

Xavier University Athletics Inclement Weather Policy:

Lightning Policy and Procedure

The state of Ohio is 4th in lightning strikes across the United States. This is a weather phenomenon that can be anticipated by tracking weather patterns in your area for large storms. When Teams are participating outside it is to be part of the daily practice/event preparation to check the weather prior to activity.

Tracking storm fronts should be done prior to taking the field by accessing the weather via the internet. <http://www.weather.com>
Select "45207" as the zip code in the box at the top of the screen.
Select "Local or Regional Doppler Radar" from the selection menu.

Once the Team takes the field storm fronts can be tracked by use of a blackberry phone with internet access or with a **NOAA Weather Radio**. These radios are pre-programmed to alert involved parties to severe weather.

Radio needs to be plugged into an outlet (does have a battery backup). Turn switch to "ON", located on the front, lower right-hand side. When tone goes off, press the "ALERT" button and follow directions that are given. Press the "WEATHER" button to get an up to date weather report and press it again to turn it off.

If a weather radio is not available the **Flash-to-Bang Ratio** will be used.

Begin counting when lightning is sighted (flash or bolt).
Counting stops when thunder is heard.
Divide the count by 5 to find the distance from you to the lightning in miles. The minimum distance to game suspension is 6 miles.

If lightning is sighted play will be suspended immediately.

Play can resume after 30 minutes with no lightning and if it is greater than 6 miles away.

Suspension of play will follow a Chain of Command established by the Athletic Department.

Chain of Command	Before Event Begins	During the Event
Baseball	Athletic Trainer	Athletic Trainer
Soccer	Athletic Trainer	Athletic Trainer
Golf	Coaching Staff / Athletic Trainer	Coaching Staff / Athletic Trainer
Tennis	Coaching Staff / Athletic Trainer	Coaching Staff / Athletic Trainer
Cross-Country	Coaching Staff / Athletic Trainer	Coaching Staff / Athletic Trainer

Where to seek shelter for Athletes, Coaches, Officials and Fans

Baseball and Soccer	Schmidt Fieldhouse / OSC
All Other Outdoor Sports	Nearest Shelter

**** An announcement will be made by the Sports Information staff and/or coaching staff of the game suspension and where to seek shelter immediately.**

Prevention of Injury due to Cold Exposure

Complications due to extreme cold conditions can initially be less life threatening than those caused by heat, but may cause secondary injuries due to loss in performance.

Cold exposure may appear to be more subtle due to the amount of time it can take for separate individuals to weather the damage due to cold and/or moisture. As in heat a Student-Athlete's first line of defense is hydration.

Recognition of early **signs** of cold stress is essential to prevention. Shivering can accelerate muscle fatigue leading to poor motor control. Cold sensation may lead to numbness, pain, and a burning sensation. The more exposed skin is the quicker a cold reaction will occur. If cold is allowed to reach the brain then someone may appear clumsy, have slurred speech or become disoriented. If an athlete begins to complain of fatigue to the point that they want to lay down than this is a sign of a medical emergency.

There are several types of Cold Injury on the way to a medical emergency.

1. Frostbite: freezing of skin or tissue causing redness, edema and mottled skin // early on frostnip causes a loss of sensation prior to frostbite
2. Hypothermia: significant loss in body core temperature (less than 95 degrees) // can manifest itself in motor function causing clumsiness, slurred speech and confusion // can stress the heart rate and kidneys
3. Chilblain : non-freezing injury due to extended cold exposure with wet conditions // causes inflammation

A major factor affecting the speed of cold injury is the **Wind Chill Equivalent Index (WCEI)**. This takes place when the wind chill lowers the actual air temperature thus cooling the body more rapidly (cold wind). This is made more rapid when the skin or clothing is wet and quickens the cooling by evaporation. This is why cold injury can take place in many different combinations of these factors present. This chart gives approximate times of exposure for uncovered skin until frostbite ensues. If the body part is wet then the time on the chart is lessened allowing for less time until frostbite.



NWS Windchill Chart



		Temperature (°F)																		
		Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63	
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72	
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77	
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81	
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84	
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87	
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89	
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91	
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93	
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95	
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97	
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98		

Frostbite Times: 30 minutes (light blue), 10 minutes (medium blue), 5 minutes (dark blue)

Wind Chill (°F) = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})
 Where, T= Air Temperature (°F) V= Wind Speed (mph) Effective 11/01/01

Terms used in Weather Forecasting:

Wind Chill	the temperature it feels like outside due to winds accelerating loss of body heat
Wind Chill Advisory	the National Weather Service issues this when wind chill can be life threatening
Wind Chill Factor	increased wind speeds accelerate heat loss from the body
Wind Chill Warning	the National Weather Service issues this when wind chill can be life threatening
Blizzard Warning	the National Weather Service issues this for winter storms with 35 mph winds with snow blowing that reduces visibility to ¼ mile or less

Weather and Other Emergency Conditions Protocols of Xavier University:

Listed below are the basic categories of University response to serious inclement weather and/or emergency conditions. Announcements on local TV and radio stations will indicate which category applies:

CLASSES and UNIVERSITY OFFICES ON DELAYED START

On such days, classes before the defined time is canceled and University offices will not open until a specific time. Employees are not required to report to work prior to the announced start time and will not be required to make up the missed time. Emergency essential personnel should still report as scheduled.

CLASSES CANCELLED and/or UNIVERSITY CLOSED

Classes will not be held and/or University offices will be closed. University employees are not expected to report to work unless specifically contacted by their supervisor to report for emergency operations. **It is expected that the use of this category will be rare.**

Notification

Employees are urged to call the University's Weather/Emergency Conditions Hot Line at 513-395-8822 to confirm which condition applies, as the stations may not be relied upon to indicate which specific condition applies. In addition, the University will provide updates on the University website at www.xavier.edu and <http://myxu.xu.edu>. In the event that classes are cancelled and the university is closed, XU ALERT ME will be activated to send voice and text messages to those who are registered in the emergency notification system. This system is not activated to announce delayed starts.

Prevention of Cold Injuries:

It is the responsibility of every coach to know the weather report prior to activity outside. It is equally important to be able to adjust Team plans to changing weather conditions.

The variables on cold injuries vary from individual to individual. Acclimatization is a primary variable, but hydration, fatigue, clothing and lack of illness affect one's ability to combat the cold. This should be considered when the following guidelines are followed.

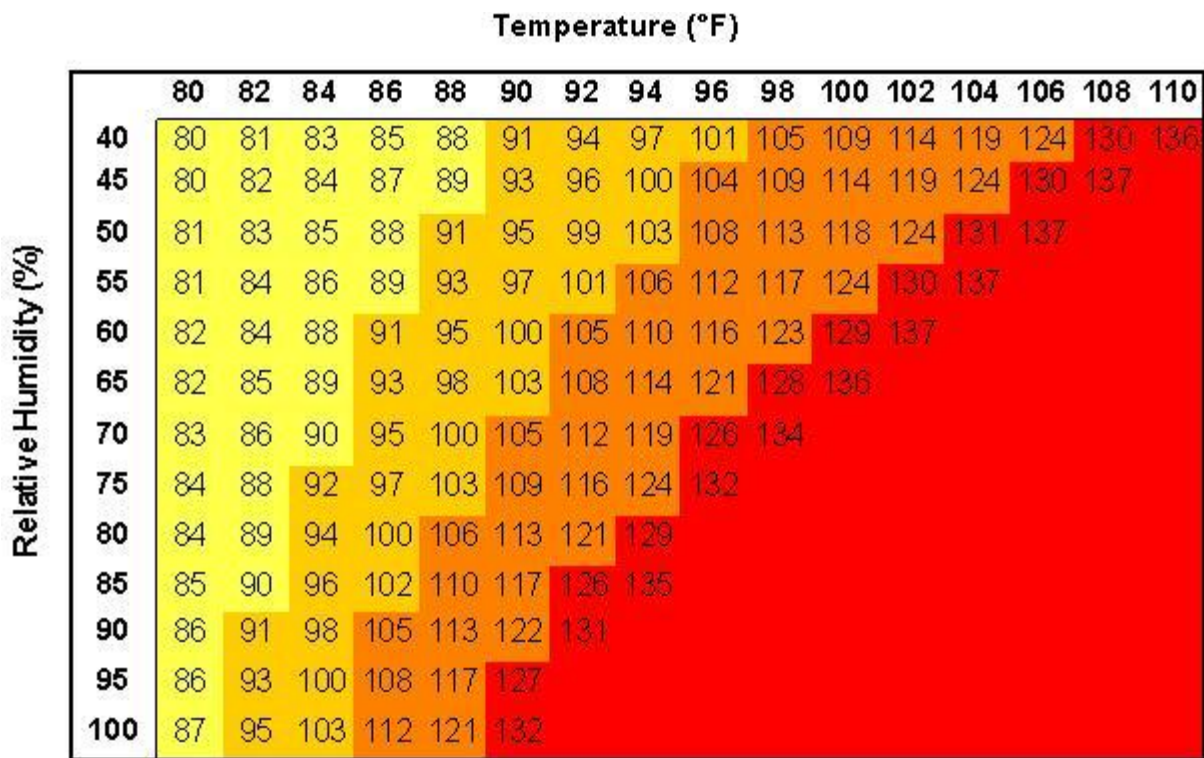
1. If there are blizzard conditions then the Team should not train outside.
2. If the conditions prevent a Student-Athlete from control of their limbs due to surface conditions then activity should take place inside.
3. If there is wind chill then once the Student-Athlete begins to have signs and symptoms of cold injury then they must return indoors to re-warm the body for at least 45 minutes. The limiting factors to cold injury are the body parts fully exposed.
4. If the University has weather advisory and there are Student-Athletes traveling from off campus to an activity then the Student-Athlete is excused from the activity.

Prevention of Injury due to Heat

Activities performed in an extremely hot and/or humid environment may cause stressors on the systems of Student-Athletes that in turn cause a health risk.

Heat Exhaustion	The body is in a form of Shock due to a loss of fluids. Symptoms: weakness, dizziness, lightheadedness, muscle cramps, nausea
Heatstroke	A medical emergency due to a high core body temperature. Symptoms: high core temperature, hot and dry skin (although some have been known to have red and sweating skin), seizure, coma

NOAA's National Weather Service Heat Index:



Limitations of Participation during prolonged heat exposure:

1. Each Student-Athlete must have a physical prior to participation with particular attention paid to those who have had a heat illness response in their history.
2. There needs to be a time of acclimatization to the elements. This is especially true for those recovering from illness. Ideally the time period is 7-10 days. The amount of time spent in the heat and the overall total amount of workload needs to be gradually increased.
3. The Coach will communicate with the Staff Athletic Trainer daily by phone/ in person for discussion of the Heat Index, and the amount of time or time of day that the practice should take place.
4. The Sports Medicine Staff will take a Wet Bulb Globe Temperature read midfield prior to practice.
5. The Staff Athletic Trainer has the ability to have practice rescheduled at a cooler time of day if conditions warrant.
6. There needs to be a Team policy of "unlimited access to water".
7. Shade needs to be available for those showing signs and symptoms of heat stress.
8. Organized water breaks need to be every 15-20 minutes during a 2 hour work period.
9. Student-Athletes need to be weighed prior to and following activity in the heat. A loss of 2 pounds is equal to a loss of 1 quart of fluid. That water must be replaced daily and / or between practices.
10. If a S-A shows signs of heat exhaustion then vital signs must be reported to the Team Physician by the Staff Athletic Trainer until orders are given to the ATC for the decision for return to play. Usually, there will not be a return to play that day and the next day will depend on the S-A's vital signs.