

## Therapeutic Hypothermia

**WebQuest Description:** This WebQuest will teach you how to care for a patient with return of spontaneous circulation (ROSC) by using therapeutic hypothermia. The lesson will provide videos as well as website references that you can learn from. You will then take part in a discussion with your peers on the topic, and you will have a graded assignment to assess your knowledge in the area.

**Grade Level:** College / Adult

**Curriculum:** Professional Skills

**Keywords:** Therapeutic Hypothermia, return of spontaneous circulation (ROSC), Cardiac arrest, Targeted temperature management (TTM)

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### Introduction

As nurses, many of you have taken basic life support (BLS), and/or advanced cardiac life support (ACLS) classes. The goal of these classes is to teach healthcare providers how to save the life of a patient that is in cardiac arrest, but do you know what to do after the return of spontaneous circulation? That is where therapeutic hypothermia comes into play! In order to preserve neurological function as much as possible after the fact, it is vital that all nurses understand how to induce hypothermia correctly. This unit of instruction will teach you this vital information, and may help you to save a life. This WebQuest is intended for use by all registered nurses.

### Tasks

In this WebQuest you will learn how to treat a patient following cardiac arrest and return of spontaneous circulation. You will watch the videos, and read the articles in the process section in order to obtain the knowledge needed to complete the course. The learning outcomes are as follows: 1: Nurses will be able to identify when therapeutic hypothermia should be used. 2: Nurses will be able to identify three cooling processes. 3: Nurses will know how to care for the patient during the initiation phase. 4: Nurses will know how to care for the patient during the maintenance phase. 5: Nurses will know how to care for the patient during the rewarming phase. The learning outcomes will be measured through the use of a quiz, accounting for 40% of the overall grade, as well as a discussion post accounting for 60% of the overall grade. Please see the grading rubric located in the "evaluation" section of this website for discussion post scoring. Please contact me at [evdecker@yahoo.com](mailto:evdecker@yahoo.com) for any questions or concerns throughout the unit of instruction.

### Process

Why should I learn about therapeutic hypothermia? Please start by watching the video below describing one man's experience with cardiac arrest and how therapeutic hypothermia affected him. This article discusses case studies showing the results of patients who have used therapeutic hypothermia. How do I care for a patient using therapeutic hypothermia? Next, watch the youtube video below which discusses how to use therapeutic hypothermia in post cardiac arrest care. This website gives an overview of the treatment protocols, cooling methods, as well as many important supportive therapies. Please take the time to read through each tab to gain insight on the topic. This article includes a checklist that can be used during the initial cooling or induction phase, as well as the maintenance phase and re-warming phase and the post-warming phase. Other important information: Click here to view the history of medically induced hypothermia, as well as to view results from studies that have been conducted. It is also important to know that there are some exclusion criteria that could impact the ability to utilize therapeutic hypothermia. This article highlights those exclusion criteria and reviews the steps used to successfully cool a patient.

### Evaluation

Please log in to the Chalkup website found below and participate in the discussion topic labeled "Discussion post." This discussion will account for 60% of your grade and will be graded based on the rubric below. In addition, please complete the following short quiz, which will account for 40% of your grade for this course. Click here to begin the quiz.

Category and Score	Exemplary	Mastery	Developing	Incomplete	Score
1: Initial discussion post	Critically examines the discussion question and answers the question completely. (40 points)	Critically examines most of the aspects of the discussion question with minor errors. (30 points)	Answers some of the initial discussion question. Does not provide insight or only gives minimal input. (20 points)	Student does not answer the initial discussion question at all. (0-10 points)	40

Category and Score	Exemplary	Mastery	Developing	Incomplete	Score
2: Responses to peers	Student responds to three or more classmates using evidence based resources. (40 points)	Student responds to two peers using evidence based resources. (30 points)	Student only responds to one peer using evidence based resources. (20 points)	Student does not participate in discussion by responding to peers or student doesn't use evidence based resources. (0-10 points)	40
3: Formatting, organization, writing style.	Uses clear, error free language. Sources are cited using APA format. (10 points)	Very few errors. Sources cited using APA format. (7-9 points)	Multiple errors or sources are not cited using APA format. (3-6 points)	Multiple errors and sources are not cited using APA format. (0-2 points)	10
4: Timeliness of posts.	Initial post submitted by Wednesday 11/15/17. Responses are submitted on at least two different days, no later than Sunday 11/19/17. (10 points)	One post was submitted at least one day late. (7-9 points)	Two of the three posts were submitted at least one day late. (3-6 points)	None of the posts were made on time. (0-2 points)	10
				Total Score	100

## Conclusion

Thank you for participating in this unit of instruction. If you have completed the process and evaluation section of the class successfully then you are finished with the class. I hope that you were able to take information away from here that will allow you to successfully use therapeutic hypothermia if the need arises.

## Teacher Page

Thank you for your interest in this WebQuest! I have enjoyed putting it together, and hope that you have learned from it as well. This webquest should be completed within one weeks time. I suggest starting it on a Monday and ending Sunday night per the grading rubric.

### Standards

The learning outcomes are as follows:1: Nurses will be able to state when therapeutic hypothermia should be used.2: Nurses will be able describe three cooling processes.3: Nurses will know how to care for the patient during the initiation phase.4: Nurses will know how to care for the patient during the maintenance phase.5: Nurses will know how to care for the patient during the rewarming phase.

### Credits

Aguinaga-Meza, , M. (2015, May 29). 5/29/2015 1 Therapeutic Hypothermia: Where Do We Stand? Retrieved November 9, 2017, from [https://www.heart.org/idc/groups/ahaecc-public/@wcm/@gra/documents/downloadable/ucm\\_474825.pdf](https://www.heart.org/idc/groups/ahaecc-public/@wcm/@gra/documents/downloadable/ucm_474825.pdf)Koyfman, A., & Long, B. (2017, February 23). Targeted Temperature Management (Therapeutic Hypothermia). Retrieved November 09, 2017, from <https://emedicine.medscape.com/article/812407-overview#a5>Nolan, J. P., Morely, P. T., Vanden Hoek, T. L., & Hickey, R. W. (2017, April 24). Therapeutic Hypothermia After Cardiac Arrest An Advisory Statement by the Advanced Life Support Task Force of the International Liaison Committee on Resuscitation. Retrieved November 16, 2017, from <https://pdfs.semanticscholar.org/dd55/2d1474b45eb8e209cbbf7b11cb1f90ccb13b.pdf> Ryan Avery, K., Oâ€™Brien, M., Daddio Pierce, C., & Gazarian, P. K. (2015). Use of a Nursing Checklist to Facilitate Implementation of Therapeutic Hypothermia After Cardiac Arrest. *Critical Care Nurse*, 35(1), 29-38. doi:10.4037/ccn2015937Therapeutic Hypothermia after Cardiac Arrest General Guideline . (2014, March 12). Retrieved November 16, 2017, from <https://www.med.upenn.edu/resuscitation/hypothermia/documents/MassGeneralHospital3.12.14.pdf> Therapeutic Hypothermia for treating sudden cardiac arrest patients. (2014, February 13). Retrieved November 09, 2017, from <https://youtu.be/4KFZ4eQBz3o> Zach's Story - Saved From Sudden Cardiac Arrest With Therapeutic Hypothermia. (2013, December 12). Retrieved November 09, 2017, from <https://www.youtube.com/watch?v=Ku5QMqGszB4>

### Other