Norwegian scientists study hypothermia

Norwegian scientists may have ruled out insufficient oxygen supply to the heart as a critical variable in whether a mammal's heart survives hypothermia.

Writing in the July issue of the American Journal of Physiology-Heart and Circulatory Physiology, researchers found no significant difference in the amount of oxygen available to the heart between rats exposed to one hour of severe hypothermia and rats exposed to five hours. However, the rats in the five-hour group were more likely to experience fatal heart failure during re-warming.

The finding is important since re-warming of victims of severe hypothermia nearly always causes heart failure of varying severity, but little is known about why that occurs, said anesthesiologist Torkjel Tveita, the study's senior researcher.

"We still do not know the pathophysiological mechanism of hypothermia, which is necessary to developing the best way to re-warm hypothermia victims," Tveita explained.

The research was conducted by scientists from the University of Tromsø and University Hospital of North Norway.