

MID Sussex Triathlon Club Policy: Wetsuit Use in Extreme Weather Conditions

Both high and low water temperatures can put significant stress on swimmers putting their health at risk.

General Information:

Cold Water

In cold water there is a common misconception that Hypothermia (when the core body temperature falls below 35°C from a normal near-constant of 36.5°C to 37.5°C) is the major risk. In reality the bigger risk to swimmers are effects of physiological changes that occur to the body prior to the onset of hypothermia:

Cold Shock

Swimmers can experience a cold shock response for about a minute after entering the water. Rapid skin cooling leads to a gasp reflex and possible hyperventilation. Panic can exacerbate the situation and potentially cause someone to drown by breathing water into the lungs if the head goes underwater or if the swimmer faints through prolonged hyperventilation.

Another cold shock response is that the blood vessels narrow (vasoconstriction) to preserve heat in the body core and protect the major organs. As a result the heart has to work much harder to pump the same volume of blood around the body. For swimmers with an underlying heart problem this additional workload can cause the heart to go into cardiac arrest.

Peripheral Cooling

Vasoconstriction, described above, decreases blood flow to the

limbs. As a result the limbs begin to cool affecting the ability of the nerves and muscles to function as well which ultimately leads to a loss of controlled and coordinated movement and the ability for the swimmer to maintain an airway by keeping their head above water (known as swim failure).

Cold water tolerance in individuals varies depending on a number of factors including: • Age • Body physiology • Health

- Ability to generate body heat.

Warm Water

Hyperthermia is an elevated body temperature which occurs when the body produces or absorbs more heat than it can dissipate, leading to heat stroke and unconsciousness.

Given the climate, problems associated with cold water swimming are generally perceived to be the more significant risk when swimming in the UK. However, the use of wetsuits can increase the risk of hyperthermia, particularly when the air temperature is warm and swimmers stand around for prolonged periods in zipped up wetsuits waiting to swim.

Wetsuit Use

International Triathlon Union (ITU) implement the following rules in competition:

Age-Group Athletes

Swim Length	Forbidden above	Mandatory Below
Up to 1500m	22 degrees	14 degrees
1501-3000m	23 degrees	16 degrees
3001-4000	24 degrees	16 degrees

NB The final decision will also depend on air temperature & adjusted down if very cool.

To help mitigate the risks posed to swimmers by water temperature and extreme weather conditions whilst training at Ardingly Reservoir Club, the following good practice guidelines will be implemented:

Minimum water temp of **13 degrees** required for training sessions & wetsuit required at all times unless specifically announced.

Acclimatization: encouraging swimmers to acclimatize to the water temperature by immersing themselves slowly and putting their faces in the water so they minimize the effects of cold shock, regulate their breathing and prepare their bodies for exertion in a controlled way.

- **Shelter:** providing a facility to provide shelter to swimmers pre and post swimming.

- **Announcements:** Making regular announcements about either keeping sheltered and warm prior to swimming in cold conditions or keeping wetsuits unzipped and pulled down until just before entering the water and ensuring they stay well-hydrated in warm conditions.
- **Water:** All members to bring water/sports drink to keep hydrated & avoid cramping particularly in warm conditions.
- **Swimmer Assessment:** Having well-briefed safety personnel that are able to recognize the signs of a swimmer getting into difficulty. Swimmers can continue to cool down on exiting the water if the air temperature is cool particularly after evening and/or early season swims.

In the event of the water temperature being above [24 degrees](#), Club Members may swim using a tow float instead of a wetsuit. Club announcements will be made on the day following verification of the water temperature.