

Being young improves survival odds in cold water

August 11 2011, By ALICIA CHANG , AP Science Writer

(AP) -- The 12-year-old boy who was rescued after spending 15 minutes or more in the cold Pacific likely survived because of his age, among other factors, experts say.

Charles "Dale" Ostrander was visiting the southwest Washington coast with his church youth group last Friday when he was swept out by a riptide. [Rescuers](#) who pulled him out said he had no pulse and his face was pale.

So how did he survive?

Studies of near-drownings in [cold water](#) have found that survival depends on many factors including a person's age, [water temperature](#), time spent underwater and how fast CPR is given.

"He's young and healthy," said Dr. Mark Morocco, an emergency room doctor at the Ronald Reagan UCLA Medical Center in Los Angeles. "Your chances of surviving are better if you're young."

After people get over the initial shock of being plunged into cold water, they generally can survive for a certain period before getting exhausted or falling unconscious.

According to the National Weather Service, the water temperature at the time was around 56 degrees. People generally can survive in that water temperature for about half an hour before their muscles get weak and

they lose strength. There's also risk of [hypothermia](#), which occurs when the body loses heat faster than it can produce it, leading to a dangerously low body temperature.

Kids tend to be more resilient than adults. Scientists point to an innate response that is triggered when people are plunged into cold water. The [heart rate](#) slows down and blood is diverted to the brain and other core organs. This so-called diving reflex is more pronounced in children, allowing them to better survive in frigid water. It's unclear how much this might have played a role in Ostrander's case.

It's unclear how long Dale was underwater. A rescuer said he was pulled from the water 15 minutes after crews were dispatched. Early in his ordeal he managed to get on the boogie board of a girl who paddled over to him, but he disappeared after a wave knocked him off.

Swift treatment helped. Morocco credited the rescuers for continuing resuscitation efforts even though Ostrander had no pulse and appeared dead.

"This is a perfect golden hour case," he said, referring to a brief window in medicine in which lives can be saved with prompt treatment.

In 1975, an 18-year-old was underwater for 38 minutes after driving off the road and into an ice-covered pond in Michigan. Paramedics initially thought he was dead, but the man eventually woke up 13 hours later in a hospital. Morocco said medical literature cites at least one case in which a person survived after being submerged for up to an hour.

"Whether or not it was a miracle depends on the details," said Dr. Paul Auerbach, who teaches emergency medicine at Stanford School of Medicine.

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