

## Refill

The refill feature is one of the benefits of using an iPRECIO® micro-infusion pump. Following the refill procedure properly is necessary to ensure a precise, continuous and trouble free long-term administration protocol.

- Remove the hair from the refilling/injection site and scrub with disinfectant soap and isopropyl alcohol.
- A series of three scrubs with both the disinfectant soap and alcohol is recommended.
- Alternatively, Hibitane®/Nolvasan® surgical scrub and solution may be used.
- Sterility of solutions and pumps must always be maintained as iPRECIO® pumps are designed to contain and infuse solutions for as long as 46 days.
- Sterility must be maintained during first fill, exchange and each subsequent extract/refill procedure.
- Please ensure that the pump temperature is maintained during implantation, fill and re-fill

Refill video

<https://drive.google.com/folderview?id=0B0pySJ1uXUqSX203d114bGsxOG8&usp=sharing>

## Excerpt from FAQ

**Q14) I have difficulties to locate the refilling port and inserting the syringe into the port.**

See details here after.

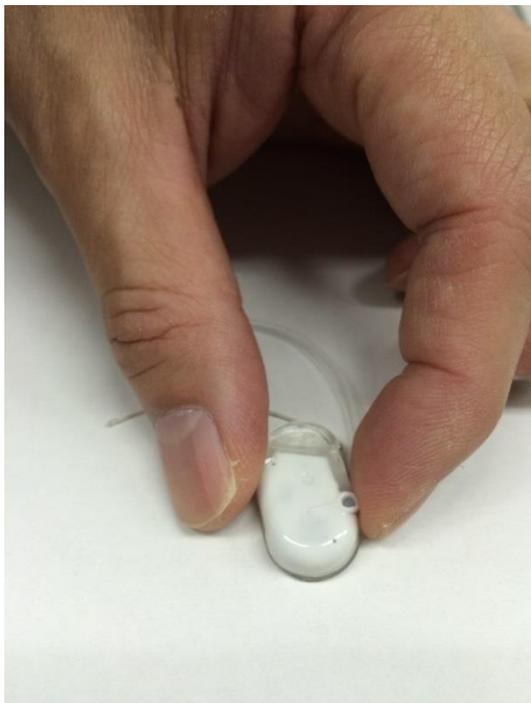
Finding the septum

- Locate the pump and the palpable reservoir in the animal percutaneously. The palpable reservoir will be considered the front of the pump.
- The septum can be located more easily as you will be able to feel it to the left and slightly further back towards the rear of the pump from the palpable reservoir. It's exact position is more easily located from the side of the pump rather than the top. See pictures on next page.
- Once the exact location and size of refill port (septum) is located, center the needle to the middle of the septum port by aligning with the maximum point of the port (from the side) and aim 1 mm in from the maximum point. Take care not to injure yourself with the needle.
- Pierce the septum until the bottom of the port is reached.
- Once you have inserted the needle in through the septum, you may want to withdraw initially to ensure that you are in the refilling port. You will be able to withdraw and feel the reservoir reduce in size. For this to work, sufficient remaining volume in the reservoir is required. When you fill, the reservoir will increase in size.

We recommend you practice filling the pumps before implantation so that you will get good experience of the protocol. You will be able to feel the needle penetrating the septum and also when the needle comes to a rest at the bottom of the port. You will also be able to see the reservoir expanding and contracting with filling and extracting.



You may also want to cover the pump with several layers of tissue to simulate more closely the pump being located percutaneously. With this in-vitro practice technique, you will have more confidence for the locating of septum port and refilling/extraction procedure.

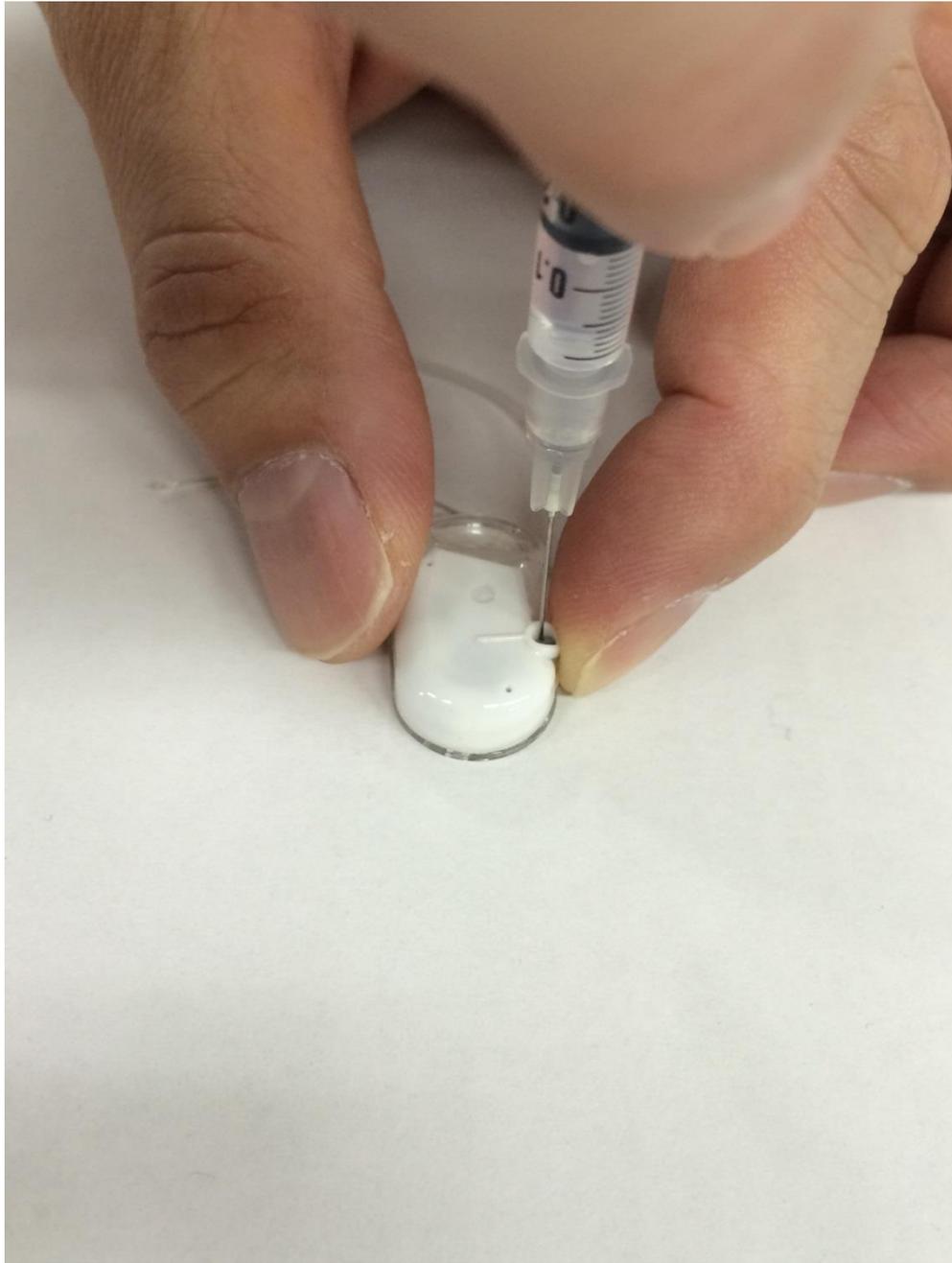


**Locating Septum Port:** Find front of pump where reservoir is located then find septum port. Alignment with the septum port location with reference to it's design; port extending out beyond the pump body makes this easy.



Once the exact location and size of refill port (septum) is located, center the needle to the middle of the septum port by aligning with the maximum point of the port (from the side) and aim 1 mm in from the maximum point. Take care not to injure yourself with the needle. Try to **make the needle insertion perpendicular to the septum plane**. See picture on next page.





The 27 gauge needle is perpendicular to septum plane. Position of the fingers on syringe changed only to display clearly that the needle is straight and in the septum port. Hold the syringe comfortably so that it is possible to locate the middle of the septum as much as possible.

August 6, 2015