The Skin Cancer Lowdown for Guides:

- You are at increased risk for skin cancer because you spend so much time in the sun, and so much time at altitude.

- Melanoma skin cancer is the second most common cancer for people 15-29, and it can kill you quickly.

- Make sure your sunscreen is "broad spectrum" (UVA and UVB), high SPF (at least 30, preferably higher) sunscreen.

- Reapply sunscreen every 2 hours or it will stop working.

- A tan results from injury to the skin’s DNA; the skin darkens in an imperfect attempt to prevent further DNA damage. These imperfections, or mutations, can lead to skin cancer.

- Clothing is a great way to avoid UV exposure, but it doesn't provide complete protection.

- Get to know the signs of skin cancer, have someone check your back (and your backside) periodically, it doesn't always develop on sun exposed skin.

- If you find something that looks suspicious, DON'T WAIT, get an expert to look at it.

Some Skin Cancer Stats:

- More people were diagnosed with skin cancer in 2009 than with breast, prostate, lung, and colon cancer combined.
- About 1 in 5 Americans will develop skin cancer during their lifetime.
- One American dies of melanoma almost every hour.
- Melanoma is one of the few cancers that continues to have an increasing number of cases each year.
Risk factors for melanoma skin cancer:

1) UV (ultraviolet) light - Too much exposure to UV radiation is the biggest risk factor. The sun, and tanning lamps are sources of UV light. People with high levels of exposure to UV light are at greater risk for all types of skin cancer.

2) Moles - A mole (the medical name is nevus) is a benign (noncancerous) skin tumor. Certain types of moles increase a person's chance of getting melanoma. The chance of any single mole turning into cancer is very low. But a person who has many moles is more likely to develop melanoma (think "mole-a-noma").

3) Fair skin - The risk of melanoma is more than 10 times higher for whites than for African Americans. Whites with fair skin, freckles, or red or blond hair have a higher risk of melanoma. Red-haired people have the highest risk.

4) Family history of melanoma - Around 10% of people with melanoma have a close relative (mother, father, brother, sister, child) with the disease.

5) Weak immune system - People who have been treated with medicines that suppress the immune system have an increased risk of developing melanoma.

6) Age - Melanoma is more likely to happen in older people, but it's also found in younger people. It's one of the most common cancers in people under 30.

7) Gender - In the US, men have a higher rate of melanoma than women.

8) Xeroderma pigmentosum (XP) - This is a rare, inherited condition.

What To Look For:

There are three main types of skin cancer:

1) basal cell carcinoma,

2) squamous cell carcinoma

3) melanoma - very serious
Each has multiple different appearances. Look for change of any kind, bleeding, irregular borders, "crunchy" skin. Skin cancers can be painless, and can be the same color as your regular skin. If you notice one or more of the warning signs, see a doctor right away, preferably a Dermatologist.

**The Warning Signs**

A skin growth that increases in size and appears pearly, translucent, tan, brown, black, or multicolored, or has a different texture.

A mole, birthmark, beauty mark, or any brown spot that:
- changes color
- increases in size or thickness
- changes in texture
- is irregular in outline
- is bigger than 6mm or 1/4” (the size of a pencil eraser)

A spot or sore that continues to itch, hurt, crust, scab, erode, or bleed

An open sore that doesn't heal within three weeks

**If You Spot It...**

Don’t overlook it, don’t delay. See a physician if you note any change in an existing mole, freckle, or spot or if you find a new one with any of the warning signs of skin cancer.

**Prevention**

About 90 percent of non-melanoma skin cancers are associated with exposure to ultraviolet (UV) radiation from the sun.

**What Is SPF, how does it work?**

The sunburn protection factor, or SPF, measures protection against only ultraviolet radiation B (UVB) (which causes sunburn), it doesn't measure protection against ultraviolet radiation A (UVA) which causes aging of the skin. Both types of UV rays cause cancer, so look for broad spectrum sunscreens that protect against both UVA and UVB rays. At this time there's no standard system for measuring protection from UVA rays. Products that contain avobenzone (Parsol 1789),
ecamsule, zinc oxide, or titanium dioxide can provide some protection from UVB and most UVA rays.

Most sunscreens with an SPF of 30 or higher do an excellent job of protecting against UVB. Here's how it works: If it takes 20 minutes for your unprotected skin to start turning red, using an SPF 30 sunscreen theoretically prevents reddening 30 times longer — about ten hours.

Another way to look at it is in terms of percentages: SPF 15 blocks about 93% of all incoming UVB rays. SPF 30 blocks 97%; and SPF 50 blocks 98%. SPFs as high as 100+ are now available. Sunscreens labeled with higher SPFs do mean more protection, but the higher the SPF, the smaller the difference becomes.

No sunscreen stays entirely effective longer than two hours without reapplication. Reddening of the skin (sunburn) is a reaction to UVB rays alone and tells you little about what UVA damage you may be getting. Plenty of damage can be done without a sunburn.

Clothing doesn't block out all UV rays. Dark colors provide more protection than light colors. Tightly woven fabric protects better than loosely woven clothing. Dry fabric is more protective than wet fabric. If you can see light through a fabric, UV rays can get through.

Check the expiration date on the sunscreen container to be sure it's still effective. Most sunscreens are effective for at least 2 to 3 years, but after a long time in storage you may need to shake the bottle to remix the ingredients.

This info came from these sites, which are also great sources of more info/photos:

The Skin Cancer Foundation
http://www.skincancer.org/
http://www.skincancer.org/understanding-uva-and-uvb.html

National Council on Skin Cancer Prevention
http://www.skincancerprevention.org/

Livestrong Foundation
http://www.livestrong.com/skin-cancer/
THE GOOD NEWS:
For those of you who've read this far! Recent research suggests that caffeine intake (and rubbing caffeine on your skin) may decrease your risk of skin cancer. Another justification to get up a few minutes early for the alpine start and "brew up".

a post from Mountain Project Blog:
So, I just spent this morning with my doc having him look at this rash I had developed on my arms in the last three weeks and I got some pretty bad news. I had originally assumed the rash on my arm was a reaction to the tattoo which had recently been inked on my arm, but NO! It's actinic keratosis, and my foolish attempts to "dry it out" by exposing my arms to more sunlight and frequent washing probably only pissed it off more.

So let's recap, 6 years of climbing, the past two years having spent a significant amount of time climbing in Jtree, being only moderately cautious of sun damage applying sunscreen most often only on my shoulders neck and face, and BAM!

Pre cancerous lesions on my forearms, and a guarantee from my doc that I will develop Squamous cell carcinoma sometime down the road, and if I am not extremely careful from here on out, I will probably have a shitty battle with skin cancer in my waning years.

SO LISTEN HERE ALL YE NAIVE MP.COMMERS! If you would have told me I was likely to battle skin cancer down the road I would have probably said "sure I spend a lot of time outside; it's likely." But when you're looking at pre cancerous lesions at 26, it's a whole different ballgame.

WEAR SUNBLOCK, LOTS OF IT. CONSIDER WEARING HATS AND LONG SLEEVE SHIRTS ESPECIALLY DURING PEAK UV DAMAGE HOURS. FRIENDS DONT LET FRIENDS DIE OF CANCER; APPLY THE SUNBLOCK YOURSELF IF YOU HAVE TOO.

Consider yourselves warned.