

Technical Note

Preventing Damaged Sensors In Blood Pressure Implants

The pressure sensors in DSI's blood pressure implants are delicate instruments and can be easily damaged. Therefore, it is necessary to use proper care when handling the devices. Below are preventative measures to take when handling the blood pressure implants to reduce the possibility of a damaged sensor.

- Handle the implant with care and be sure not to drop it. When moving or handling the implant, always handle it by the body of the device; not the catheter or leads.
- Try not to produce any situations where excessive pressure is placed anywhere along the length of the catheter. The distal pressure-sensing tip of the catheter is especially sensitive and should never be grasped or handled directly. Care should be taken when handling the catheter and device.
- When removing the tip cover, always grasp at the very end of the cover to avoid damaging the catheter tip. If the protective cover is gripped too close to the catheter, it could collapse or crush the lumen of the catheter and cause a sharp increase in pressure. Snapping the protective tip cover off can also cause a sharp change in pressure and may cause a void in the gel. Once the catheter tip covers are removed, they should never be placed back onto the catheter as this can result in damage the pressure sensor.
- When handling and inserting the catheter, always grasp on or behind the overlap section with a proper surgical instrument so the lumen of the catheter does not collapse or become crushed. **DSI strongly recommends using Vessel Cannulation forceps whenever handling the catheter.** For more information on this surgical instrument, please see the Small Animal Surgical Supplies document located on the DSI Support Center.
- When regelling the catheter, be sure to monitor the amount of pressure being applied with a DSI Signal Detector or an AM radio. Please note that there is no audible tone that can be heard with a PhysioTel Digital implant and the audible tone on an HD-S10 implant will not fluctuate at any time when the pressure is changing. Regelling should occur anytime there is a loss of gel in the tip of the catheter. The catheter should be examined after the tip cover is removed and immediately before it is inserted to ensure the catheter tip is filled with gel. If the catheter becomes crushed or kinked during insertion, the catheter should be re-examined for gel loss and regelled if needed. For further instructions on regelling can be found in the DSI Support Center.

- If it is necessary to cut the catheter when removing the implant after use, never use a pair of scissors as this could damage the pressure sensor. Catheters should always be cut with a new scalpel blade at a 45-degree angle to the catheter while cutting away from the device body. The catheter should be cut at no less than 3cm from the device body. DSI recommends removing the entire device and catheter intact, whenever possible, to avoid damage and if it is necessary to return the device in for analysis.

Product Return Information

Implanted devices and contaminated equipment may constitute a biohazard. In order to protect anyone who may come in contact with the contaminated product and comply with national and international transportation regulations, all implants and equipment that come in contact with an animal must be cleaned and disinfected before they are returned to DSI.

Ensure that the devices are well packed, preferably in their original packaging and boxes, and return the devices via a traceable shipping method to prevent losses in transit. Replacement of a damaged pressure sensor may require a fee in addition to the standard device exchange charge.

A detailed procedure for properly returning telemetry devices to DSI is provided on our website: www.datasci.com/policies/returning-products

Contact DSI Technical Support with any concerns or comments regarding the performance of the devices, **prior to returning them**, to allow for proper handling and product investigation.

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