

# The Pros and Cons of Ports

Ports can be controversial due to the danger they pose for immune deficient patients, but in some cases, they may be warranted.

By Abbie Cornett



**IMMUNE DEFICIENT PATIENTS** and others who are treated with immune globulin (IG) receive this therapy in one of two ways: intravenously or subcutaneously. IV infusions can be from temporary peripheral IVs (the type typically performed when the IV catheter is inserted at each visit and removed after use) or permanent central lines.

A Picc line is a type of temporary central line inserted through a peripheral vein and may be used for several days and up to several weeks when properly maintained. Another temporary central line is a larger catheter venous line inserted directly into a large vein under the collarbone or in the neck and placed all the way to the heart. This type of central line and the Picc line can be inserted at the bedside. There are two types of permanent central

lines, both of which are surgically implanted. One is a large catheter that exits the skin with the end of the catheter available to access for taking blood or administering IV medications. The other, also surgically placed, is a port.

Traditionally, IG therapy is begun intravenously (IVIG), and if difficulty is experienced with accessing the vein, subcutaneous IG (SCIG) infusions are often recommended. More recently, though, immunologists recommend beginning SCIG from the onset of therapy. In some instances, instead of SCIG, there is an option of having a port installed, which can be controversial. Patients considering a port should be familiar with its advantages and downsides.

## What Is a Port?

A port is a small device that is surgically implanted under the skin of a patient. The port has a “hollow space inside that is sealed by a soft top,” which is connected to a small catheter that is inserted inside a vein leading to the heart.<sup>1</sup> There are many different types of ports, so a patient’s physician will suggest the appropriate one.

## Placement of a Port

The port is usually placed on either side of the upper chest below the collarbone. In general, the preferred veins for central access are the right internal jugular, left internal jugular, right subclavian and left subclavian — in that order.<sup>2</sup> However, the doctor will determine where the best placement of the port is depending on what is best suited for a patient’s treatment.

## How Does a Port Work?

A port works like an IV, but instead of inserting a needle into a vein, a special needle is inserted through the skin into the port so medications and fluids can be given. A port can also be used to draw blood samples and may reduce the time needed to infuse some medications.

## Advantages of a Port

Ports are popular with patients for many reasons. Many times, a patient's peripheral veins have been damaged due to repeated needle sticks and the medications that they receive. A port takes away the need for multiple sticks and can greatly reduce the fear of treatment, especially in children.

Diane Galbavy is an example of a patient whose needle anxiety was affecting the quality of her treatments. Diane was diagnosed with leukemia and a primary immune deficiency in June 2013. When she began her treatment, she was unaware of what a port was; she just knew she hated the repeated needle sticks. At the end of the first year of treatment, her anxiety level had reached a point where she just couldn't imagine going through the stress of getting an IV every 28 days for the rest of her life. Her physician agreed that she should have a port installed. Since getting her port, she doesn't dread her treatment and feels more positive about her condition. She describes her port as "a beautiful present in a little box."

## The Disadvantages of a Port

While ports may be looked upon favorably by many patients because of easy venous access and comfort, they do not come without substantial risks. According to pediatric immunologist Terry Harville, "A port can be a double-edged sword for patients with a primary immune deficiency." He believes this question should be asked: "Is a port for convenience or necessity?" Dr. Harville doesn't recommend a port for his immune deficient patients unless they have no other venous access or they have a co-diagnosis that requires them to receive other forms of IV medication on a regular basis. If there is no co-diagnosis, he recommends they switch from IVIG infusions to SCIG infusions.

Indeed, many physicians believe ports represent a significant concern for immune deficient patients. The American Academy of Allergy Asthma and Immunology's practice guidelines state: "The placement of permanent central venous access solely for the purpose of IVIG administration should be discouraged. Permanent central venous catheters may be associated with thrombotic and infectious complications."

A port provides a direct conduit for organisms into the bloodstream of a patient, which creates the risk of a serious infection. To reduce the risk of infection, sterile techniques must be used when accessing the port. And, this can be a problem because not all medical personnel have been trained in the proper method of accessing ports. Should an immune deficient patient show any sign of infection such as fever after a port has been accessed, Dr. Harville recommends performing blood cultures from the port

and from a different vein and starting IV antibiotics through the port. This would typically require hospitalization until the culture information can be sorted out.

Besides the risk of infection, ports have other disadvantages. They require surgery to place in the vein, and they can cause

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considerable scarring particularly if they have to be replaced or become infected. Further, the vein into which the port is placed is "sacrificed" in order to use it. This means that if the port is ever removed from that vein, the vein can no longer be used again. As noted above, there are a limited number of veins suitable for port placement, and with each port placement, there will be one less available.

While ports don't interfere with normal activity, if a patient plays contact sports that could result in the port being hit, padding over the site may be recommended.

## An Individual Decision

While the placement of a port in immune deficient patients raises many concerns, there are many patients like Diane who find them a wonderful solution. Ports significantly reduce needle anxiety, particularly for children, and provide easier administration of medication when venous access is compromised. In the end, however, the decision to have a port installed is one that must be discussed with a physician who can help a patient decide the best course of treatment. ■

**ABBIE CORNETT** is the patient advocate for *IG Living* magazine.

## Source

1. Your Port Access Advantage. A Brief Introduction to Ports. Accessed at [www.portadvantage.com/patient/about\\_implanted\\_ports.html](http://www.portadvantage.com/patient/about_implanted_ports.html).
2. Navilyst Medical. Port Implantation-Vascular Access. Accessed at [www.navilystmedical.com/Clinicians/index.cfm/114](http://www.navilystmedical.com/Clinicians/index.cfm/114).