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## Where can I find more information?

For information on cardiac arrest support groups:

**-Sudden Cardiac Arrest Association**

[www.suddencardiacarrest.org](http://www.suddencardiacarrest.org)

For information on cardiac arrest and therapeutic hypothermia:

**-Center for Resuscitation Science**

[www.med.upenn.edu/resuscitation](http://www.med.upenn.edu/resuscitation)

For information on cardiac arrest, CPR and current guidelines:

**-American Heart Association**

[www.heart.org](http://www.heart.org)



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## Questions and Support?

Please feel free to ask the doctors and nurses if you have any further questions regarding your loved one's post-arrest care, including TH.

Support is available from our chaplain services or social services.

Support from family and friends may also be helpful.

It is also important to remember to take care of yourself while waiting for your loved one to recover.

Please remember to get plenty of rest, sleep and proper nutrition.

This process will be a marathon, not a sprint.



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# Therapeutic Hypothermia



**Caring for a loved one during hypothermia.**

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# Therapeutic Hypothermia

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## What is Therapeutic Hypothermia?

Therapeutic hypothermia (TH) is considered an important therapy for a comatose survivor of cardiac arrest—a patient whose heart stopped beating, was restarted during cardiopulmonary resuscitation (CPR), and who remains minimally responsive immediately after the event. It is endorsed by the American Heart Association and is performed by lowering the body temperature to 32-34°C (approximately 90 to 93°F). Normal body temperature is 98.6° F or 37°C.

## How Does Hypothermia Help?

TH works by protecting the brain and other vital organs. It lowers oxygen requirements, decreases swelling, and limits the release of toxins, which can cause cells to die. TH has been shown to improve neurological outcomes and increase survival in patients who remain in a coma after successful CPR.

## What are the Risks to Cooling?

There are few risks associated with mild TH. On the other hand, this therapy offers important benefits to survival and neurological recovery. Your loved one will be monitored closely by the health care team and side effects will be quickly managed.

## What to Expect?

Close monitoring will be provided in the intensive care unit (ICU). When the patient first arrives in the ICU, please allow at least 90 minutes for the doctors and nurses to provide immediate necessary care. Your loved one will be kept unconscious with sedation and other medications and will be on a breathing machine. Vital signs such as temperature, blood pressure and heart rate will be continuously monitored. To provide the highest level of care during TH, many blood tests and procedures will be performed during the first 24-48 hours.

## How is TH initiated and maintained?

The cooling process can be performed in a variety of different ways including: chilled intravenous fluids to initiate TH; cooling wraps applied to your loved one's chest and legs to maintain body temperature at 32-34°C; and ice packs placed on the groin, neck, or under the arms. Medication will be given, if necessary, to prevent shivering, which can slow the cooling process.



## When Should Cooling Begin and How Long Will it Last?

Cooling should begin as soon as possible after a patient has survived a cardiac arrest. The therapy will be continued for approximately 24 hours. Your loved one will be re-warmed slowly over roughly 12 hours until the body temperature returns to normal (37°C). When the re-warming process nears completion, some of the sedating medications will be turned off.

## Recovery:

Recovery occurs on an individual basis. Some patients wake up very quickly after re-warming is complete. Some patients may take longer than 72 hours to begin waking up. It is important to remember that cardiac arrest is a very critical illness, and there is no guarantee that recovery will be possible. In general, no decisions should start to take place until at least 72 hours from the time your loved one's heart was restarted and re-warming complete.

