## When Are You Cold

## Supplement to ITLS, Improving Patient Assessment

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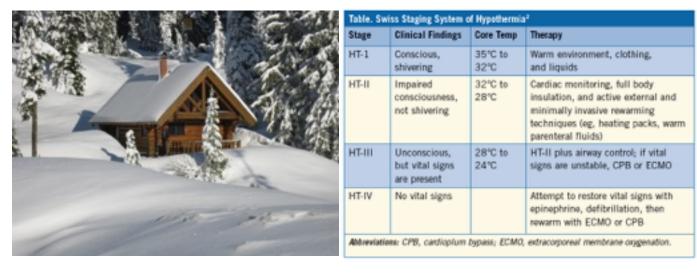


Photo taken by Peter Symons EMT-P Crows Nest Highway Jun 6 2012

The ITLS eighth edition text discusses in many chapters the relationship between trauma and hypothermia. There are situations where hypothermia is in it's self the trauma and having an understanding of hypothermia is important. Getting an accurate assessment, including temperature can be critical to the treatment and transport of the hypothermic patient. Getting a temperature via hypothermic thermometer is the gold standard, but how often is this possible in the field?

This ITLS supplement will review the commonly used terminology from various agencies and compare them to a non thermometer based assessment system. The Swiss Staging system<sup>1</sup> is widely use in many countries and has been sited in many texts, including the New England Journal of Medicine<sup>2</sup>, and European Resuscitation Council, Cardiac arrest in Special Circumstances<sup>3</sup>.

WHEN ARE YOU COLD ITLS SUPPLEMENT 1

<sup>&</sup>lt;sup>1</sup>Durrer B, Brugger H, Syme D. The medical on-site treatment of hypothermia:ICAR-MEDCOM recommendation.

<sup>&</sup>lt;sup>2</sup> n engl j med 367;20 nejm.org 1930 november 15, 2012

<sup>&</sup>lt;sup>3</sup> Resuscitation 95 (2015) 148-201

## **Terminology**

The most common terminology used to describe hypothermia in the prehospital setting has been Mild, Moderate and Severe. There is however, a variety of opinions as to what temperature those terms might represent. Some systems use the cessation of shivering as the determinant between moderate and severe, while others use shivering cessation as the difference between mild and moderate.

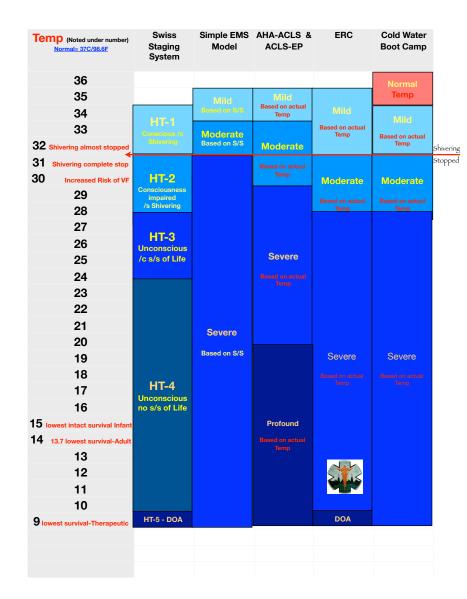
Chart 1 shows the variation of terms with the approximate temperature used to describe the hypothermia. The Chart includes the following from left to right

The Swiss Staging System, an EMS protocol example, AHA (American Heart Association) as seen in the ACLS and ECLS -EP Text,

ERC (European Resuscitation Council) as noted above.

Cold water boot Camp (Dr. Gordon Geisbrecht, PH.D) which is recognized by a number of government and non-government agencies in Canada and the USA.

The terms of mild, moderate and severe lose meaning without a clear reference point. Expanding those terms to Mild, Moderate, Serve and Profound may be very



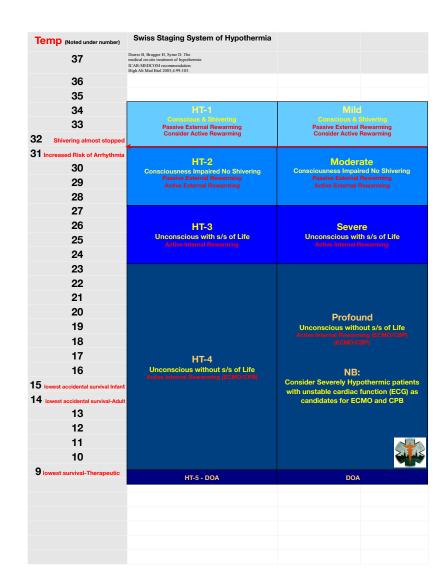
helpful in determining the best treatment and transport destination for the patient.

WHEN ARE YOU COLD ITLS SUPPLEMENT 2

## The Swiss Staging System Adapted to Common Terminology

By using the Swiss Staging System, and understanding how the HT terms could be converted to terms more commonly used, the treatment plan can be tailored to meet the patient needs.

Extracorporeal Membrane Oxygenation (ECMO) and Cardiopulmonary Bypass (CPB) are treatments that may enhance the survivability of the Profoundly Hypothermic patient or the Severely Hypothermic patient with unstable cardiac function, HT-2 and HT-3. Moderate and Severely Hypothermic patients with preserved cardiac function, HT-2 and HT-3 may be able to be treated at a centre that has high quality resuscitation equipment but lack ECMO or CPB.



Swiss Staging system provides the ITLS provider with a more accurate means of assessing the patient temperature when a thermometer is not available.

WHEN ARE YOU COLD ITLS SUPPLEMENT 3