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Missisquoi Valley Union Middle/High School Sports Medicine Handbook

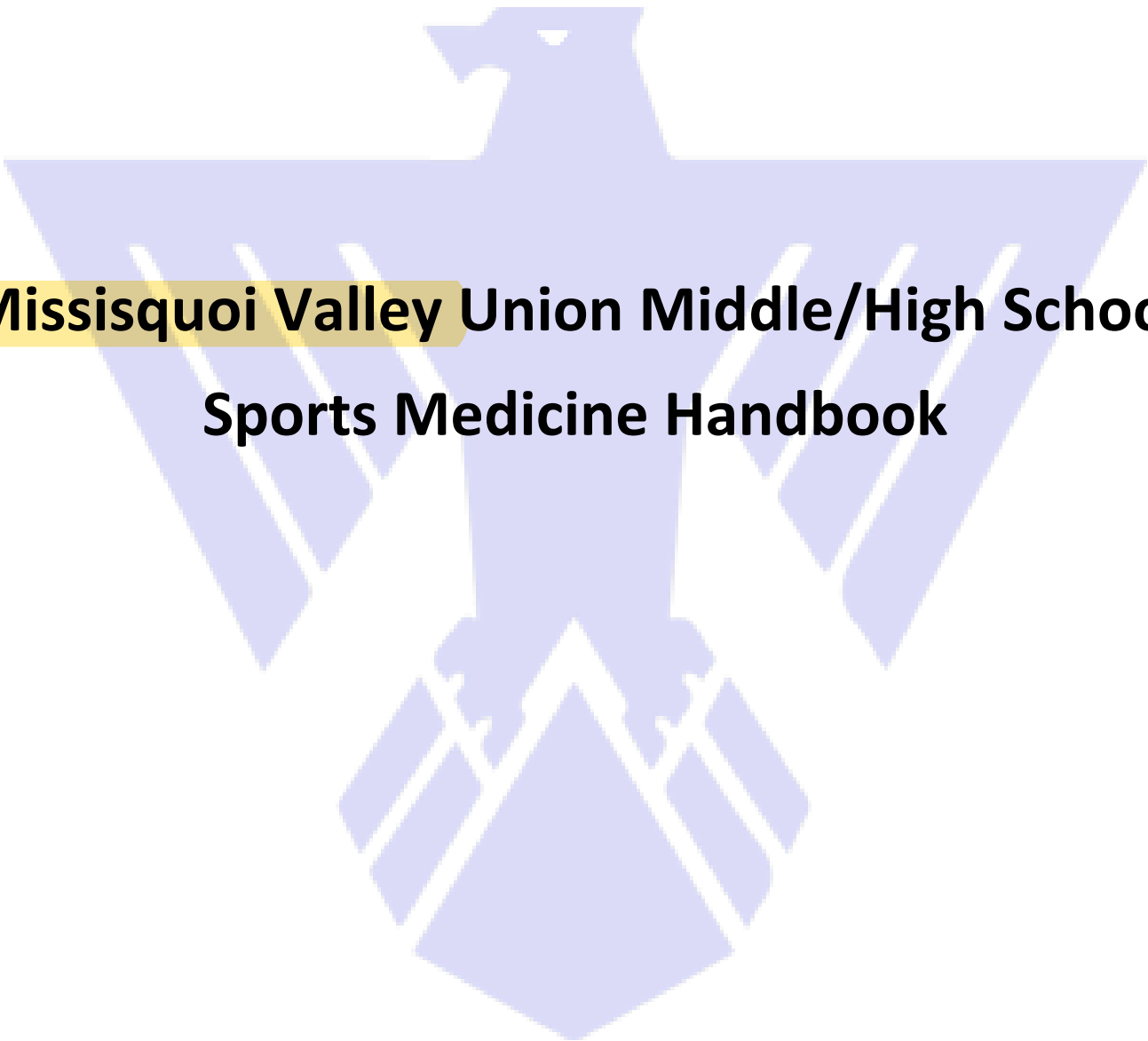


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MVU/NMC ATHLETIC TRAINING AGREEMENT



Online Electronic Signature Done with Athlete Registration

Missisquoi Valley Union and Northwestern Medical Center have reached an agreement in forming a partnership to provide extra medical staff onsite for our athletes at practices and games on designated days. As a result of the partnership, we are asking each athlete and family to sign a consent authorizing NMC to provide treatment within the scope of their practice.

Agreement to Assume Risks of Athletic Participation

I hereby grant permission to Northwestern Medical Center's Athletic Trainer, Physical Therapist or medical provider, to render any injury evaluations, preventative, first aid, rehabilitative or emergency treatment, that they deem is reasonably necessary to the health and well-being of my son/daughter. I recognize that my child is responsible for reporting any injuries promptly to the medical staff, and for following their recommendations for treatment

I understand that NMC medical staff reserve the right to determine when an athlete may return to play following and injury.

Having understood the risks of athletic participation, I voluntarily assume and accept these risks. I, on my own behalf, hereby release and discharge Northwestern Medical Center, and any of its employees, from all liabilities for injury or illness to my child during his/her athletic participation.

I understand and agree that by signing this "Agreement to Assume Risks of Athletic Participation" on behalf of my minor child, that I will be giving up the same rights for my minor child as I would be giving up if I signed this document on my own behalf. I further agree, as a parent or legal guardian of a minor participant under 18 years of age, that I will advise my minor child regarding the above warning and conditions and their ramifications, and that I consent to my child's participation. I hereby consent for my minor child to the assumption of risks described in this Agreement.

I understand and agree that this Agreement shall be governed by, and construed in accordance with, the laws of the State of Vermont.

Allergies

All student-athletes and parents are asked to clearly state during the online registration process if they have any known allergies. They are to indicate what they are, how severe, and if they are to carry an epi-pen per physician orders. If they do have an epi-pen they are asked to please carry this in the medical kit that coach will bring to each practice and game so that everyone knows where to find the epi-pen. All coaches who have student athletes that have severe allergies on their team will be required to receive training from the school nurse on epinephrine administration.

Asthma

All student-athletes and parents are asked to clearly state during the online registration process if they have asthma. They are to indicate what type (chronic, exercise induced, etc.) and how severely or frequently they experience asthma attacks. If they have an inhaler they are asked to please carry this in the medical kit that coach will bring to each practice and game so that everyone knows where to find the inhaler in an emergency. All coaches who have student athletes who have asthma on their team will be required to receive training from the school nurse on inhaler administration.

Bloodborne Pathogens

Coaches, athletic trainers, and athletes should all be educated on how to appropriately manage contact with blood, bodily fluids, and other possibly infectious materials.

Universal precautions: In order to reduce exposure, universal precautions should be followed. Universal precautions refer to the use of gloves, goggles, and face shields in order to avoid contact with bodily fluids.

In order to minimize the exposure risk the following should be done:

- Universal precautions (gloves) at all times when there is a risk of contact with bodily fluids
- Hand washing for a least 30 seconds
- Use of red biohazard bags for disposal of any possibly infectious materials (located in all med kits)
- All uniforms that are soiled should be removed and cleaned separately

*If an exposure does occur while treating an athlete, the athletic trainer and athletic director should be informed immediately.

Diabetes

All diabetic student athletes participating in sports at Missisquoi Valley Union are asked to clearly state this during the online registration process. Each athlete is responsible for monitoring their own blood glucose levels, and carrying their own clearly labeled emergency glucagon medication in their personal bag. Coaches and the athletic trainer are to be made aware of where in the bag the medication is kept and where the bag will be for all practices and games. We would also ask that an additional glucagon kit be stored in the coaches' med kit or athletic trainer's med kit for the duration of the season in order to ensure quick and reliable access to it in the event of an emergency. All coaches who have diabetic athletes on their team will undergo training with a member of the athletic health care team each sports season.

Hypoglycemia (also known as low blood sugar) is the most common complication of diabetes and can be life threatening if not treated quickly and appropriately. Coaches, parents, and athletes should all be

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educated about the signs and symptoms of hypoglycemia so that they are able to recognize the emergency and notify the athletic trainer and emergency medical responders.

Signs and symptoms include but are not limited to: sweating, pale skin, headaches, blurred vision, dizziness, confusion, disoriented, uncoordinated, nervous/irritable, weak, lethargic, and shaky. If severe the student athlete may be unable to swallow, have seizures or convulsions, and become unconscious.

Emergency Glucagon Administration: This will be reviewed with all coaches of diabetic athletes seasonally. **This is a medical emergency so 911 must be activated immediately.** DO NOT give a student athlete who is unconscious anything by mouth.

To Administer Glucagon:

1. Position student athlete on their side
2. Remove the cap from the glass vial
3. Pull the needle cover off of the syringe
4. Insert the needle into the vial and inject all the liquid
5. Shake and dissolve
6. Withdraw the glucagon solution back into the syringe and remove the needle from vial
7. Check for air bubbles in the syringe. If there are any bubbles make sure to remove them by tapping the syringe to allow the air to move to top of the syringe and the gently push on plunger to force the air out.
8. Insert the needle into a large muscle group such as thigh, upper arm, or buttocks at a 90 degree angle and inject the glucagon
9. Withdraw the needle and dispose into a sharps container, and apply slight pressure to area of insertion with gauze.
10. Keep student athlete positioned on their side and stay with them until EMS has arrived and assumed control.

Nutrition and Dehydration

The purpose of this section is to educate athletes, parents, and coaches about nutrition, hydration, and safety of student athletes at Missisquoi Valley Union. This material is intended for general educational purposes, and does not take the place of a physician, or serve as substitute for medical advice or treatment. *Please consult your health care provider if you have questions about a serious illness or injury.*

The most important part of sports nutrition is proper and adequate hydration. Every year athletes across the country die or become seriously ill due to **dehydration**, a condition that can be caused or made worse by physical activity. Dehydration can lead to exercise associated muscle cramps, heat syncope, heat exhaustion, and exertional heat stroke. It is to be noted that there are different levels of dehydration.

Water is the best fluid to consume to keep the body **hydrated**, but there are many other types of fluid replacement such as sports drinks that may be appropriate **during** activity.

Steps for Preventing Dehydration

- Acclimate to the heat over a period of 10 -14 days.
- Be sure to drink plenty of proper fluids during the acclimatization period.
- Schedule practice and game times in the morning or evening, avoid peak sun hours.
- Drink fluids containing sodium to keep your urine clear to light yellow.
- If you sweat a lot, or heat conditions worsen, be sure to take in extra sodium during the day with your meals and/or rehydration beverages containing sodium.

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- When exercising in the heat, clothes should be breathable and allow for proper sweating and evaporation.
- Alter intensity and frequency if exercising in the heat. Always make adjustments as the heat and/or humidity increase. Allow yourself rest breaks in the shade.
- Hydration breaks should be more frequent and longer as the heat and/or humidity increase.
- During training consume fluids! Rehydrate rapidly within the first 2-3 hours following dehydration detection.
- After training you should consume a volume of fluids that is greater than the volume of sweat loss.

*By the time you are thirsty you are already dehydrated!

Nutrition Guidelines

To help athletes achieve peak performance it is important to promote healthy eating and adequate fluid intake. Encourage athletes to take time to eat breakfast every day. Remind your athletes that lunch for many of them will be their pre-game meal and to eat accordingly. The size of the meal or snack eaten before exercise is important because adequate time is needed for digestion. Studies have confirmed an ideal pre-game meal should be predominantly carbohydrate. Eating foods high in carbohydrate can maintain blood glucose levels during exercise and provide fuel. The closer it gets to game time or practice, the smaller the meal or snack should be. The body must have the proper fuel in order to achieve peak performance.

Adequate Pre-Game Meals:

4 or more hours before game: Sandwich with lean meat such as turkey or ham, fresh fruit, low-fat yogurt.

3 hours before game: Fruit or juice, bagel or toast with a little peanut butter, light cream cheese or margarine.

1-2 hours before game: Fresh fruit or fruit juice or a sports beverage (Gatorade, vitamin water, etc.).

Foods high in fat and protein such as steak, eggs, pizza, nachos, and hot dogs are digested very slowly and won't be available for use as fuel for an extended period of time and therefore should be avoided immediately before exercise.

Vermont Principal's Associations Procedure for Athletic Participation in the Heat

Follow www.nata.org/position-statements Exertional Heat Illnesses Fluid Replacement for Athletes; www.acsm.org Exertional Heat Illness in Training & Competition; VPA Sports Medicine Advisory Committee August 2015

Exercise in a hot environment with associated fluid loss and elevated body temperature can lead to: Dehydration, Heat Exhaustion, and Exertional Heat Stroke and Death.

Modifications must if the environment is putting athletes at greater risk for heat illness.

All schools are expected to adhere to the following policy for athletic participation in all sports during times of high heat and/or humidity

Exertional Heat Stroke is on the rise in this country, and is currently among the top three reasons why athletes die during sporting activities. State mandatory policy for athletic activity in the heat provides critical standards to protect athletes against heat illnesses, and potentially save lives.

This policy follows recommended guidelines from the National Athletic Trainers' Association, American College of Sports Medicine, and Korey Stringer Institute.

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Steps for Monitoring Hot Weather

- Weather should be monitored by designated athletic department personnel (Athletic Trainer if present) and an advisory should be issued to school coaching staff when applicable. Usually by email **the day prior** to the event warning of the potential, and **the day of the** event with potential modifications.
- Athletic Department officials should use a **Wet Bulb Globe Temperature** Measuring (WBGT) Device. It is considered the gold standard measurement tool. (if cost prohibitive, Heat Index measuring devices can be used, although considered less accurate than WBGT)
 - The WBGT considers ambient temperature, relative humidity, wind, and solar radiation.
 - The Heat Index considers effects of ambient temperature and relative humidity only.
 - WBGT can be estimated from the chart below in cases where there is full sun and light wind by using a heat index monitor.
- Weather readings **MUST** be measured **at the practice/game site**, using a Wet Bulb Globe Temperature Device (or Heat Index Monitor). Measurements should be obtained beginning 1 hour prior to the event and monitored 30 minutes thereafter.
- Reminder: Synthetic Turf/Asphalt/Dark colored surfaces are significantly hotter than the ambient air temperature, especially if in full sun.
- Based on information from local/on-site weather measurements and from the National Weather Service, determine the risk of potential danger to participants using **Table 1 below**. Issue a warning and implement the practice or game plan for that day to be distributed to all coaches prior to practice time. See list on pg. 3 for additional Competition Modifications.
- Avoid scheduling training and competitions during the hottest part of the day (between 11am and 4pm).
- Shaded Areas should be easily accessible to athletes during rest/fluid breaks with unlimited fluids available

Activity Modification Chart

| Risk | WBGT* | Modifications |
|---------------|--------------------------|---|
| Minimal Risk | <76.1°F <24.5°C | Normal Activities, no modifications necessary |
| Low Risk | 76.2-81°F 24.4-27.2°C | Discretion for Intense/Prolonged Activity Watch at Risk Players Provide at least 3 rest/fluid breaks each hour of 4+mins each. |
| Moderate Risk | 81.1-84°F 27.3-28.9°C | Rest/Work ratio to be increased 15-20 min of activity followed by 4+ min rest/fluid breaks Practice will be in shorts, helmets, shoulder pads only. No equipment may be worn for conditioning activities. Maximum length of practice 2 hours |

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| | | |
|--------------|----------------------|--|
| High Risk | 84.1-86°F 29-30°C | Rest/Work ratio to be increased 20 mins activity/6+ min rest. 20 mins of rest distributed throughout 1 hour of practice Practice will be in shorts only (all protective equipment removed) No conditioning activities Maximum Length of practice 1 hour Change Time of Day activity is held (no practices between 11am-4pm) |
| Extreme Risk | >86.1°F >30°C | No Outdoor Workouts May delay practice until cooler WBGT reading occurs |

Shaded Areas should be made available for all athletes during rest/fluid breaks, unlimited fluids, remove equipment

***Reminder: the temperatures shown in the above table are WBGT temps, not ambient temperatures**

*Cat 1 from Grundstein

#Adapted from: Andrew Grundstein, Applied Geography, 2015
Regional Safety Thresholds for athletics in the Contiguous US

Wet Bulb Globe Temperature (WBGT) from Temperature and Relative Humidity

| Relative Humidity (%) | Temperature (°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | |
| 0 | 15 | 16 | 16 | 17 | 18 | 18 | 19 | 19 | 20 | 20 | 21 | 22 | 22 | 23 | 23 | 24 | 24 | 25 | 25 | 26 | 27 | 27 | 28 | 28 | 29 | 29 | 30 | 31 | 31 | 32 | 32 | |
| 5 | 16 | 16 | 17 | 18 | 18 | 19 | 19 | 20 | 21 | 21 | 22 | 22 | 23 | 24 | 24 | 25 | 26 | 26 | 27 | 27 | 28 | 29 | 29 | 30 | 31 | 31 | 32 | 33 | 33 | 34 | 35 | |
| 10 | 16 | 17 | 17 | 18 | 19 | 19 | 20 | 21 | 21 | 22 | 23 | 23 | 24 | 25 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 30 | 31 | 32 | 32 | 33 | 34 | 35 | 36 | 36 | 37 | |
| 15 | 17 | 17 | 18 | 19 | 19 | 20 | 21 | 21 | 22 | 23 | 23 | 24 | 25 | 26 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 33 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | | |
| 20 | 17 | 18 | 18 | 19 | 20 | 21 | 21 | 22 | 23 | 24 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 31 | 32 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | | | | |
| 25 | 18 | 18 | 19 | 20 | 20 | 21 | 22 | 23 | 24 | 24 | 25 | 26 | 27 | 28 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | | | | | | |
| 30 | 18 | 19 | 20 | 20 | 21 | 22 | 23 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 39 | | | | | | | | |
| 35 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | | | | | | | | | |
| 40 | 19 | 20 | 21 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | | | | | | | | | | |
| 45 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 30 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | | | | | | | | | | | | |
| 50 | 20 | 21 | 22 | 23 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 39 | | | | | | | | | | | | | |
| 55 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 34 | 35 | 36 | 37 | 38 | | | | | | | | | | | | | | |
| 60 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 35 | 36 | 37 | 38 | | | | | | | | | | | | | | | |
| 65 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 31 | 32 | 33 | 34 | 36 | 37 | 38 | | | | | | | | | | | | | | | | |
| 70 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 33 | 34 | 35 | 36 | 38 | 39 | | | | | | | | | | | | | | | | |
| 75 | 22 | 23 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 32 | 33 | 35 | 36 | 37 | 39 | | | | | | | | | | | | | | | | | |
| 80 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 32 | 33 | 34 | 36 | 37 | 38 | | | | | | | | | | | | | | | | | | |
| 85 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 34 | 35 | 37 | 38 | 39 | | | | | | | | | | | | | | | | | | |
| 90 | 24 | 25 | 26 | 27 | 28 | 29 | 31 | 32 | 33 | 35 | 36 | 37 | 39 | | | | | | | | | | | | | | | | | | | |
| 95 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 33 | 34 | 35 | 37 | 38 | | | | | | | | | | | | | | | | | | | | |
| 100 | 24 | 26 | 27 | 28 | 29 | 31 | 32 | 33 | 35 | 36 | 38 | 39 | | | | | | | | | | | | | | | | | | | | |

WBGT > 40

Note: This table is compiled from an approximate formula which only depends on temperature and humidity. The formula is valid for full sunshine and a light wind

https://cdn4.sportngin.com/attachments/document/0130/7219/vpa_heat_policy.pdf#_ga=2.235185537.166223350

Step 1: If you DO NOT have a WBGT measuring device, measure the temperature and humidity so you can estimate the WBGT using Chart 1 above.

Note: This is only accurate in light wind and full sun conditions.

Step 2: Once you have determined an Estimated WBGT, use Table 1 above to see what activity modifications should be implemented.

Recommended Preventative Strategies for Competitions



Competition Modifications:

- Unlimited supply of water at the site of each activity
- Move competition times to a cooler part of the day; early morning or early evening
- Meet with officials prior to game to discuss any or all of the concerns and/or strategies.
- Use player substitutions more often during play
- A mandatory water time out at the mid-way point of each half of play for both teams
- An extended half time for players to recover/cool more completely
- Cold water/ice towels and/or fans should be used to cool players
- Recommend removal of helmets and other equipment during rest periods or stoppage of play.
- Have plenty of extra ice and water at the site in the event a player needs immediate first aid/cooling
- An on-site cold/ice water tub (kiddie pool) for emergent athlete immersion is recommended
- Athletic Trainers/Coaches should be especially vigilant and monitor player's physical condition in extreme temperatures

Hydration:

- **Prior to Activity:** At least 500mls (2-3 glasses)
- **During Activity:** 200mls (1-2 glasses) every 15 minutes
- Preferably water however sports drinks may be appropriate
- Unlimited supply of water at the site of activity

Clothing:

It is essential that everyone is educated on the importance of:

- Wear appropriate clothing during play (wear light colors, wicking quick dry fabric)
- Practice without equipment on.
- Appropriate application and re-application of SPF 30+ sunscreen

Factors Affecting Body Temperature Regulation:

- Air Temperature
- Activity Intensity
- Adaptability/Acclimatization of the body
- Humidity
- Fluid Intake
- Age of the Athlete (children, adolescent, elderly)
- Wind
- Clothing

Susceptibility

- Prior History of heat illnesses
- Unacclimated athletes (early season, unusually high temps)
- Overweight (high BMI) or Underweight Athletes (Low BMI)
- Some medications and/or some medical conditions
- Dehydration/Greater than 3% body weight loss during the event
- Heavy or "Salty Sweaters"

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- High Temperature/humidity the previous participation day

Heat Illness

- Exposure to prolonged or abnormal amounts of heat and humidity can be especially dangerous for *young athletes* who sweat less, adjust more slowly and produce more internal heat than adults.
- **Remember: More water does not make it less hot!**
- Exercise in a hot environment, with associated fluid loss and elevated body temperature, can lead to: **Dehydration, Heat Exhaustion and Heat Stroke.** Heat stroke is a preventable, potentially fatal condition and must be treated immediately.
- Children who take certain medications, have chronic health problems or are overweight may be more susceptible to heat illness.

Heat Illness Definitions:

Dehydration

- Fluid loss occurs during exercise, due to perspiration and respiration.
- It makes an athlete more susceptible to fatigue and muscle cramps. Inadequate fluid replacement before, during and after exercise will lead to excessive dehydration and may lead to other heat illnesses.

Treatment: Fluid replacement before, during and after activity until urine is a light lemonade color

Heat Exhaustion

- Dehydration can lead to heat exhaustion and an inability to sustain adequate cardiac output.
- Symptoms include:
 - Fatigue, weakness
 - Headache, dizziness
 - Loss of endurance/skill
 - Light-headedness
 - Pale, clammy, sweaty skin
 - Nausea
- Athletes will pass little urine, which will be highly concentrated.
- Muscle cramps may be associated with heat exhaustion

Treatment: Cool athlete in shade or air conditioning, provide fluids, remove equipment, elevate legs

Exertional Heat Stroke

- Severe overheating, thermoregulatory failure may lead to exertional heat stroke.
- More or Large amounts of water do not prevent heat stroke
- **HEAT STROKE is LIFE THREATENING and PREVENTABLE!**
- Symptoms include:
 - Fatigue
 - Headache
 - Dizziness
 - Nausea
 - Pale skin
 - May or may not be sweating
 - Confusion

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- Increased body temperature
- Increased heart rate, respirations
- Collapse
- Exertional Heat stroke may arise in an athlete who has **not** been identified as suffering from heat exhaustion and has persisted in further activity.

Treatment: Immediate, drastic on-site cooling in ice/cold water immersion, fans, ice bags to groin arm pits, neck, EMS to hospital

Vermont Principals' Association Procedure for Athletic Participation in the Cold

Cold Injury

- *Cold weather is defined as any temperature that can negatively affect the body's thermoregulatory system.*
- *It is important to remember that temperatures do not have to be freezing to have this effect.*
- *Individuals engaged in sports activities in cold, wet and/or windy conditions are at risk for environmental cold injuries*
- *Reminder: Windy & Wet conditions reduce body temperature 3-5 times quicker*

Steps for Monitoring Cold Weather

- Weather should be monitored by designated athletic department personnel (Athletic Trainer if present) and an advisory should be issued to school coaching staff when applicable. Usually by email **the day prior** to the event warning of the potential, and the day of the event with potential modifications.
- Temperature, wind speed, and wind chill will be monitored.
- Athletic Department officials will use a **Wind Chill Index Chart** (Chart 1) as a measurement for impending weather situations and adjust outside activities as necessary using the **Activity Modification Table 1**
 - The Wind Chill Index considers effects of temperature and wind speed (see Chart 1 below)
 - Keeping in mind that precipitation increases risk dramatically
 - This chart is available at: <http://www.nws.noaa.gov/om/winter/windchill.shtml>
- Based on information from the National Weather Service, local weather stations and local/on-site Cold Index measurements, determine the risk of potential danger to participants. Issue a warning and implement the practice or game plan for that day to be distributed to all coaches.

Activity Modification Chart

| Risk | Temp/Windchill | Modifications [#] |
|----------|----------------|--|
| Low Risk | 30°F and below | Outside participation with appropriate clothing [^] |

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| | | |
|----------------------|----------------|---|
| Moderate Risk | 25°F and below | Mandate additional protective clothing (hat, gloves, layers) Limit practice time to 60-90 minutes/15 min rewarm Provide re-warming facilities (warm dry environment, fluids, blankets, hot packs) |
| High Risk | 15°F and below | All participants must have appropriate clothing as above Cover all exposed skin (cover helmet ear holes) Outside participation limited to 45 minutes/15min rewarm Provide re-warming facilities (warm dry environment, fluids, blankets, hot packs) |
| Extreme Risk | 0°F and below | Termination of all outside activities * # |

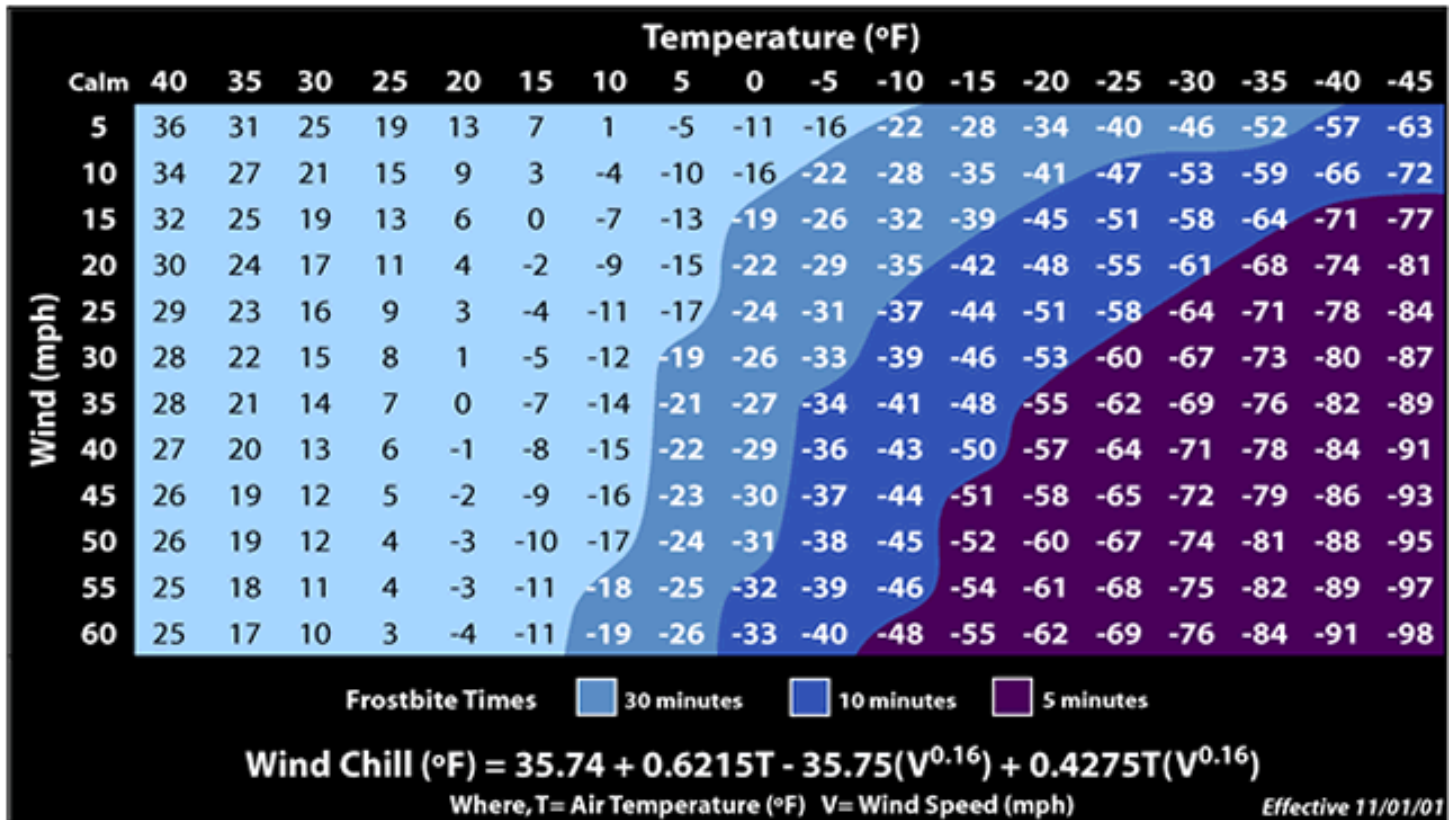
*Frostbite can occur in 30 minutes with minimal wind. See attached Windchill chart

#Nordic ski teams, Alpine ski teams, and snowboard teams are subject to coach's and venue location discretion. These participants and the nature of their sport dictate necessary equipment/clothing for such extreme weather. Venues issue warnings & "wind holds".

^See appropriate clothing on following page under Clothing Recommendation



Wind Chill Chart



Recommended Preventative Strategies

Competition/Practice Modifications:

- Consider extended half-times to allow for rewarming
- Provide access to a warm building
- Consider abbreviated introductions
- Ensuring/mandate proper clothing (hats, gloves, pants)
- Consider a “EZ” up tent for players/officials for protection from the elements
- Coaches should be vigilant and monitor player’s physical condition and mental status
- Have adequate rehydration fluids available, consider warm beverages
- Have hotpacks, blankets, additional warm, dry clothing available

Appropriate Clothing^:

In cold weather conditions appropriate clothing should be worn to prevent cold exposure. Both the Athletic Trainer(s) and coaches should require the student-athletes to implement the following:

- Wear several layers around the core of the body (especially those who are not very active).
 - The first layer should wick moisture away from the body (DryTech, underarmor)
 - The top layers should trap heat, block the wind (fleece, windblock)
 - No cotton as inside layer.
 - Outside layer should be water resistant/waterproof
- Long pants designed to insulate.
 - On cold/and or windy days windpants or a nylon shell should be worn on the surface layer to break the wind.
- Long sleeved garment that will break the wind
- Gloves
- Hat or helmet to protect the ears; tape helmet ear holes for cold/wind protection
- Face protection
- Moisture wicking socks (preferably wool blend)

It is important that athletes avoid wearing multiple layers of cotton. When the body sweats the cotton will become dense and permeated with sweat

Factors Affecting Body Temperature Regulation:

- Wind and moisture (rain) dramatically increase heat loss from the body
- Cold exposure/activity requires more energy from the body. Additional calorie intake may be required.
- Cold exposure/activity requires similar hydration to room temperature; however the thirst reflex is not activated. Conscious efforts before and after practice to hydrate should be initiated.
- Never train alone. A simple ankle sprain in cold weather may become life threatening.
- Appropriate clothing must be closely monitored and mandated (see above)
- Increased risk factors: Previous cold injury, females, low body weight, asthma, CV conditions

Cold Injury

Hypothermia:

- Body Core Temperature below 95°F
- Symptoms include:

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- Shivering
- Lethargy, amnesia
- Impaired motor control
- Pale, cold face and extremities
- Decreased heart rate
- Slurred speech
- Impaired mental function

Treatment: remove wet clothing, warm with dry insulating blankets, cover the head, get to a warm environment. Provide warm beverages, avoid friction, avoid warming extremities initially

Frostnip/Frostbite:

- Frostbite is actual freezing of body tissues. Most susceptible are fingers, toes, earlobes, nose.
- Symptoms include:
 - Dry, waxy skin
 - Swelling
 - Burning, tingling
 - Limited movement
 - White/blue/gray patches
 - Aching, throbbing, shooting pain

Treatment: rewarm slowly in warm water (not hot); avoid friction/rubbing tissue

Chillblain:

- An exaggerated or uncharacteristic inflammatory response to cold exposure
- Symptoms include:
 - Red or blue lesions
 - Swelling
 - Tenderness
 - Itching, numbness, burning
 - Increased temperature

Treatment: wash, dry area, elevate, cover with loose clothing/blankets, avoid friction, lotion

General Signs/ Symptoms of Cold Stress:

- Uncontrollable shivering
- Swollen Extremities
- Confusion
- Slurred Speech
- Headache, dizziness
- Red or Painful extremities
- Fatigue
- Blurred Vision
- Numbness/tingling of skin



Athletic Training Return to Sport Policy

| | |
|---|---|
| Applicability: Northwestern Medical Center | Date Effective: 11/16 |
| Department: Rehabilitation Services | Date Last Reviewed: 11/16 |
| Supersedes: none Remove AMY Putnam SVP Physician Services | Or Date Last Revision: 11/16 |
| Administration Approval: Amy Putnam SVP Physician Practices | |

Purpose:

1. Identify who is responsible for clearing an athlete to return to athletic participation.
2. Identify procedure/guidelines to follow for athlete's safe return to athletic participation
3. Identify all necessary communication and paper work to be completed.

Background: none

Definitions:

On field injury without recommendation for additional medical personnel- an injury that takes place on the field that is assessed and treated by the athletic trainer without recommendations for additional medical intervention.

On field injury needing additional medical personnel- an injury that takes place on the field that is assessed by the athletic trainer with recommendations for additional medical intervention such as; emergency department visit, follow up with primary care physician, physical therapy evaluation, and/or follow up with orthopedic or specialist.

Procedure: Northwestern's sports medicine staff will evaluate the injury and based upon the evaluation make a determination what the most appropriate course of care is for the athlete. In most cases, injuries are minor and the athlete will be treated by the athletic trainer at the school. If an injury is more extensive or requires further medical evaluation, the athlete's parent/guardian will be contacted by the athletic trainer.

The decision for an athlete to return to athletic participation will be determined by an athletic trainer following the procedure and guidelines listed below. In the event that additional treatment was required by a physician, the physician determines when that athlete is safe to return to athletic participation. **The athletic trainer or designee sports medicine provider is the individual(s) who make the final decision regarding the athletes return to athletic activity**

Documentation to be completed by the athletic trainer:

- All injuries are documented on an online injury reporting software called. "SportsWare."
- If recommendation is made to discontinue play until further medical intervention, the athlete is expected to follow up with the recommendations and then follow up with the athletic trainer for assessment for safe return to sport following the guidelines listed below.



Sports Medicine Handbook- Missisquoi Valley Union Middle/High School

Guidelines for Safe Return to Sport

For on field injury with or without recommendation for additional medical personnel:

- The athlete has full range of motion compared to the uninvolved side
- The athlete has full or at least 90% strength compared to the uninvolved side
- The athlete is able to perform functional tests without adverse reaction
 - Functional tests for lower extremity injuries include but are not limited to: forward jogging, forward sprinting, figure eight running, and back pedaling, followed by sport specific tasks. Sport specific testing may include but are not limited to: single leg hop, lateral hops, deep squat jump and stop and go assessment.
 - Functional tests for upper extremity injuries may include but are not limited to: overhead reaching, overhand throwing, underhand throwing, weight bearing through a push up/plank and resisted push/pull followed by other applicable sport specific tasks.
- Once the athlete is cleared for return to athletic participation this is documented on the online injury reporting software.
- If recommendation was made for emergency department visit, follow up with primary care physician or orthopedic/specialist follow up- the athlete must show documentation that releases the athlete to return to athletic participation. This documentation is to be filed with the coach and the athletic trainer. At this time the athletic trainer will put athlete through above noted guidelines. **The athletic trainer or designee sports medicine provider is the individual(s) who make the final decision regarding the athletes return to athletic activity**

Monitoring Plan: ongoing by rehab manager and supervisor

Related Policies: N/A

References: N/A

Reviewers



remove names below Replace w Sarah Nielsen,

Key Stakeholders: Kristy Cushing, Rehab Manager, Karen Staniels, Director Ortho/Rehab

Supervisor, Rehab Services

A. Committees: none

B. Key Process Owner (KPO): Kristy Cushing, Manager Rehabilitation Services



Athletic Injury Policy

- An athletic trainer will be present at every home contest. An athletic trainer will be available in the training room at MVU.
- If there is an athletic injury at MVU or any athletic facility on campus during practice or a game, the Athletic Trainer is responsible for evaluating and deciding the plan of care for the athlete.
- If the ATC is not present, refer to Emergency Action Plan for athletic injuries.
- It is the coaches' responsibility to make the athletic trainer aware of an injury that occurred off campus so the ATC can make proper decisions on the athletes care.

Potential Head Injury Action Plan

Management of Sports-Related Concussions

Missisquoi Valley Union High School (MVU) has developed this protocol to address the issue of the identification and management of concussions for students who participate in school sports. Act 68 was passed into law in 2013 and requires that schools have an action plan.

A safe return to activity protocol (learning and athletics) is important for all athletes following any injury, but it is essential after a concussion. The goal of this protocol is to ensure that athletes are identified, treated and referred appropriately for return to learn and return to play. Consistent use of a potential head injury protocol will ensure that the athlete receives appropriate follow-up and/or academic accommodations in order to make certain that the athlete is fully recovered prior to returning to full athletic play activity.

This protocol will be reviewed annually by the **Director of Athletics and the Athletic Trainer**. Changes and modifications will be reviewed and written notifications will be provided to athletic department staff, coaches and other appropriate school personnel.

All coaches are required to certify concussion management training every two (2) years. Parents and athletes must be educated about concussions annually. The written documentation of coach's annual training shall be kept in the coach's personnel file and the student/parents in the student file and be tracked by **The Director of Athletics**.

Recognition of Concussion

These signs and symptoms – following a witnessed or suspected blow to the head or body – are indicative of a probable concussion.

Signs (observed by others)

Forgets plays
Appears dazed or stunned
Exhibits confusion
Unsure about game, score, opponent
Moves clumsily (altered coordination)
Balance problems
Personality change
Responds slowly to questions
Forgets events prior to hit
Forgets events after the hit
Loss of consciousness (not required)

Symptoms (reported by athlete)

Headache
Fatigue
Nausea or vomiting
Double vision, blurry vision
Sensitive to light or noise
Feels sluggish
Feels "foggy"
Problems concentrating
Problems remembering

Any athlete who exhibits signs, symptoms, or behaviors must be removed from competition or practice and will not be allowed to train or compete with a school athletic team until the athlete has been examined by and received written permission to participate in athletic activities from the athletic trainer or sports medicine provider. (per Act 68, approved by the VT Legislature in 2013).

Athletic trainer, or sports medicine provider has been designated as the individual(s) who can make the initial decision to remove a student athlete from play when it is suspected the athlete may have suffered a potential head injury, although as stated above, the coach shall not allow an athlete to practice or compete if they have sustained an injury and have any of the above symptoms.

Sports Medicine Handbook- Missisquoi Valley Union Middle/High School

Athletes with a suspected head injury should not be permitted to drive home.

School must notify parents/guardians within 24 hours if student sustains a concussion.

The athletic trainer, sports medicine provider, or athletic director, is the individual(s) assigned to inform parents/guardians that their student/child may have sustained a potential head injury.

Act 68 requires that schools must outline the steps required before a student athlete can return to athletic or learning activity.

Athletic Concussion Policy

- If you believe an athlete sustains a concussion and an athletic trainer isn't present, refer to the Emergency Action Plan. **If in doubt do NOT play the athlete!!**
- If an athlete sustains a concussion, is diagnosed by an ATC or other trained medical professional, than that athlete cannot participate in their sport until satisfactory completion of the 5 Step Return to Play Protocol.
- Coaches must make the Athletic Trainer aware of any athletic injury or concussion sustained off campus immediately.
- ATC contact info is in your hand book and, on the MVU website, and Emergency Action Plan for athletic injuries.
- ALL PARTICIPATING ATHLETES MUST TAKE THE SCAT5 CONCUSSION TEST

Athletic Concussion Procedures

1. Athlete gets assessed and evaluated for concussion by the Athletic Trainer during a game/practice. If athlete experiences symptoms later, they will see their physician.
2. Concussion diagnosis is made with a symptom check and SCAT5 test retake.
3. Parent is notified and educated on return to learn with school nurse, and return to play with ATC.
4. Student progresses through RTL protocol with the help of school nurse.
5. When the athlete has gone 24 hours without concussion symptoms, and has been cleared through RTL with school nurse, the athlete goes to ATC for a second evaluation.
6. **ATHLETE MAY NOT START SPORTS UNTIL THEY CHECK IN WITH ATC AFTER THEIR SYMPTOMS HAVE DISSIPATED. The Athletic Trainer has the FINAL say in regards to the athlete's return to play.**
7. Once the Athletic Trainer has spoken with and evaluated the athlete, he/she can retake the SCAT5 concussion test. The Athletic Trainer checks the scores when completed.
8. The athlete and Athletic Trainer then start the '5 Steps' of return to play (daily check in).
9. If all symptoms are gone and do not persist through the 5 Steps, the athlete can return to full participation.

**Insert: RTL Return to Learn, should state will be implemented by the Health Office
Return to Learn Protocol**

The following steps are required before the student can return to academic activity. The student is required to complete the RTL protocol and be symptom free for 24 hours before beginning the RTP protocol. ❌ ❌ ❌

1. Home - Total Rest
2. Home – Light Mental Activity ❌
3. School – part time – maximum accommodations
4. School - part time – moderate accommodations
5. School – full time – minimal accommodations

6. School – full time – full academics, no accommodations

Gradual Return to Play Following a Potential Head Injury

This return to play plan will only start when the athlete has been without any symptoms for 24 hours. If at any time during the steps, symptoms return, wait 24 hours and return to step 1.

It is important to wait 24 hours between steps because symptoms may develop several hours after completing a step.

The athlete should be free of any pain medications before and while progressing through the steps (no ibuprofen, aspirin etc.)

This program will be closely monitored by an appropriate staff member (i.e. coach, athletic trainer, and athletic director) and will be reviewed step by step with the athletic trainer or the designee. The appropriate staff member will be designated by either the athletic trainer or athletic director.

Step 1 Aerobic conditioning- walking or stationary bike

Intensity level 4 out of 10

Duration- no more than 30 minutes

If no symptoms appear, wait 24 hours and move on to Step 2.

Step 2 Sport specific drills- skating for hockey, running drill for soccer and basketball

Intensity level 5 out of 10

Duration- no more than 60 minutes

If no symptoms appear, wait 24 hours and move on to Step 3.

Step 3 Non-contact training drills- include more complex training drills i.e. passing and receiving drills, more complex running drills.

Intensity level 7 out of 10

Duration- no more than 90 minutes

No head contact or potential for body impact.

OK to start resistance training.

If no symptoms appear, wait 24 hours and move on to Step 4.

Step 4 Full contact practice

No intensity or duration restrictions.

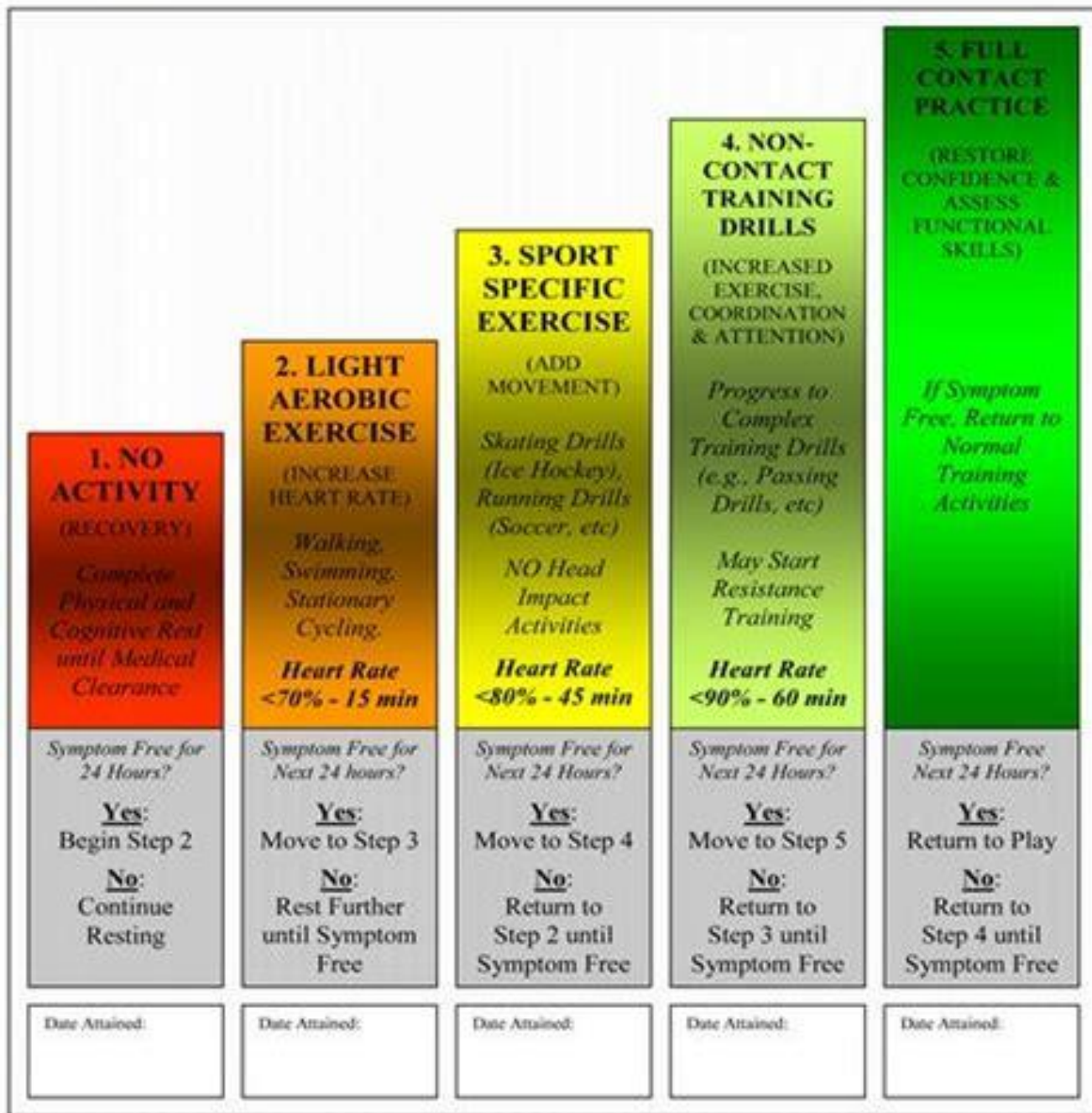
If no symptoms appear, wait 24 hours and move on to Step 5.

Step 5 Full clearance for return to play.

See separate Return to Learn Guideline – Return to learn will be supervised by the school nurse.



Graduated Return to Play Protocol



Reference: Consensus Statement on Concussion in Sport: the 3rd International Conference on Concussion in Sport held in Zurich (2008). Br J of Sports Med 2009; 43: 176-284 doi:10.1136/bjism.2009.038248



Dental Emergencies

Follow "Emergency Treatment of Athletic Dental Injuries" as approved by the Academy for Sports Dentistry

Avulsion: (Entire tooth knocked out)

1. Avoid additional trauma to tooth while handling. **Do not** handle tooth by the root. **Do not** brush or scrub tooth. **Do not** sterilize tooth.
2. If debris is on tooth, gently rinse with water
3. If possible, replant tooth and stabilize by biting down gently on a towel or handkerchief. **Do this ONLY if athlete is alert and conscious.**
4. If unable to replant:
 - a. Best: Place tooth in saline solution
 - b. 2nd Best: Place tooth in cold milk
 - c. 3rd Best: Wrap tooth in saline-soaked gauze
 - d. 4th Best: Place tooth under athlete's tongue. **Do this ONLY if athlete is conscious and alert**
 - e. 5th Best: Place tooth in cup of water
5. Time is very important. Re-implantation within 30 minutes has the highest degree of success rate. **Transport the athlete and tooth to an emergency dentist immediately.**

Luxation: (Tooth in socket, but wrong position)

1. **Extruded Tooth:** Upper tooth hangs down and/or lower tooth rose up.
 - a. Reposition tooth in socket using firm finger pressure.
 - b. Stabilize tooth by gently biting on towel or handkerchief
Transport the athlete to an emergency dentist immediately.
2. **Lateral Displacement:** Tooth pushed back or pulled forward.
 - a. Try to reposition tooth using finger pressure
 - b. Athlete may require local anesthetic to reposition tooth; if so, stabilize tooth by gently biting on towel or handkerchief
 - c. **Transport the athlete to an emergency dentist immediately.**
3. **Intruded Tooth:** Tooth pushed into gum, looks "short"
 - a. Do nothing, avoid any repositioning of tooth
 - b. **Transport the athlete to an emergency dentist immediately.**

Fracture: (Broken Tooth)

1. If tooth is totally broken in half, save the broken portion and bring to the dental office as described under Avulsion, Item 4. Stabilize portion of tooth left in mouth by gently biting on towel or handkerchief to control bleeding.
2. Should extreme pain occur, limit contact with other teeth, air, or tongue. Pulp nerve may be exposed, which is extremely painful to athlete
3. **The athlete may complete the game or activity but will require dental treatment within 24 hours to save or treat the dental pulp. Sooner is better**

Local Emergency Dentists:

Associates in Comprehensive Dental Care

10 Mapleville Depot
St. Albans, VT 05478
Phone: 802-524-5169

Fiddlehead Dental

39 Congress St.
St. Albans, Vermont 05478
Phone: (802) 524-9774
Email:
fiddleheadental@myfairpoint.net

Associates for Dental Care

2 Spring Street
Swanton, VT 05488
Map & Directions Phone: (802) 868-3334
E-mail: info@adcvt.com

Hudson Valley Dental Associates PLLC (Aspen Dental)

62 Merchants Row
Williston, VT 05495
(802) 455-8048
Emergency Phone: (855)577-1657

Mental Health

Refer to NATA Inter-Association Recommendations for Developing a Plan to Recognize and Refer Student-Athletes with Psychological Concerns at the Secondary School Level: A Consensus Statement

Mental health disorders in secondary schools are a growing concern. Being able to identify the signs and symptoms of mental health disorders is detrimental. In the event of a psychological or mental health crisis on school campus, safety is the highest priority. Whenever possible, defer to school personnel (i.e. school counselor/nurse, school administrator, etc.) in such an emergency. If a mental health crisis were to occur after school hours, when school administrators, counselors or nurses may not be available, the athletic trainer (AT) may be central in managing the situation. Intervention and reporting must be managed appropriately, without further risk of harm or escalation. **If a coach or athletic trainer identifies a student with a mental health concern, their job is to refer the student-athlete into the mental health care system for assessment and treatment by a credentialed mental health care professional.** If a student athlete is concerned about the mental health of a teammate, they should privately notify their coach or athletic trainer and allow them to proceed.

Confidentiality:

While in the majority of situations, utmost confidentiality is afforded to the athlete when sharing information with coaches and athletic trainers, state and federal laws require reporting certain situations involving minors. Cases in which an individual poses a risk to themselves or others, or where the individual is being abused in any way must be reported. The expectation must be made clear to the student-athlete, especially those under the age of eighteen, that even if they do not want the information shared, the AT or coach is obligated to notify school officials and/or local authorities of these situations.

Identifying Psychological Concerns

Depression

Individuals may feel:

- Sad
- Anxious
- Empty
- Hopeless
- Guilty
- Worthless
- Helpless
- Irritable
- Restless
- Indecisive
- Aches, pains, headaches, cramps, or digestive problems

Individuals may present (with):

- Lack of energy, depressed, sad mood
- Loss of interest in activities previously enjoyed (hanging out with friends, practice, school, sex)
- Decreased performance in school or sport
- Loss of appetite or eating more than normal, resulting in weight gain or weight loss
- Problems falling asleep, staying asleep, or sleeping too much
- Recurring thoughts of death, suicide, or suicide attempts
- Problems concentrating, remembering information, or making decisions
- Unusual crying

Anxiety

Common anxiety signs and symptoms:

- Feeling apprehensive
- Feeling powerless
- Having a sense of impending danger, panic, or doom
- Having an increased heart rate
Breathing rapidly
- Sweating
- Trembling
- Feeling weak or tired

Other aspects to consider:

- You feel like you're worrying too much and it's interfering with your work, relationships, or other parts of your life
- You feel depressed, have trouble with alcohol or drug use, or have other mental health concerns along with anxiety
- You think your anxiety could be linked to physical health problems
You have suicidal thoughts or behaviors (if so, seek emergency treatment immediately)

Eating Disorders

Anorexia Nervosa

Common signs and symptoms include:

- Extreme thinness (emaciation)
- Relentless pursuit of thinness and unwillingness to maintain a normal or healthy weight
- Intense fear of gaining weight
- Distorted body image, self-esteem that is heavily influenced by perceptions of body weight and shape, or denial of the seriousness of low body weight
- Lack of menstruation among girls and women (amenorrhea)
- Extremely restricted eating
- Compulsive exercise

Other symptoms may develop over time, including:

- Thinning of bones (osteopenia or osteoporosis)
- Brittle hair and nails
- Dry and yellowish skin
- Growth of fine hair all over the body (lanugo)
- Mild anemia and muscle wasting and weakness
- Severe constipation
- Low blood pressure, slowed breathing and pulse
- Damage to the structure and function of the heart
- Brain damage
- Multiorgan failure
- Drop in internal body temperature, causing the person to feel cold all the time
- Lethargy, sluggishness, or feeling tired all the time
- Infertility

Bulimia Nervosa

Common signs and symptoms include:

- Chronically inflamed and sore throat
- Swollen salivary glands in neck and jaw
- Worn tooth enamel, increasingly sensitive and decaying teeth as a result of exposure to stomach acid
- Acid reflux disorder and other gastrointestinal problems
- Intestinal distress and irritation from laxative abuse
- Severe dehydration from purging of fluids
- Electrolyte imbalance (too low or too high levels of sodium, calcium, potassium, and other minerals), which can lead to heart attack

*If you recognize an athlete with a non-emergent potential psychological concern, speak with the Missisquoi Valley Union athletic trainer, nurse, or guidance counselors regarding next steps.