

Simi Valley Unified School District Guidelines for Preventing Heat Stress

Heat Stress is the overall effect of excessive heat on the human body. The body dissipates heat in various ways: by increasing blood circulation, by losing water through sweating, and as last resort, by panting or altering breathing. When heat gain exceeds the level the body can remove, body temperature begins to rise, and heat related illnesses and disorders may develop. Those at highest risk are the very young, the elderly, people with acute or chronic health problems, and people using certain medication or taking illicit drugs. For various reasons, not all people tolerate heat to the same extent.

Heat Index is a measure of how hot it really feels when relative humidity is factored with the actual air temperature. For local and forecasted temperature and humidity, go to the NOAA (National Oceanic and Atmospheric Adm.) website at <http://www.noaa.gov/wx.html> and type in the local zip code.

RH (%)	Temperature (°F) –																
	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114
80	89	94	100	106	113	121	129	138	148	158	169	181	---	---	---	---	---
75	88	93	98	104	110	117	125	133	142	152	162	173	---	---	---	---	---
70	86	91	95	100	106	112	119	126	134	143	152	161	172	180	---	---	---
65	86	89	93	98	103	109	115	122	128	136	145	153	163	173	---	---	---
60	84	88	91	95	100	105	110	116	123	130	137	145	153	162	171	181	---
55	84	87	90	93	98	102	107	112	118	124	131	138	146	154	162	171	181
50	83	85	88	91	95	99	103	108	113	118	124	131	137	144	152	160	168
45	82	84	87	90	93	97	100	104	109	114	119	125	131	137	144	151	159
40	82	83	85	88	91	94	97	101	105	109	114	119	124	130	136	142	148
35	81	83	85	87	89	92	95	99	102	106	110	115	120	125	130	136	141
30	81	82	84	86	88	90	93	96	99	102	106	110	114	118	122	127	132
25	80	82	83	85	87	89	92	94	97	100	103	107	110	113	117	121	125
20	79	81	83	85	86	88	90	93	95	98	100	103	106	109	112	115	119

Note: Exposure to full sunshine can increase HI values by up to 15° F. As an example, if the air temperature is 96°F (found on the top of the table) and the relative humidity is 65% (found on the left of the table), the Heat Index—how hot it feels—is 122°F.

To counteract heat stress, all District personnel must pay attention to these contribution factors:

- air temperature
- humidity
- air circulation
- radiant heat
- air pollution
- classroom temperature
- classroom location
- medical problems and use of medications
- fluid intake
- appropriate clothing
- physical conditioning
- acclimation to heat
- intensity, type and duration of exercise

Weather conditions, heat and air quality may be cause for a school principal to make the decision to modify classroom or campus activities. The district will also forward information when it is received by the County Office.

Students with certain health problems may require more attention. If students complain about the heat, allow them to rest and inform the school nurse who may want to have their health status clarified by a parent or guardian. Employees with specific health problems making them more sensitive to heat should alert the site administrator.

Policy: To counteract heat stress, all District Personnel must pay attention to weather conditions and use common sense and good judgment for modifying activities and/or school days. This policy applies to all school sponsored events.

On very hot, humid days, administrators, teachers and other staff should be aware of the “Guidelines for Consideration in Modifying Instructional Programs, Physical Activity, and School Schedules Based on Heat Index” and “Heat Related Illnesses, Signs/Symptoms and Treatment” to help minimize possible heat stress.

Guideline for consideration in modifying instructional programs, physical activity, and school schedules based on Heat Index.

Category	Outdoor Inst., including P.E. and Recess	Precautions and Recess Class Lengths	SUGGESTED Fluid Intake
85 - 94° F Heat Index “Green Flag”	Learning skills decrease with long exposure; heat index is above 95°	Low to Moderate Risk. Use Caution for recess and PE. Students should be given the option to remain in a cool location. (Shaded area, air conditioned room, office, especially those with health/medical needs.)	Water should be easily accessible in individual fluid containers to permit easier monitoring of fluid intake. Allow students to carry water bottles when outside if practical.
95° to 99° F Heat Index “Yellow Flag”	Encourage loose-fitting, light colored, lightweight clothing, wide brimmed hats, water bottles or frequent water breaks; IF A/C is not available increase room ventilation, (open windows/doors/use fans); provide wet wipes, damp clothes and /or spray bottles to cool forehead, arms, legs, and face.	High Risk. Physical activity outdoors at recess or PE is to be ceased. Students should remain indoors in an air conditioned environment as much as possible. Students can be given an option to go outdoors to walk, but this is to be minimized to 5 minutes.	Students should consume approx. 16-20 oz. of water every 2-3 hours throughout the day. Fluid replacement should occur immediately after a student has spent time outdoors.
100° to 105° F Heat Index “Red Flag”	All of the above and move students/staff to cooler areas of the building, as often as necessary, to avoid being in the above 90° Heat Index areas for longer than 60-90 minutes at a time.	Very High Risk. Students shall not be outside except to move from one location on the school site to another.	Teachers should remind students to consume water every 2-3 hours. Scheduled water breaks are recommended. Cool fluids are recommended to optimize gastric emptying.
Above 105° F Heat Index “Black Flag”	All of the above and immediately move the students/staff to cooler areas of the building. IF there are no suitable locations below the “black flag” level, immediately contact the District Offices (Ed. Services or Superintendent)	Extreme Risk. No practice. Heat Index should be rechecked every 30 minutes.	All students must have water readily available to them.

Heat Related Illnesses, Signs/Symptoms and Treatment

Heat Illness	Definition/Description	Signs/Symptoms	What to Do
Muscle (Heat) Cramps	Occurs during or after intense exercise. Student will experience acute, painful, involuntary muscle contractions. Typically in the arms, legs, or abdomen.	Dehydration; thirst; fatigue; sweating; muscle cramps.	<ul style="list-style-type: none"> ▪ Stop all activity and sit quietly in a cool place. ▪ Drink clear juice or a sports drink. ▪ Do not engage in exercise/strenuous activity for a few hours after cramps subside, as this may lead to heat exhaustion or heat stroke. ▪ Seek medical attention if heat cramps do not subside in one hour.
Heat Syncope	Occurs as result of exposure to high temperatures. Typically occurs during the first 5 days of acclimation to physical activity in the heat. May also occur after a long period of standing after physical activity.	Dehydration; fatigue; fainting; lightheadedness; tunnel vision; pale or sweaty skin; decreased pulse rate.	<ul style="list-style-type: none"> ▪ Lie down in a cool place. ▪ Drink clear juice or a sports drink.
Heat (Exercise) Exhaustion	The inability to continue exercising that is associated with heavy sweating, dehydration, energy depletion, and sodium loss. *Frequently occurs in hot, humid conditions.	Normal or elevated body-core temp (97-104°F); dehydration; dizziness and or lightheadedness; headache; nausea and or diarrhea; weakness; persistent muscle cramps; profuse sweating; chills; cool, clammy skin.	<ul style="list-style-type: none"> ▪ Seek medical attention immediately if symptoms are severe, the student has existing heart problems or high blood pressure. ▪ You may attempt to cool the student by giving: cool beverages (as directed by a school nurse), rest, and moving to an air conditioned environment, and wearing lightweight clothing.
Heat Stroke	Life-threatening unless promptly recognized and treated. Occurs as a result of prolonged heat exposure while engaging in physical activity. Symptoms are a result of the body shutting down when it is no longer able to regulate temperature naturally.	Same Symptoms as Heat Exhaustion and High body-core temp (>104°F) Change in Mood (e.g., apathy, irrational) Hot and wet or dry skin increased heart rate. Confusion.	<ul style="list-style-type: none"> ▪ If any symptoms are evident-CALL 911 or seek immediate medical assistance. ▪ Move the student to a shady area. ▪ Cool rapidly, using whatever methods available: immerse the victim in a tub of cool water; place in a cool shower, spray with cool water from the hose, sponge with cool water; fan the victim. ▪ Monitor body temperature and continue to cool, until temp drops to 101-102° F. ▪ Continue until medical professionals arrive and take over. If medical attention is delayed, call the emergency room for further instructions.

Guidelines for Preventing Heat Stress – continued

Modifying Classroom Activities

- Staff must be informed about the district’s guidelines for preventing heat stress, and the most efficient methods of reducing heat and maximizing ventilation in classrooms. Staff should observe students, especially students with health problems, during physical activities and when the Heat Index is high. Staff must know signs and symptoms of heat stress, emergency first aid, & how to obtain Medical help.
- Doors and windows must be closed in air-conditioned rooms, and any air-conditioning equipment malfunction should be reported at once. Non air-conditioned rooms should be surveyed and maximum cooling efforts should be instituted, including windows, doors and blinds adjusted, electric fans, etc.
- When classroom temperatures exceed 92° F, consideration should be given to moving students to cooler rooms or other appropriate area (classes can be combined in an air-conditioned room or outside in a shaded area).
- Teachers, at the elementary level, may readjust their program to use the cooler early hours for physical activities. Any exercise must be limited or modified when the Heat Index is above 95°.
- Water must be available (i.e., non breakable water bottles, max. 9” x4”-32 oz., fountains, and in an emergency Food Services’ water containers) to prevent dehydration. During activity, water breaks every 15-30 minutes should be encouraged.

Weather Conditions for Modifying Athletic Activities

During times of excessive heat, the following precautions need to be taken for outdoor physical activity which includes recess, physical education, recreation, and competitive sports:

- The intensity of exercise activities must be limited or they must be modified whenever the Heat Index is above 95° (see Heat Index table).
- Air Quality Advisories issued by the County must be obeyed.
- Adequate water must be available. Sugary and caffeinated beverage cause dehydration. Carbonated beverages may cause abdominal pain. Do not use irrigation systems for drinking water.
- Proper clothing should reflect heat, permit freedom of movement, and allow free perspiration.
- Sweat saturated garments should be replaced by dry ones. Rubberized sweat suits should never be used to produce loss of weight.
- Staff supervising physical activities should observe students during activity periods and modify activities as recommended. Students known to have health problems should be closely observed and their activity modified or restricted.
- Rest periods should be provided during activity. All activities should be followed by the proper cool-down and rest.

Strategies for Preventing Heat Stress During the School Day

- Each school should review this information with their staff on an annual basis. Teachers, staff, parents, and students should be instructed by school nurses regarding awareness of signs and symptoms and first aid for problems attributable to excessive heat. Teachers should explain precautions to students.
- A “cool room” should be established for use by students showing early signs of heat stress. This room should provide maximum coolness possible. During excessive heat the “cool room” should be available for use at all times during the school day.
- Prior to boarding busses, traveling students should be encouraged to drink water and be given time to drink cool water located near the pickup areas. For safety reason, personal water containers may not be used while riding on District buses. When the Heat Index is 95° or greater, schools may consider providing large moist towelettes for use by students.
- When planning an outdoor event such as graduation, educational fairs, health fairs, etc. that cannot take place indoors, staff should plan appropriately; the time of day, shaded areas, first aide, notification of participants to dress accordingly (light clothing, hats, sunglasses and bring liquids to maintain hydration).