

Can we drink saltwater?

1. Before we start, let's think about

- (1) What will make us dehydrated?
- (2) What will happen if we are dehydrated?
- (3) Can you actually drink your own pee? (<https://www.youtube.com/watch?v=axVPg5EtvKs> from the 5:08)
- (4) Can we drink the salt water directly? (<https://youtu.be/jdOjB0j329g?si=EctlpE9y4goZNTKL>)

2. What would happen if we drank salt water directly?

- (1) The danger in drinking saltwater lies at the _____ level. To maintain their structural _____, your body's cells match the _____ of certain ions, like salt, within their membranes with the concentration outside of them — in your _____, for instance.
- (2) Seawater is about four times saltier than your blood. So when it's ingested, the fluid outside your cells becomes much saltier. To _____ the resulting _____ difference, water flows out of your cells.
- (3) Your _____ use this water to begin removing the _____ of salt — but they require much more freshwater to actually flush it all out.
- (4) Consuming enough seawater without any freshwater can lead to _____.
- (5) The effects can be _____ as the body's cells lose water and contract. This can cause tissues to shift and _____ and fluids to collect in critical organs.

3. How can we create the water from salt water? - Aristotle's two models of Seawater desalination

- (1) One is _____, and relies on heating seawater to yield vaporized condensed freshwater.
- (2) The other is _____, which uses pressure to push seawater through a salt-filtering membrane — a process Aristotle documented with a sealed wax jar.

4. Which one is better and why?

5. WRITE AND SPEAK. If you are sailing in the ocean alone, and you need freshwater, what can you do?

- How to turn the saltwater into freshwater?
- What kind of food should you avoid eating?
- Shall you drink your own urine?
- Can you get some drinkable water from somewhere else?

ANSWERS

2.

Cellular, integrity, concentration, bloodstream

relieve, pressure

Kidneys, excess

Salt poisoning

Devastating, rupture

3.

Thermal

reverse osmosis