Cat. 50-9000B / 50-9900
PleurX™ Peritoneal Catheter Kit
For Peritoneal Placement Only
Sterile
For Single Use Only

Instructions for Use

USA Rx Only

For product inquiries or technical assistance, please call (800) 653-6827
SafetyGlide is a trademark of Becton Dickinson, Inc.
Filter Straw is a registered trademark of B. Braun, Inc.
BioPatch and Dermabond are trademarks of Johnson & Johnson Corporation.
PleurX, ChloraPrep, Hi-Lite Orange, CareFusion and the CareFusion logo are trademarks or registered trademarks of CareFusion Corporation, or one of its affiliates.
© 2010, 2011, 2012, 2014, 2015, CareFusion Corporation or one of its affiliates. All rights reserved.

CareFusion
75 North Fairway Drive
Vernon Hills, IL 60061 USA
361-33501 • 2015-07

© 2010, 2011, 2012, 2014, 2015, CareFusion Corporation or one of its affiliates. All rights reserved.

Contains phthalates
Figure

(4)

(5)

(6)

(7)

(8)

(9)

(10)

(11)

(12)

(13)

(14)

(15)
PleurX Peritoneal Catheter Procedure

Product Information

The PleurX Peritoneal Catheter consists of a fenestrated silicone catheter with a valve mechanism and a polyester cuff. A barium sulfate stripe runs the entire length of the catheter. The valve is designed to prevent the passage of air or fluid in either direction unless it is accessed with the specifically matched drainage line, access kit, or vacuum bottles provided by CareFusion. The PleurX Peritoneal Catheter is designed exclusively for use with the PleurX vacuum bottle, glass vacuum bottles, and the lockable drainage line for connection to wall suction or portable suction.

PleurX Peritoneal Catheter

![Diagram of PleurX Peritoneal Catheter]

Fenestrations: 30.5 cm, Polyester Cuff: 15.0 cm, Valve: 7.0 cm

Indications

The PleurX Peritoneal Catheter System is indicated for intermittent, long term drainage of symptomatic, recurrent, malignant ascites that does not respond to medical management of the underlying disease, for the palliation of symptoms related to recurrent malignant ascites and for peritoneal placement only.

The drainage line is used to drain fluid using standard wall suction, water seal drainage system, vacuum bottle, or other appropriate method.

Contraindications

Use of the PleurX Peritoneal Catheter System is contraindicated in the following situations:

1. When the peritoneal cavity is multi-loculated, and the drainage of a single loculation would not be expected to provide relief of dyspnea or other symptoms.

2. When there is a coagulopathy.

3. When the peritoneal cavity is infected. The valved peel-away introducer and catheter insertion stylet are not designed for use in the arterial system or as a hemostatic device.

Warnings

Do not put anything except the access tip of the lockable drainage line, access kit, or PleurX Vacuum Bottles into the PleurX Catheter valve since any other device could damage the valve. A damaged valve may allow air into the body or let fluid leak out through the valve when not draining.

Cautions

For single use only. Re-use may result in a non-functional product or contribute to cross contamination.

Sterile technique should be used when placing and draining the catheter.

Care must be taken not to bend or kink the sheath. Damage to the sheath may prevent passage of the catheter.

The fenestrations must be entirely within the peritoneal space to avoid leakage into the tunnel tract. Take patient size, tunnel length, and the catheter length into account when placing the catheter.

The valved peel-away introducer is designed to reduce fluid loss and the risk of air intake, but is not a hemostasis valve. It is not intended to create a two-way seal, nor for arterial use. It will substantially reduce the race of fluid flow, but some fluid loss through the valved peel-away introducer may occur.

Sterility

This product has been sterilized. It is for single use only and is not to be resterilized. Do not use if package is damaged. CareFusion will not be responsible for any product that is resterilized, nor accept for credit or exchange, any product that has been opened but not used.

PleurX Catheter Tray Supplies

Preparation Components

2 Chloraprep® 10.5 ml Applicators with Hi-Lite Orange™ Tint
1 Fenestrated Drape
1 Filter Straw
3 Lidocaine HCl 1%, 5 ml Ampules
1 SafetyGlide Needle, 22 G x 1 ½” (3.8 cm)
1 SafetyGlide Needle, 25 G x 1” (2.5 cm)
1 Blue Wrap

Placement Components

1 PleurX Pleural Catheter, 15.5 Fr
1 Safety Scalpel
1 Guidewire Introducer with Needle
2 Syringes, 10 ml
1 Needle Foam Stop
1 J-tip Guidewire
1 Forceps
1 Dilator, 12 Fr
1 Valved Peel-Away Introducer, 16 Fr
1 Tunneler
1 Catheter Insertion Stylet
Closing Components
1. Tweezer
2. Silk Suture, 2-0 Straight Needle
3. Absorbable Suture, 4-0 Curved Needle

Drainage Components
1. Drainage Line with Lockable Access Tip
2. Needle, 17 G x 1” (2.5 cm)
3. 5-in-1 Drainage Line Adapter
4. Alcohol Pad
5. Valve Cap

Dressing Components
6. Gauze Pads, 4” x 4” (10.2 cm x 10.2 cm)
7. Foam Catheter Pad
8. Self-Adhesive Dressing

General Guidelines
1. Systemic prophylactic antibiotics may be indicated.

2. The procedure for peritoneal placement can be performed using local anesthetic and sedation. However, depending on patient needs, it may be performed using alternative approaches to anesthesia or sedation.

3. The catheter should be placed under image guidance, using all precautions normally used for percutaneous placement of indwelling, tunneled catheters. Care should be taken to identify and avoid contact with vasculature near the guidewire insertion site.

4. Guidewire insertion site selection should be based upon patient anatomy and presentation with consideration given to any possible adhesions or loculated pockets of fluid. The fenestrated section of the catheter should preferentially be placed low in the peritoneal cavity to maximize access to fluid.

5. Consideration should be given to the patient’s ease of access in determining the location of the catheter exit site.

6. The fenestrated end of the catheter may be cut shorter depending on an individual patient’s anatomy. **Note:** Leave at least one fenestration present on the catheter.

7. When using the drainage line, it may be used to drain at a suction level of -60 cm H₂O or less for as long as it takes to drain 2,000 ml of fluid from the abdomen per day. The volume of fluid removed should be based on the individual patient’s status and the risks for over draining, including hypotension.

Suggested Placement Procedure

Proper medical and surgical procedures are the responsibility of the physician. The appropriateness of any procedure must be based upon the needs of the patient. **Figure 3** illustrates the placement of the PleurX Peritoneal Catheter, as described in the following procedure.

**Caution:** Individual patient anatomy, such as thin or weak abdominal wall, may require procedural variations to reduce the risk of leakage around the catheter.

1. Position the patient appropriately to access the desired guidewire insertion site.

2. Identify the appropriate insertion site through which to place the guidewire. The guidewire insertion site is typically lateral to the midline, 6–10 cm below the costal margin, and above the patient’s beltline. Ultrasound can be used to confirm the guidewire insertion site.

3. Identify the location of the catheter exit site, which is usually 5-8 cm superior and medial to the guidewire insertion site.

4. Surgically prep both sites utilizing the ChloraPrep® applicators. **Refer to the ChloraPrep insert for further information.**

5. Place the fenestrated drape with the opening located over the planned insertion and tunneling sites.

**Caution:** Use the filter straw for aspiration only. Do not use for injection.

**Note:** Utilize a filter straw when aspirating Lidocaine into the syringe.

6. Aspirate the Lidocaine HCl 1% into a syringe. Attach the 25 G needle to the syringe and raise a skin wheal. Aspirate additional Lidocaine into the syringe and use the 22 G needle to complete infiltration of the access site and tunnel track. **Refer to Addendum for additional product information.**
such as drapes or towels. Silicone rubber is highly prevent it from coming into contact with surfaces surface contaminants.

Caution: Do not allow the guidewire to inadvertently advance totally within the patient. Ensure that the guidewire exits the proximal end of the needle, dilator, sheath, or stylet prior to and during placement of each component.

Removing the introducer, leaving the guidewire in place.

Caution: If the needle is left in place with the guidewire introducer, damage to the guidewire may result if withdrawn through the needle.

Make a 1 cm incision at the guidewire insertion site.

Make a second 1-2 cm incision 5-8 cm superior and medial to the guidewire insertion site. This incision will be the catheter exit site. Consider the patient’s ease of access in determining its location. (Figure 3)

Note: A smaller incision may provide better security of the catheter.

Note: Take care to ensure that the tunnel track has been anesthetized.

The fenestrated end of the catheter may be cut shorter depending on an individual patient’s anatomy. If desired, cut a portion of the fenestrated end of the catheter by using a scalpel to make a straight cut between fenestrations. Leave at least one (1) fenestration on the catheter.

Attach the fenestrated end of the catheter onto the tunneler.

Caution: Exercise care when handling the catheter to prevent it from coming into contact with surfaces such as drapes or towels. Silicone rubber is highly electrostatic and attracts airborne particles and surface contaminants.

Caution: Use rubber-shod instruments when handling the catheter. Possible cuts or tears can occur if rubber-shod instruments are not used.

Pass the tunneler (A) and catheter (B) subcutaneously from the second incision down to and out through the first incision at the guidewire insertion site. (Figure 4) Continue to draw the catheter through the tunnel until the polyester cuff lies inside the tunnel, about 1 cm (C) from the second incision. (Figure 5)

Disconnect the tunneler from the catheter.

Note: If the cuff is advanced further into the tunnel, it can make later removal of the catheter difficult.

Removing the 16 Fr dilator from the sheath. (Figure 6) Slide the valve over the sheath opening, insert the 16 Fr dilator through the valve, and lock in place using the rotating collar. (Figures 7 and 8)

If using the catheter insertion stylet, follow these instructions (steps 17-22) and continue to step 27.

Caution: Do not use the catheter insertion stylet if the PleurX Catheter has been trimmed to accommodate patient anatomy.

Insert the tip of the catheter insertion stylet through the first fenestration of the catheter (closest to the cuff) and advance it into the catheter toward the tip (away from the cuff). (Figure 9) Ensure that the base of the stylet hub is pushed all the way up against the catheter.

(Figure 10b), such that the tip of the catheter insertion stylet is just past the 3rd to last fenestration near the tip of the catheter. (Figure 10a) Set the catheter and stylet aside.

Note: If placing the catheter over the guidewire, turn the yellow cap counterclockwise to remove it from the stylet. (Figure 11)

Note: For steps 18-20, ensure the guidewire exits the proximal end of the dilator, sheath, or stylet prior to and during placement.

Dilate the insertion site over the guidewire utilizing the 12 Fr dilator. (Figures 7 and 8)

Thread the 16 Fr valved peel-away introducer over the guidewire into the peritoneal cavity. (Figure 11)

Remove the guidewire and dilator as a unit from the sheath by unlocking the rotating collar. Leave the sheath in place. Note: If placing the catheter over the guidewire, only remove the dilator.

Thread the catheter with the stylet over the guidewire and ensure the guidewire is coming out of the stylet hub prior to placing the catheter into the introducer.

Advance the catheter with stylet through the valved sheath all the way until the hub of the stylet is at the top of the sheath. (Figure 12)

Pull the stylet out of the catheter. Continue pushing the catheter into the sheath advancing it until all the fenestrations are within the peritoneal cavity. This can be verified using fluoroscopy as the fenestrations are located along the barium sulfate stripe. Note: If placing the catheter over the guidewire, remove the stylet and the guidewire as a unit out of the catheter.

If not using the catheter insertion stylet, follow these instructions (steps 23-26) and continue to step 27.

Note: For steps 23-24, ensure the guidewire exits the proximal end of the dilator or sheath prior to and during placement.
23. Dilate the insertion site over the guidewire utilizing the 12 Fr dilator.
24. Thread the 16 Fr valved peel-away introducer over the guidewire into the peritoneal cavity.
25. Remove the guidewire and dilator as a unit from the sheath by unlocking the rotating collar. Leave the sheath in place.
26. Insert the fenestrated end of the catheter into the sheath advancing it until all the fenestrations are within the peritoneal cavity. This can be verified under fluoroscopy as fenestrations are located along the barium sulfate stripe.
27. After the catheter has been positioned, crack the sheath handle in half.
28. Peel the non-valved side of the sheath handle partially away from the catheter. (Figure 13)
29. Hold the catheter firmly in position and tear the valve of the sheath from the catheter. Note: It is normal to experience some resistance when pulling the catheter through the slit on the sheath valve.
30. Peel away the sheath while ensuring the catheter remains in place. Adjust the catheter so that it lies flat in the tunnel without any kinks.
Caution: Do not use forceps on the introducer to break the handle and/or peel the sheath.
31. Close the incision at the guidewire insertion site.
32. Close the incision site around the catheter and suture the catheter to the skin taking care not to restrict the diameter of the catheter. This suture is intended to remain in place at least until there is tissue ingrowth around the cuff. Refer to Addendum for additional product information.
Caution: Exercise care when placing ligatures to avoid cutting or occluding the catheter.
Note: After suturing, Dermabond™ Topical Skin Adhesive (not included) may be applied topically over the guidewire insertion site and catheter exit site. This may aid in preventing leakage by assisting in wound closure. Follow the instructions for use provided by the manufacturer.

Drainage Procedure
The drainage procedure can be performed using:
   a) PleurX Vacuum Bottle(s)
   b) PleurX Lockable Drainage Line with glass vacuum bottle(s) or with wall suction
If using PleurX Vacuum Bottle(s), refer to PleurX Drainage Kit Instructions for Use.
Caution: In malignant ascites patients, paracentesis related hypotension is uncommon, but has been documented. Use of IV fluid replacement and/or administration of colloidal agents can reduce the risk of hypotension. Additionally, initial drainage should be no more than 6L in the first 24 hours.

Caution: Potential complications of access and drainage of the peritoneal cavity include, but may not be limited to, the following: laceration of liver or bowel, hypotension/circulatory collapse, electrolyte imbalance, protein depletion, ascites leakage, peritonitis, wound infection, tumor growth in the catheter tunnel, and loculation of the peritoneal cavity.
Caution: Removal of chylous malignant ascites could exacerbate protein depletion or related nutritional complications.

Connect the Drainage Line to Wall Suction
Caution: Keep the valve on the PleurX Catheter and the lockable access tip on the drainage line clean. Keep them away from other objects to help avoid contamination.
Caution: If wall suction is used, it must be regulated to no greater than -60 cm H₂O or to drain no more than 400 ml of fluid per minute. (-60 cm H₂O = -1.7 in Hg = -0.8psi)
1. Close the roller clamp completely by rolling the wheel on the roller clamp toward the suction source. (Figure 14)
Caution: The roller clamp must be fully closed to occlude the drainage line. When not connected to a suction source, make sure the roller clamp is fully closed, otherwise the drainage line may allow air into the body or let fluid leak out.
2. Attach the 5-in-1 adapter to the Luer fitting on the drainage line.
3. Connect the drainage line to the suction source.
4. Remove the cover from the lockable access tip by twisting it and pulling gently. Discard the cover. (Figure 15)
5. Insert the lockable access tip on the drainage line securely into the catheter valve. You will feel and hear a click when the lockable access tip and valve are securely connected. (Figure 16)
6. If desired, lock the access tip to the catheter valve by twisting the access tip until you feel and hear a second click. (Figure 17)
Caution: Make sure the valve and the lockable access tip are securely connected when draining. If they are accidentally separated, they may become contaminated. If this occurs, clean the valve with an alcohol pad and use a new drainage line to avoid potential contamination.
Caution: Precautions should be taken to ensure the drainage line is not tugged or pulled.
Connect the Drainage Line to Glass Vacuum Bottle(s)
Caution: Keep the valve on the PleurX Catheter and the lockable access tip on the drainage line clean. Keep them away from other objects to help avoid contamination.
Caution: When draining with glass vacuum bottles, do not use a needle larger than 17 G.
1. Close the roller clamp completely by rolling the wheel on the roller clamp toward the glass vacuum bottle. (Figure 14)
Caution: The roller clamp must be fully closed to occlude the drainage line. When not connected to a glass vacuum bottle, make sure the roller clamp is fully closed; otherwise the drainage line may allow air into the body or let fluid leak out.
Caution: When connecting to a glass vacuum bottle, make sure the roller clamp on the drainage line is fully closed. Otherwise, it is possible for some or all of the vacuum in the bottle to be lost.
2. Attach a 17 G needle to the Luer fitting on the drainage line.
3. Connect the 17 G needle to the glass vacuum bottle.
4. Remove the cover from the lockable access tip by twisting it and pulling gently. Discard the cover. (Figure 15)
5. Insert the lockable access tip on the drainage line securely into the catheter valve. You will feel and hear a click when the lockable access tip and valve are securely connected. (Figure 16)
6. If desired, lock the access tip to the catheter valve by twisting the access tip until you feel and hear a second click. (Figure 17)
Caution: Make sure the valve and the lockable access tip are securely connected when draining. If they are accidentally separated, they may become contaminated. If this occurs, clean the valve with an alcohol pad and use a new drainage line to avoid potential contamination.
Caution: Precautions should be taken to ensure the drainage line is not tugged or pulled.

Drain Fluid
1. Roll the wheel on the roller clamp away from the suction source to begin drainage. (Figure 18)
2. When fluid begins to drain, you may roll the wheel on the roller clamp toward the suction source to slow or stop the flow of fluid for a few minutes. Pain may be an indication of infection.
3. When fluid flow stops or the desired amount of fluid has been removed, completely close the roller clamp by rolling the wheel on the roller clamp toward the suction source. (Figure 14)
4. If you need to change the glass vacuum bottle/canister/water seal device or suction source for any reason, remove the drainage line from the suction source and connect to a new suction source. Roll the wheel on the roller clamp away from the suction source to resume draining.

Finish Drainage
1. If locked, twist the lockable access tip to unlock it from the catheter valve. (Figure 19)
2. Ensure the drainage line has been unlocked. Pull the lockable access tip out of the valve in a firm, smooth motion. (Figure 20) Set the used drainage line down.
3. Clean the catheter valve with an alcohol pad. (Figure 21) Discard the alcohol pad. Do not try to push anything through the valve as damage to the valve may occur.
Caution: The alcohol pads are flammable. Do not expose the pads to an open flame.
4. Place the new valve cap over the catheter valve and twist it clockwise until it clicks into its locked position. (Figure 22)

Place the Self-Adhesive Dressing
1. Clean around the catheter site.
Note: Make sure the exit site and skin around the catheter are dry before completing the dressing procedure.
2. Place the foam catheter pad around the catheter. (Figure 23)
3. Wind the catheter into loops and place it over the foam pad. (Figure 24)
4. Cover the catheter with up to four (4) gauze pads (Figure 25)
5. The self-adhesive dressing has three (3) layers:
   a. printed liner
   b. clear wound dressing
   c. center panel and frame backing
6. Remove and discard the center panel from the backing of the self-adhesive dressing. (Figure 26)
7. Peel the printed liner from the self-adhesive dressing, exposing the adhesive surface. (Figure 27)
8. Center the self-adhesive dressing over the gauze pads and press it down. (Figure 28)
Note: Do not stretch the self-adhesive dressing during application.
9. Slowly remove the frame while smoothing down the self-adhesive dressing edges. (Figure 29)
10. Smooth the entire self-adhesive dressing from the center toward the edges using firm pressure to enhance adhesion.
11. Disconnect the drainage line from the glass vacuum bottle or suction source.
Note: Dispose of the used drainage line and/or used glass vacuum bottles in accordance with applicable local, state, and federal regulations. Used product may present a potential biohazard.

Note: The Ethicon BioPatch™ (not included) is compatible for use with the PleurX Catheter. If using BioPatch, the disc should be placed on the skin first, before the foam pad and other dressing materials. Follow all instructions for use provided by Ethicon and CareFusion.

Subsequent Drainage Procedures
Subsequent drainage procedures are to be performed using the PleurX Drainage Line, PleurX Vacuum Bottle, or the PleurX Drainage Kits. Each drainage kit contains the necessary drainage line, vacuum bottle, and other necessary items to perform the drainage procedure.

Catheter Removal Procedure
It may be appropriate and/or necessary at a later date to remove the PleurX Peritoneal Catheter. Three successive attempts to drain fluid that result in less than 50 ml of fluid removed may indicate one of the following:
• the ascites has resolved
• the catheter is loculated away from the fluid
• the catheter is occluded
1. Place the patient appropriately to access the catheter insertion site.
2. Aseptically clean the patient's abdomen around the catheter insertion site.
3. Anesthetize the site.
4. Remove any remaining sutures securing the catheter.
5. Using forceps, dissect around the cuff to free it from the ingrowth. Ensure that the cuff is completely free within the tunnel.
6. Grasp the catheter in one hand and pull with a firm, constant pressure.
7. Cover the site as appropriate.

It is vital that patients and/or caregivers are carefully instructed on how to use the kit to drain malignant ascites. The person(s) responsible for drainage must be able to demonstrate they are capable of performing the procedure.

If the patient/caregiver is not able or willing to perform the drainage, a medical professional should perform the drainage.

It is recommended that the patient is periodically contacted or seen by a clinician to evaluate treatment regimen, assess need for albumin supplementation and evaluate catheter's functional status.

Note: Not made with natural rubber latex.
The PleurX Catheter is MR Safe.
ADDENDUM ONE

BD SafetyGlide™ Needle

1. Push firmly when attaching the needle to the syringe. Draw up Medication in accordance with established protocol.

2. Administer Medication in accordance with established protocols. For user convenience, the needle “bevel up” position is oriented to the lever arm as shown.

3. Activate Safety Mechanism immediately after removal from patient by pushing lever arm completely forward until needle tip is completely covered. Visually confirm that the lever arm has fully advanced and the needle tip is covered. If unable to activate, discard immediately into an approved sharps collector.

Discard after single use in an approved sharps container in accordance with applicable regulations and institutional policy.

Use one handed technique and activate away from self and others.

Activation of the protective mechanism may cause minimal splatter of any fluid that is remaining on the needle after injection.

Non-pyrogenic. Do not use if individual packaging is damaged.

Do not Reuse. For Single Use.

Caution

Where local and/or institutional procedures permit/require transportation of the filled syringe, use a passive recapping technique to cover the needle before transporting to the point of administration. USA only: OSHA standards require that such recapping must be accomplished using a one handed technique. DO NOT hold the needle shield during the recapping process.

To help avoid HIV (AIDS), HBV (Hepatitis) and other infectious diseases due to accidental needlesticks, activate the protective mechanism immediately after use.

Federal (USA) law restricts this device to sale by or on the order of a physician.

Do not autoclave BD SafetyGlide™ Needle before use.

Caution: Reuse may lead to infection or other illness/injury.

Excerpt from: BD SafetyGlide is a trademark of Becton, Dickinson and Company. ©2006 BD www.bd.com

This product is covered by U.S. Patent numbers 5,348,544.

BD, Franklin Lakes, NJ 07417 USA
ADDENDUM TWO
P/N 03-4216R7  Rev. 2015-02
POLYSYN™ - Absorbable Surgical Suture, USP (Violet and Clear)

Description
POLYSYN™ (Polyglycolic Acid) suture is a synthetic absorbable, sterile, surgical suture composed of a homopolymer of glycolic acid. POLYSYN™ (Polyglycolic Acid) is supplied as either a braided multifilament or as a monofilament suture. POLYSYN™ (Polyglycolic Acid) is provided dyed (violet) or undyed (clear) as well as coated or uncoated. The pigment for the violet dye is D&C Violet #2. The substances contained in the coating and suture are noncollagenous and nonantigenic. POLYSYN™ (Polyglycolic Acid) suture meets all the requirements established by the United States Pharmacopeia (USP) for synthetic absorbable surgical suture.

Rx Only

Indications
POLYSYN™ (Polyglycolic Acid) suture is indicated for use in general soft tissue approximation and/or ligation, including use in ophthalmic procedures, but not for use in cardiovascular and neurological procedures.

Actions
POLYSYN™ (Polyglycolic Acid) suture elicits a minimal acute inflammatory reaction in tissues, which is followed by gradual encapsulation of the suture by fibrous connective tissue. Progressive loss of tensile strength and eventual absorption of POLYSYN™ (Polyglycolic Acid) synthetic absorbable sutures occurs by hydrolysis, where the polymer degrades to glycolic acid which is subsequently absorbed and metabolized by the body. Absorption begins as a loss of tensile strength without appreciable loss of mass. Implantation studies in animals indicate that POLYSYN™ (Polyglycolic Acid) suture retains at least 50% of its original tensile strength at two weeks post implantation, with approximately 20% remaining at three weeks. Absorption of POLYSYN™ (Polyglycolic Acid) synthetic absorbable suture is essentially complete between 50 and 90 days.

Contraindications
This suture, being absorbable, should not be used where extended approximation of tissue is required.

Warnings
Do not resterilize. Discard open, unused sutures and associated surgical needles.
Users should be familiar with surgical procedures and techniques involving absorbable sutures before employing POLYSYN™ (Polyglycolic Acid) synthetic absorbable sutures for wound closure, as risk of wound dehiscence may vary with the site of application and the suture material used. Physicians should consider the in vivo performance (under ACTIONS section) when selecting a suture for use in patients. The use of this suture may be inappropriate in elderly, malnourished or debilitated patients, or in patients suffering from conditions which may delay wound healing.

As with any foreign body, prolonged contact of any suture with salt solutions, such as those found in the urinary or biliary tracts, may result in calculus formation. As an absorbable suture, POLYSYN™ (Polyglycolic Acid) may act transiently as a foreign body. Acceptable surgical practice should be followed for the management of contaminated or infected wounds. As this is an absorbable suture material, the use of supplemental nonabsorbable sutures should be considered by the surgeon in the closure of sites which may undergo expansion, stretching, or distension or which may require additional support.
Precautions
Care should be taken to avoid damage when handling. Avoid crushing or crimping the suture material with surgical instruments, such as needle holders and forceps. Infections, erythema, foreign body reactions, transient inflammatory reactions, and in rare instances, wound dehiscence are typical or foreseeable risks associated with any suture and hence are also potential complications associated with POLYSYN™ (Polyglycolic Acid) suture.

The surgeon should avoid unnecessary tension when running down knots to reduce the occurrence of surface fraying and weakening of the strand.

Under some circumstances, notably orthopedic procedures, immobilization of joints by external support may be employed at the discretion of the surgeon.

Avoid prolonged exposure to elevated temperatures.

To avoid damaging needle points and swage areas, grasp the needle in an area one-third (1/3) to one-half (1/2) of the distance from the swaged end to the point. Reshaping needles may cause them to lose strength and become less resistant to bending and breaking.

Users should exercise caution when handling surgical needles to avoid inadvertent needle sticks. Discard used needles in “sharps” containers.

Skin sutures which must remain in place longer than 7 days may cause localized irritation and should be snipped off or removed as indicated.

Adequate knot security for synthetic absorbable sutures, which are coated to enhance handling characteristics, requires the accepted surgical technique of flat, square ties, with additional throws as warranted by surgical circumstance and the experience of the surgeon.

Adverse Reactions
Adverse effects associated with the use of this device may include, wound dehiscence; failure to provide adequate wounds support in closure of sites where expansion, stretching or distention occur etc., unless additional support is supplied through the use of nonabsorbable material; failure to provide adequate wound support in elderly, malnourished, or debilitated patients, or in patients suffering from conditions which may delay wound healing; tissue granulation or fibrosis, wound suppuration and bleeding as well as sinus formation; wound infection, minimal acute tissue inflammatory response characteristic of foreign body response; localized irritation when skin sutures are left in place for greater than seven (7) days; calculi formation in urinary and biliary tracts when prolonged contact with salt solutions such as urine and bile occurs; and transitory local irritation at the wound site.

Broken needles may result in extended or additional surgeries or residual foreign bodies. Inadvertent needle sticks with contaminated surgical needles may result in the transmission of blood borne pathogens.

Sterility
POLYSYN™ (Polyglycolic Acid) is sterilized using ethylene oxide. Do not reuse. Do not resterilize. Do not use the package is opened or damaged. Discard opened unused sutures. Do not use after expiration date.

How Supplied
POLYSYN™ (Polyglycolic Acid) synthetic absorbable surgical sutures are available sterile as braided multifilament dyed, (violet) and undyed (clear) coated strands in USP sizes 8-0 through 2 (metric sizes 0.4 through 5) in a variety of lengths affixed to various needle types. POLYSYN™ (Polyglycolic Acid) synthetic absorbable sutures are also available sterile as monofilament uncoated, dyed (violet) and undyed (clear) strands in USP sizes 9-0 and 10-0 (metric 0.3 – 0.2) in a variety of lengths affixed to various needle types.

Excerpt from: Surgical Specialties Corporation
Surgical Specialties Corporation, Corredor Tijuana-Rosarito 2000, #24702-B, Ejido Francisco Villa, Tijuana, B.C., C.P. 22235
POLYSYN™ is a trademark of Surgical Specialties Corporation
All Rights Reserved. Made in Mexico.
ADDENDUM THREE

SILK SUTURE - Non-Absorbable Surgical Suture, USP 2-0 Braided, Black

Description
Silk suture (Black, White) is a non-absorbable, sterile, surgical suture composed of an organic protein called fibroin. This protein is derived from the domesticated species Bombyx mori, (B. mori) of the family Bombycidae. In the United States, Silk suture is provided dyed (black) or undyed (white). The pigment for the black dyed suture is Hematein (Logwood Tree) Black. Silk suture is wax coated. Silk suture is available as either braided or twisted monofilament strands. The product meets all the requirements established by the United States Pharmacopeia (USP) for Non-absorbable Surgical Suture.

Outside the United States only, Virgin Silk suture is available in sizes 8-0 (metric 0.4) and 9-0 (metric 0.3) dyed blue with methylene blue. Virgin Silk suture dyed blue is not available for sale in the United States, and is available for export outside the United States only.

Rx Only

Indications
Silk suture is indicated for use in general soft tissue approximation and/or ligation, including use in ophthalmic procedures.

Actions
Silk suture elicits an acute inflammatory reaction in tissues, which is followed by gradual encapsulation of the suture by fibrous connective tissue. While Silk suture is not absorbed, progressive degradation of the proteinaceous silk fiber in vivo may result in gradual loss of the suture’s tensile strength over time.

Contraindications
The use of this suture is contraindicated in patients with known sensitivities or allergies to Silk. Due to the gradual loss of tensile strength which may occur over prolonged periods in vivo, Silk suture should not be used where permanent retention of tensile strength is required.

Warnings
Do not resterilize. Discard open, unused sutures and associated surgical needles.

Users should be familiar with surgical procedures and techniques involving Silk sutures before employing Silk sutures, for wound closure, as risk of wound dehiscence may vary with the site of application and the suture material used. Physicians should consider the in vivo performance (under ACTIONS section) when selecting a suture for use in patients. The use of this suture may be inappropriate in elderly, malnourished or debilitated patients, or in patients suffering from conditions which may delay wound healing.

As with any foreign body, prolonged contact of any suture with salt solutions, such as those found in the urinary or biliary tracts, may result in calculus formation.

Acceptable surgical practice should be followed with respect to drainage and closure of infected or contaminated wounds.
Precautions
Care should be taken to avoid damage when handling. Avoid crushing or crimping the suture material with surgical instruments, such as needle holders and forceps.
Infections, erythema, foreign body reactions, transient inflammatory reactions, and in rare instances, wound dehiscence are typical or foreseeable risks associated with any suture and hence are also potential complications associated with Silk suture.
Acceptable surgical practice must be followed with respect to drainage and closure of infected wounds.
To avoid damaging needle points and swage areas, grasp the needle in an area one-third (1/3) to one-half (1/2) of the distance from the swaged end to the point. Reshaping needles may cause them to lose strength and be less resistant to bending and breaking. Users should exercise caution when handling surgical needles to avoid inadvertent needle sticks. Discard used needles in "sharps" containers.
As with any suture material, adequate knot security requires the accepted surgical technique of flat, square ties, with additional throws as warranted by surgical circumstance and the experience of the surgeon.

Adverse Reactions
Adverse effects associated with the use of this suture may include, wound dehiscence; gradual loss of tensile strength over time; allergic response in patients that are known to be sensitive to silk; calculi formation in urinary and biliary tracts when prolonged contact with salt solutions such as urine and bile occurs; infected wounds; minimal acute inflammatory tissue reaction; and pain, edema and erythema at the wound site.
Broken needles may result in extended or additional surgeries or residual foreign bodies. Inadvertent needle sticks with contaminated surgical needles may result in the transmission of blood borne pathogens.

Sterility
Silk sutures are sterilized by gamma radiation. Do not reuse. Do not resterilize. Do not use if the package is opened or damaged. Discard opened unused sutures. Do not use after expiration date.

How Supplied
Braided Silk suture is available sterile in USP sizes 8-0 through 5 (metric 0.4 through 7) in both dyed (black) and undyed (white), wax coated. Silk suture is supplied sterile in pre-cut lengths, both needled and non-needled and affixed to various needle types. Twisted Silk suture is available in USP size 9-0 (metric 0.3) dyed black.

Excerpt from: Angiotech
Surgical Specialties Corporation, Corredor Tijuana-Rosarito 2000, #24702-B, Ejido Francisco Villa, Tijuana, B.C., C.P. 22235