

Safety Meeting Topic

Heat Stress Awareness

April 2011

Aside from these obvious dangers, the frequency of accidents in general appears to be higher in hot environments than in more moderate environmental conditions. One reason is that working in a hot environment lowers the mental alertness and physical performance of an individual. Increased body temperature and physical discomfort promote irritability, anger, and other emotional states which sometimes causes us to overlook safety procedures or to divert attention from hazardous tasks.

For residents of the valley of the sun, it is easy to get complacent about the heat and the potential effects it has on all of us. We all need to remember that our systems take time to acclimatize to the heat. We should plan more strenuous activities early in the day to minimize the impact of the heat on our activities. The following information is provided as a reminder of things that you can do to minimize the potential to suffer from heat related illness, and to protect yourself from the potentially harmful effects of sun exposure.

Heat Wave Safety Rules

In our desert climate, heat causes more health problems than any other weather factor. Our soaring summer temperatures and low humidity can be a dangerous combination. Follow these rules to stay safe in the Arizona desert.

✓ **Slow down.** Your body can't do its best at high temperatures and humidities.

✓ **Don't dry out.** Drink plenty of water while the hot spell lasts.

✓ **Heed your body's early warnings** that heat syndrome is on the way. Reduce your activities immediately and get into a cooler environment.

✓ **Avoid thermal shock.** Acclimatize yourself gradually to warmer weather. Treat yourself gently for those first two or three hot days.

✓ **Dress for summer.** Light colored and lightweight clothing reflects heat and sunlight.

✓ **Vary your thermal environment.** Physical stress increases with exposure time in heat wave weather. Try to get out of the heat for at least a few hours each day.

✓ **Put less fuel on your inner fires.** Foods like proteins, that increase metabolic heat production, also increase water loss.

✓ **Don't get too much sun.** Sunburn makes the job of heat dissipation that much more difficult.

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Heat Stress

The effects of heat on the body are known as heat stress. Many factors contribute to heat stress, but the most important elements influencing heat stress and comfort are temperature and humidity. As the chart indicates, the combination of high temperature and humidity greatly increases the threat for heat stress. The Apparent Temperature or Heat Stress Index assumes a very light breeze and you being in the shade. Of course, how hot "it feels" varies from one person to another, but this index seems to give a good idea of what the hot weather "feels like".

To find out what the air "feels like", use the table below. For example, with the air temperature of 90 degrees, and relative humidity of 60%, move down to where the columns meet and find the Heat Stress Index of 100 degrees.



Heat Stress Index

		% RELATIVE HUMIDITY																			
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
T E M P E R A T U R E	85	79	80	81	82	83	84	85	86	87	88	89	90	91	93	95	97	99	102	105	108
	90	84	85	86	87	88	90	91	93	95	96	98	100	102	106	109	113	117	122		
	95	88	90	91	93	94	96	98	101	104	107	110	114	119	124	130	136				
	100	93	95	97	99	101	104	107	110	115	120	126	132	138	144						
	105	97	100	102	105	109	113	118	123	129	135	142	149								
	110	102	105	108	112	117	123	130	137	143	150										
	115	107	111	115	120	127	135	143	151												
	120	111	116	123	130	139	148														
	125	116	123	131	141																
	130	122	131																		

A quick reference card prepared by the Occupational Safety & Health Administration on recognizing and addressing heat stress is available at <http://www.osha.gov/Publications/osh3154.html>.

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Sun Awareness in Arizona



Arizona has the highest rate of skin cancer among the 50 states.

Prolonged overexposure to the sun is the primary cause of skin cancer. Skin cancer is reported in 500,000 Americans each year and 6,500 to 7,500 cases result in death. That is more deaths per year than all other weather factors combined, including tornadoes, hurricanes, heat waves and winter storms. Fortunately, 95% of skin cancer patients are free of the disease once treated. The cure rate would approach 100% if everyone with symptoms sought prompt medical attention.

How to Prevent Skin Cancer

1. Minimize sun exposure, especially during the hours of 10 a.m. and 2 p.m., when the sun's rays are the most intense;
2. Use a sunscreen. Apply often while in the sun. Use a sunscreen with a sun protection factor (SPF) of 15 or higher;
3. Cover up. Wear a hat, long-sleeved shirts and pants when out in the sun;
4. Be aware of reflecting surfaces. Sand, water, pool decks, and snow can reflect up to 85% of the sun's damaging rays;
5. Remember that damaging ultraviolet rays can penetrate clouds and are stronger in the thinner air of higher altitudes. Don't forget the sunscreen in these conditions.
6. Avoid tanning salons and sunlamps. Ultraviolet rays from these sources are the same as in sunlight and can cause sunburn, premature aging and increased skin damage.

Skin Cancer Warning Signs

See your doctor if you see any of these or other changes on your skin you can't explain or which last for than 30 days.

7. A sore that doesn't heal;
8. Appearance of a new blue, black, brown, or pink area on your skin;
9. A mole that changes in color, shape, size or texture;
10. A mole that changes in sensation.