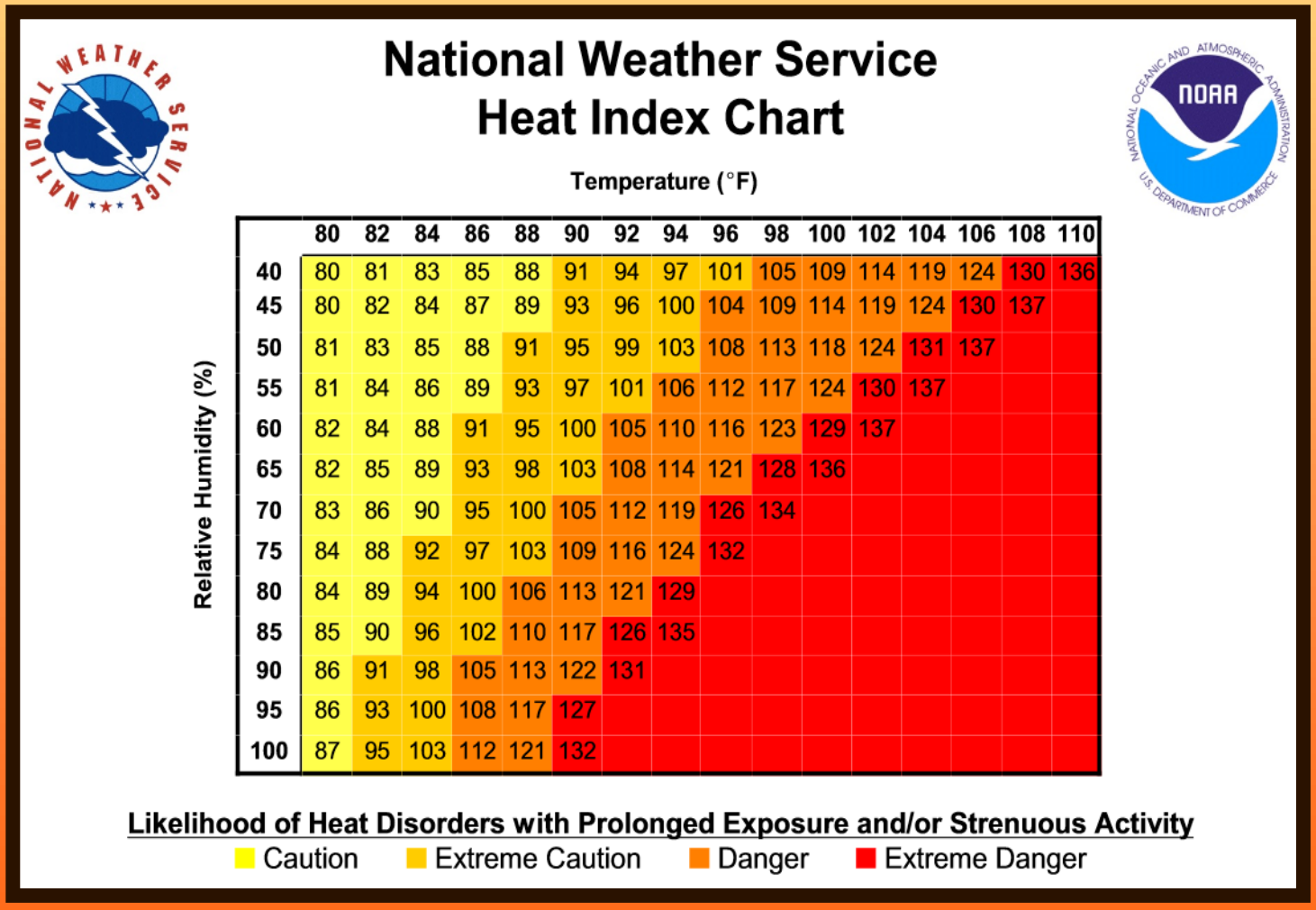
NATIONAL WEATHER SERVICE
MICHIGAN HEAT AWARENESS DAY
MAY 22, 2015

WHAT IS THE HEAT INDEX?

The Heat Index (HI) is a measure of how hot the weather actually feels to the body based on air temperature and relative humidity. The values on the table below are calculated for shady locations. Exposure to full sun can increase heat index values by as much as 15°F. Strong winds, particularly those accompanying very hot, dry air, can be extremely hazardous, as wind increases heat to the body.



Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Extreme Heat is Deadly!

HOT FACTS!

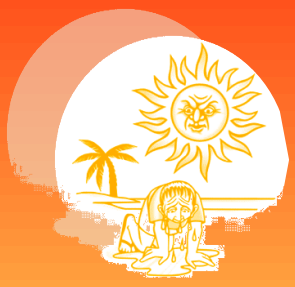
- **In the U.S., about 120 people die each year from extreme heat.**
- **Michigan averages about 5 heat related deaths a year.**
- **Heat deaths and injuries are typically underreported.**
- **Most heat related deaths are adults over the age of 40 and the deaths occur in their homes.**
- **Every location in Michigan has experienced 100 degree heat sometime in the past.**
- **Metro Detroit experiences about twelve 90+ degree days per year.**
- **Southern Lower Michigan experiences seven to twelve 90+ degrees days per year.**
- **Northern Lower Michigan and the Upper Peninsula experiences about five 90+ degree days per year.**
- **Warm nights with temperatures above 70° hinders the body's ability to cool. This creates even more heat stress the following day.**

Watches, Advisories & Warnings

EXCESSIVE HEAT WATCH: Issued when the Heat Index is expected to reach 105F within the next 2-3 days.

HEAT ADVISORY: Issued when the Heat Index is expected to reach 100F for 3 hours or more. May be issued with lower criteria for days with successive heat.

EXCESSIVE HEAT WARNING: Issued when the Heat Index is expected to reach 105F for 3 hours or more. May be issued with lower criteria for days with successive heat.



Recognizing Heat Illness

SUNBURN

- **SYMPTOMS**: Swelling, pain and redness of skin, blisters, fever, headaches.
- **FIRST AID:** Apply cool cloths to the burned area or immerse in cool water. Apply moisturizing lotion. Do not use salve, butter or ointment. Do not break blisters. Get medical attention for sunburned babies less than 1 year old.

HEAT CRAMPS

- **SYMPTOMS:** Muscle pain, heavy sweating.
- **FIRST AID:** Stop all activity for a few hours. Drink water, clear juice or a sports beverage. Get medical attention if cramps do not go away within 1 hour.

HEAT EXHAUSTION

- **SYMPTOMS:** Heavy sweating, cramps, tiredness, weakness, headache, cool and moist skin, fast and weak pulse, fast breathing, nausea, fainting.
- **FIRST AID:** Get the victim out of the sun, lay them down and loosen clothing. Apply cool, wet cloths. Give sips of a non-alcoholic drink. Get medical attention right away if the symptoms are severe or if the victim has heart problems or high blood pressure.

HEAT STROKE

- **SYMPTOMS:** High body temperature (103° orally.) Red, hot, dry skin without sweating. Rapid, strong pulse. Throbbing headache. Dizziness, nausea, confusion, unconsciousness.
- **FIRST AID:** Do not give fluids to drink. Move the victim out of the sun and cool them down using a garden hose, sponging with cool water or any other method to cool them rapidly.

Actions to Prevent Heat Disorders

HYDRATE

- Drink plenty of water, even if you don't feel thirsty!
- Avoid drinks with alcohol, caffeine or lots of sugar.

EDUCATE

- Know the latest temperature and heat index forecasts and values.
- Find a cool place where you will be able to get out of the heat.
- Know the warning signs of heat illness.

ACT QUICKLY

- Get medical help right away for any of these warning signs:

  Dry hot skin, heavy sweating, rapid breathing, rapid heartbeat, cramping, nausea, dizziness, confusion and exhaustion.

TAKE IT EASY

- Avoid over exertion especially between the hours of 11 am and 6 pm.
- Take breaks at least hourly in the shade or in an air conditioned location.
- Stay out of the sun and stay in a cooled building as much as possible.
- Use a fan only when the windows are open or when the air conditioner is on.

Beat the Heat
Check the Backseat

DO NOT LEAVE CHILDREN OR PETS IN YOUR VEHICLE!

- The temperature inside a vehicle can rise 20 degrees in 10 minutes and 50 degrees in an hour, even when outside air temperatures are in the 70's.
- The inside of a car acts like a greenhouse, where actual temperatures inside the vehicle can reach 120°F in minutes and approach 150°F in as little as an hour.
- This can cause hyperthermia (heat stroke) in only minutes, particularly in children, whose body temperatures warm at a rate three to five times faster than an adult.
- Studies have shown that "cracking the windows" provides little (if any) relief.

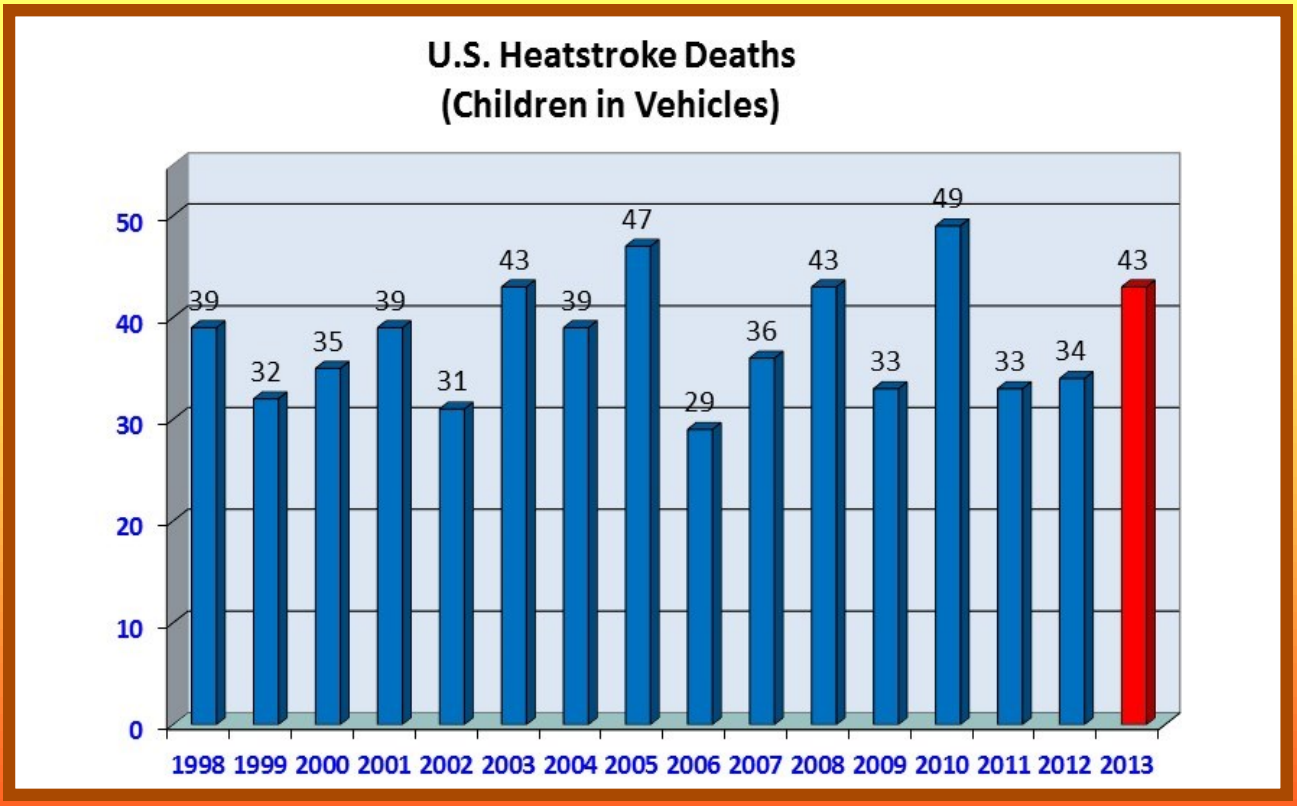


Chart courtesy of San Francisco State Univeristy

WEB RESOURCES

NWS - www.weather.gov

Detroit - www.weather.gov/dtx

Grand Rapids - www.weather.gov/grr

Gaylord - www.weather.gov/apx

Marquette - www.weather.gov/mqt

Northern Indiana - www.weather.gov/iwx

Heat Index Chart

http://www.weather.gov/om/heat/heatindex.shtml

Excessive Heat Outlooks

http://www.hpc.ncep.noaa.gov/heat_index.shtml

http://www.cpc.ncep.noaa.gov/products/predictions/short_range/heat/hi_610.php

NWS Heat Page

http://www.weather.gov/om/heat/index.shtml

Michigan Committee for Severe Weather Awareness

www.mcswa.com

CDC Extreme Heat Health

http://emergency.cdc.gov/disasters/extremeheat/

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This publication is available on-line at your local NOAA NWS web site.

Provided by NOAA National Weather Service offies serving Michigan and the Michigan Committee for Severe Weather Awareness