

Frequently Asked Questions

1. How does QuikClot work?

- A. QuikClot works by providing a hemo-concentration effect in the blood that is exiting a wound. The body's natural clotting process is accelerated by the increased concentration of platelets and clotting factors at the wound site.

2. What causes the hemo-concentration?

- A. QuikClot's main component material is called an adsorbent, it is actually a synthetic derivative of volcanic rock. It has many pores, internal and external, which capture and hold the water molecules that make up the majority of the blood. The ability to attract and hold the water molecules is due to electrostatic forces that are present in the pores of QuikClot material when it is dry and are liberated when the QuikClot is saturated. These are the same types of forces that cause static cling, but in the formulation of QuikClot, they are much stronger. Water molecules are held very strongly.

The clotting factors, proteins in the blood, and the cellular components of the blood are not attracted nor held by the QuikClot, because they are simply too big to fit in the pore structure of the QuikClot material. This leaves them free to do their work at the wound site.

3. Is there a chemical reaction involved?

- A. No, the interaction of the QuikClot and the water in the blood (called *adsorption*) is purely physical in nature. Upon application, QuikClot rapidly attracts water molecules, and almost instantly the internal pores are filled. There are no chemical changes to the blood, the water, or the QuikClot. Since the reaction is physical, and not biological or chemical, there is almost no chance for an allergic reaction to occur.

4. Are there any side effects?

- A. The adsorption of water into the QuikClot granules can cause an instantaneous release of heat, called an *exothermic reaction*. The release of heat stops when the pores of the QuikClot become filled, which due to QuikClot's strong attraction for water, is only a second or two.

5. What causes the heat?

- A. The heat is generated by a phenomenon called the *Heat of Adsorption*. The electrostatic charge in each pore of the QuikClot, which attracts the water molecules, is released when the pore is filled. This liberated energy is in the form of heat.

6. How much heat is generated?
 - A. There are many variables that affect the heat generated when QuikClot is used. It's been our experience that the exothermic reaction with blood generates less heat than water alone. Under controlled experiment conditions, the highest temperature observed was 140 degrees F.

7. What care should be taken when using QuikClot?
 - A. Following the QuikClot package instructions avoids or minimizes the effects of exothermic reaction. It is important to use just enough QuikClot to stop the bleeding that is present. Dry QuikClot granules should be brushed away from the top of the wound area before applying irrigation solution. When removing QuikClot from a wound, the volume of water used to irrigate should always be larger than the volume of QuikClot. Flooding the QuikClot granules rather than slowly applying small streams of irrigation solution minimizes the heat produced.

8. Does QuikClot have FDA approval?
 - A. Yes, QuikClot received 510(k) clearance from FDA to market QuikClot over the counter (NON-prescriptive) in March of 2002. The 510(k) number is k013390, and you can view the FDA decision at the following website by plugging in the 510(k) number:
<http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm>

9. What is the Shelf Life, and are there any special storage instructions?
 - A. An unopened pack of QuikClot has a shelf life of three years. The only storage instruction is to not leave a pack of QuikClot in direct sunlight for extended periods of time. If you cover the pack, there is nothing to worry about. QuikClot is heated to 140°F to 155°F during the packaging process, and therefore can withstand high temperatures. QuikClot can also be stored in temperatures below freezing.

10. Can I save the unused portion and use it later?
 - A. No, once the package has been opened, the QuikClot granules start to adsorb the moisture from the air, thus rendering them useless. You can, however, treat more than one injured person, or multiple injuries on the same person with one pack of QuikClot.

11. How much do I need to use? Why is the packet 3.5 ounces?

A. A full packet of QuikClot is more than enough to treat a complete bisection of the femoral artery and vein. This was the testing performed by the U.S. Navy, and the reason that the military has deployed QuikClot with over 50,000 of our U.S. troops. The basic rule is to slowly pour QuikClot onto the wound until you see a layer of QuikClot on top of the injury.

The packet is 3.5 ounces so that you are assured to have enough to treat any size wound. You can treat multiple wounds on multiple victims if the injuries are not as severe. We are thinking about packaging QuikClot in smaller quantities, but it will not change the cost of the product very much. Most of our cost comes from the packaging and sterilization process.

12. How long can I leave QuikClot in the wound, and how do I remove it?

A. Since QuikClot is inert after it has adsorbed the water in the blood, it is safe to leave in the wound for days if necessary. The clot formed is so strong that it is possible for a person to be moved and/or walk around during this period. QuikClot will not be absorbed by the body, but since it doesn't change in shape, size or consistency, it is very easy for the attending medical personnel to irrigate and/or suction it out of the wound.

Contact your distributor/manufacturer's representative for more information:

Best Glide Aviation Survival Equipment, Inc.

P.O. Box 201900

Austin, Texas 78720

512-834-9971

www.bestglide.com

marketing@bestglide.com