



AAC Publications

Snow Blindness

Alaska, Denali, Cassin Ridge

On the evening of June 11, mountaineering rangers Melis Coady, Dave Weber, and Mark Westman responded to a 24-year-old male climber suffering from snow blindness at 14,200-foot camp. The climber had summited Denali via the Cassin Ridge one day earlier. The climb had been completed in poor weather with high winds. During their ascent, the team had lost multiple pieces of equipment, included the patient's goggles. This loss proved problematic on summit day when his glacier glasses didn't provide enough protection.

When continual treatment over a 24-hour period by NPS volunteer paramedics Jaime Anderson and Gabe Webster yielded no improvement, it was decided to evacuate this climber by helicopter. He was flown to Talkeetna on June 13, transferred to a local ambulance, and treated at Matsu Regional Hospital in Palmer.

ANALYSIS

Snow blindness can occur with surprisingly limited exposure to reflective glare at altitude. Some eye-specific ointments can help reduce the associated discomfort, but only time will heal this "sunburn" of the eye. The ailment requires rest with closed eyes in a shaded environment until healed. Unfortunately, prior to NPS involvement, a well-intentioned climber in camp treated this patient with a petroleum-based ointment not intended for eye treatment and potentially increased the severity of this patient's issues. (Source: Denali Mountaineering Rangers.)

Images

SNOW BLINDNESS – *Prevention and Treatment*

Snow blindness, or photokeratitis, is sunburn of the cornea and conjunctiva caused by ultraviolet (UV) light reflected by the snow surface.

PREVENTION

- Wear adequate eye protection even on cloudy days (glacier sunglasses, with side shields, or goggles with 100 percent UV protection). Carry backup protection.
- Minimize time without eye protection in glare-prone environments. Beware of removing icy or fogged-up sunglasses. Snow blindness can occur in as little as two hours of exposure.

SIGNS & SYMPTOMS

- Eye pain, eye redness, and tearing; vision difficulties; light sensitivity
- Signs and symptoms may be delayed up to 12 hours from exposure

TREATMENT PRINCIPLES

- Keep eyes closed and avoid bright light and further UV exposure (consider eye patches)
- Consider pain medications
- Symptoms typically resolve within one or two days with eye rest

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