skin as much as possible, such as with clothing—but not all clothing offers the same level of protection.

Material, weave, and color can affect the amount of UV radiation a material is able to block. For example, a white cotton T-shirt has an SPF of about seven but drops to about three when wet.

The best UV protection comes from long-sleeved shirts and pants made from closely-knit materials in darker colors.

Another good option is clothes treated with sun protection chemicals or special dyes to block out UV light. These select clothing types offer great protection and are typically made of lightweight fabrics, giving you an SPF of 50 or higher, which only allows 1/50th of the sun's UV radiation to reach your skin.

Use head protection

The main job of head protection is to protect your head against injury, but it also provides protection from the sun. That is good news for the skin around the head and neck, as these areas can be the most difficult to protect due to body movement and lack of or insufficient coverage.

Most, if not all, NCDOT sites require the donning of a safety helmet while on the job. If that's the case, there are different brim lengths to choose from and several available accessories that can be fitted over or under the hard hat to provide a wider brim for the face, ears, and neck for protection from the sun. Other options are available that go under the safety helmet to both cool workers and provide protection.

Wear safety eyewear

UV light is also very damaging to your eyes. Tinted or clear safety glasses that offer UVB and UVA protection should be worn whenever you are out in the sun. Be sure to choose a pair that fits comfortably and offers 100% UV protection.

The good news is that polycarbonate, which is what most safety eyewear lenses are made of, will help to filter out some of this UV light naturally. However, polycarbonate only filters up to 380nm, leaving a 20nm range unprotected.

Use sunscreen

Wearing sunscreen is vital to protecting construction workers from UV rays. Select a broad-spectrum sunscreen with a high SPF, which measures the amount of protection from UVB radiation. Don't forget about your face, neck, ears, hands, and lips.

Here's what to pay attention to:

SPF 30—The longer an SPF works, the better. Sunscreen with an SPF 30 protects against UVB rays 30 times longer than unprotected skin before starting to turn red. The SPF determines how much UVB is blocked when worn. Sunscreen with SPF 15 blocks 93% of the UVB rays, while SPF 30 blocks 97%.

Water-resistant—Construction is a sweaty job, so consider using a broad-spectrum, water-resistant sunscreen with an SPF of 30 or higher. Most are rated to last 40-80 minutes.

Application time—Remember, sunscreen needs time to absorb into your skin. Leave room for at least 20 minutes after applying sunscreen to exposed areas before going outdoors. The standard rule of thumb is to reapply every two hours and more frequently on days with a high UV index. Be sure to check the manufacturer's application recommendations to protect your skin adequately.

Make or use shade where possible

This can be difficult depending on the site, but building temporary shade or having indoor areas available can be an efficient way to protect construction workers from sun exposure.

Think about break times and meals at the very least, but meetings, preparing tools, mixing materials, etc., could be conducted under a roof, tent, or shady area.