

Modern Scientific Advance Best Shot At Success For Boys Trapped In Thai Cave



By *Jamie Wells, M.D.* — July 5, 2018



Credit: Pixabay [1]

As the world remains captivated by the fortuitous discovery of the [12 boys and their football coach](#) [2] found alive in a deep-seated cave in Thailand, the initial feelings of exhilaration are now tempered by worry as their journey out proves more complicated than one could ever imagine. With all of the fears that tend to consume our culture over minute risks, this problematic, but hopeful rescue effort is a powerful reminder that nature will always be our greatest adversary. And modern medical and scientific advance will support the best outcome possible.

Despite the mounting challenges, among them dangerous weather patterns, treacherous terrain, inexperienced and weakened young boys, it is current day understanding, innovation and progress on innumerable fronts that will contribute to the success of this mission.

Their medical status upon discovery

For nearly ten days, the team and their coach were without food and minimal water which they acquired via drips from crevices between rocks. Restricted in their mobility and in darkness under wet conditions, they were incredibly resilient in their ability to combat likely escalating fear and panic to sustain themselves. Wearing shorts and soccer jerseys with exposed extremities, it is unclear how they managed the changing temperatures and navigated vermin.

All told, these realities can contribute to muscle atrophy, diminished strength, malnutrition, electrolyte imbalance, dehydration, weakness, fatigue, various wounds and questionable mental status changes. It is reported that the [boys heard birds and kids](#) [2] from above, so now existing chimneys are being explored as alternative escape routes. However, it is uncertain if these observations were actually hallucinations. Delirium, a transient acutely distressed state of mind,

can occur when someone is disoriented by a lost sense of time without a capacity to discern night from day, in [hypothermia](#) [3], [heat stroke](#) [4] or [hypoxic \(low oxygen\)](#) [5] conditions, for instance. The environment in the wild can bring about a host of problems. For example, such constant high stress can weaken a person's immunity, impair their sleep, even fluctuate their blood sugar.

How modern medicine and science is combating these contributing factors

Without food for that long and such impaired ambulation, it is quite amazing how weakened any one of us can become; so safely refeeding, rehydrating and improving the muscle breakdown is a heroic task when time is of the essence as it is here. Done too precipitously, harm can result.

But, the good news is that we know that, so we can implement measures to prevent untoward effects. It is also important to appreciate that this population is more resilient than given credit for and ideally is replete with general good health and fitness being that they are a soccer team. It is likely that they lack a host of co-morbidities which would only introduce more complexity to their situation. Simultaneous, multi-prong approaches are underway to optimize their physicality to assist in their short- and long-term survival. Attempts to maintain communication with parents and loved ones will aid in assuaging fears and tend to their mental health needs.

This is a marathon, not a sprint.

Medications to stave off infection, wound care and temporary solutions to improve sanitation are paramount - especially if they will be sheltering in place for months under such a rainy season. With a protracted stay, managing sewage from bodily functions will be a necessary step to prevent spread of disease. Such mechanisms for maintaining and restoring health have been delivered and are continuing to be sent in to them. Oxygen is being pumped into the cave pocket dwelling. These proactive endeavors will empower them should they require being reactive to expected dynamic changes.

The luck of the times

Finding the trapped team, stabilizing and optimizing their well-being and negotiating best options to get them home are testaments to modern advancements in tracking technology, comprehending weather patterns to a myriad number of medical and scientific disciplines. Practice drills, continuous pumping out of water and coordinated evacuation and communication systems utilizing a global, concerted effort is miraculous in its undertaking when fashioned for such a worthy cause.

Let's not forget the many trips the well-equipped Navy SEALs divers and medics are enduring and achieving when they must traverse [2.5 miles](#) [2] in and out of the cave labyrinth's dark, muddy, tortuous canals often mostly filled with water and without visibility through narrow, flooded spaces that fit one human with gear to reach the boys and also deliver to them vital goods they had in tow. It takes [6 hours](#) [2] to get to their destination and 5 hours to trek back out as their target point is 0.6 miles striking distance from the top of the mountain. It is arduous, often against forceful current.

This could not have been conceivable in the past.

Though this channel of swimming out is a perilous one for the soccer players given most don't know how to swim and have never been trained to dive, education is already underway and a

variety of methods are being scrutinized to bring them to safety. Taking very seriously respecting nature's fury will be the rescuers best path to a triumphant conclusion. It is important to realize that panic and fatigue can pose a [very real danger for drowning](#) [6] under such circumstances, even for the most seasoned diver. It can create a hazard for the rescuer and the child they are pulling behind them. They know this and are including fixes in their plans so as to avoid such negative consequences entirely (e.g. one at a time to avoid backlog, multiple positions for checkpoints).

Cautious optimism

The precarious state of this evacuation is of very real concern. Those expert in such missions are trained, then trained again, then tested and re-tested all to prepare for this eventuality. Their dedication and willingness to put themselves in harm's way to save another life demonstrates the best of humanity. In concert with medical and scientific advances, nature is facing a formidable opponent. All the while, the world is sending its prayers, resources and know-how. Together, it will hopefully be enough to close the chapter by bringing elation back to this story.

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Links

[1] <https://pixabay.com/en/cave-diving-palau-pacific-blue-1154294/>

[2] <https://www.cnn.com/2018/07/05/asia/thai-cave-rescue-intl/index.html>

[3] <https://www.acsh.org/news/2017/03/13/snowstorm-%E2%80%98stella-say-no-hypothermia-and-frostbite-10991>

[4] <https://www.acsh.org/news/2017/09/15/why-florida-nursing-home-death-count-so-high-after-hurricane-irma-11829>

[5] <https://www.acsh.org/news/2017/06/14/fighter-pilot-hypoxia-isnt-just-f-35-issue-11419>

[6] <https://www.acsh.org/news/2017/05/24/how-we-drown-not-movies-11318>