K-9 Safe-Seal Endo Tube
Frequently Asked Questions

How long will this tube last?
The Safe-Seal tube has been used in clinical situations for over seven years without failure or need for replacement. The solid one-piece silicone design will last for years.

Do I need to worry about tube kinking?
The soft, flexible nature of the tube is an extreme advantage. As with all tubes, a right angle bending force could cause kinking. The operator should be aware that the tube should be securely attached to the snout and if using a nonrebreather apparatus, that it should be kept in front of the patient on the table. Kinking has not been a problem in the seven year clinical trials. When using the smallest tube, the tip of the tube is 1/4 inch thick and is therefore more flexible. The shaft of the tube is 3/8 inch diameter and resistant to kinking. As long as the flexible tip is safely inside the trachea, it will not be subjected to bending forces and can not kink.

What about sterilization and cleaning?
The medical grade silicone is autoclavable and resistant to cold disinfectants. Gas sterilization is safe but not necessary. The durable silicone can be scrubbed in the usual fashion.

How many tubes do I need?
Only 3 sizes of tubes are necessary for a small animal practitioner for dogs weighing 10 to 200 pounds. This makes the Safe-Seal Endotracheal tube very cost effective. Its durability gives this tube many years of use.

Will water or fluids leak past the tube during procedures such as dentals?
No. The tube is designed to seal with 10 - 30 centimeters of water pressure in the trachea. Unless positive pressure exceeding this amount is applied in the pharynx, no passage of fluid is allowed to enter the lungs.

How does the tube prevent over pressurization of the lungs of my patient?
The carefully spaced and tapered Blaines are designed to allow excess of 10- 30 centimeters of water to bypass and escape. Thus, if the pop-off valve is accidentally left closed, the pressure will be released and no harm will come to the patient.

What about "dead air" space in small, brachiocephalic breeds?
The tidal volume of a dog's lungs determines if dead air space is a problem. A 20 pound pug with a short nose has roughly the same tidal volume as a 20 pound Whippet with a long nose. The length of the nose is irrelevant. However, dead air space is defined as any part of the tube extending past the front teeth. The only Safe-Seal tube that could possibly have a dead air space problem is the smallest tube. Therefore, a shorter version of the small tube is available.

Who has been using this tube?

Many veterinarians have participated in our trials, including board certified doctors. Some of their testimonials are included in this web site. The response has been overwhelmingly positive. Check them out!

How do I determine the correct size tube to use?

There is tremendous variation in the size of the trachea and larynx between different breeds of dogs. As a general guide line, the small tube will properly fit dogs ranging from 10 - 30 pounds. The middle size tube will usually work for dogs from 25 and up to 80 pounds. The large size tube will work well for dogs from 70 to 200 pounds. A simple rule of thumb is if the tube feels too tight or too loose upon insertion, use the next size tube, smaller or larger as appropriate.

Why do I hear air leakage sometimes when I first insert the tube?

If a patient is "light" when first intubated, he may cough or forcefully expire. The Blaines will release pressure exceeding 10 - 30 centimeters of water. So when first intubated a "honking" sound of this pressure release is normal. When the patient is breathing normally, no leakage will occur. In either case, there will be no leakage during inspiration, so the patient will be receiving all the oxygen and anesthetic the patient requires.

What is the proper method of inserting the tube?

The stylet included with each tube is necessary due to the flexibility of the tube. Insert the tube in the usual fashion and stop inserting while the tube is in forward motion. This will insure the Blaines will seal the trachea and allow excess pressure to escape. Remove the stylet and secure the tube to the snout in the usual way.

Can positive pressure be applied?

Yes, 10 - 30 centimeters of pressure can be applied with the tube in its forward position. If the operator desires more pressure, the tube is merely withdrawn 1/2 inch, the baffles will flip over, and as much pressure as deemed necessary is available.

Why does the Safe-Seal tube cause no damage to the trachea?

There is minimal contact with the tracheal mucosa with the Safe-Seal ET tube and the pressure caused by the bending of the Blaines varies between 1 - 3 centimeters of water. Inflation cuff tubes have a large area of tracheal contact and require up to 30 centimeters of water pressure to seal. If inadvertent movement of the tube occurs, the Safe-Seal tube will rotate and not cause friction damage to the mucosa. The Blaines keep the tip of the ET tube centered in the trachea at all times, thus not allowing pressure points typical of inflation cuff.

Sterilization Recommendations?

Method: Steam sterilize the product using the following parameters after removing all non-autoclavable protective packaging and labeling:

Cycle: High Vacuum, Temperature 270 F (132 C), 4 minutes of exposure
Cycle: Gravity, Temperature 270 F (132 C), 10 minutes of exposure.
Cycle: Vacuum, Temperature 270 F (132 C), 10 minutes of exposure.

I feel that I have to use too much pressure when I insert the tube, is this a problem?

No. After over 6000 procedures performed in trials, no problems have arisen to suggest that this is a problem. The pressure you feel while inserting the tube is created by the bending of the Blaines at the level of the arytenoid cartilages which are very tough. The needed pressure of the Blaines is about 3 centimeters of water. An inflated cuff on traditional tubes exerts 10 - 30 centimeters of water - which is about 10 times the additional pressure in a more sensitive area than the passage of the Blaines through the arytenoids. The amount of pressure or resistance that you feel is similar to the pressure you feel when passing a large stomach tube down the esophagus. Lubrication of the Blaines either with water or KY is beneficial in reducing the friction at the arytenoids.

Why does the Safe-Seal tube not have a Murphy Eye?

A Murphy Eye is designed to allow alternate air flow if the bevel of the tube gets occluded by being pressed against the tracheal wall. This occurs because the traditional tubes are rigid and curved, and because the cuff often inflates asymmetrically, causing the tip to be forced against the inside wall of the trachea. The Safe-Seal tube is straight and flexible. The Blaines (baffles) keep the tip of the tube centered in the trachea at all times. Therefore, the beveled end of the tube cannot ever be forced against the tracheal wall. Seven years of trials on real patients and x-rays show that the beveled end of the tube remains centered and a Murphy Eye is not necessary.