

VPL SUTURES



PRN
PHARMACAL
prnpharmaceutical.com



Why VPL Sutures?

Reduce your cost, not your quality.

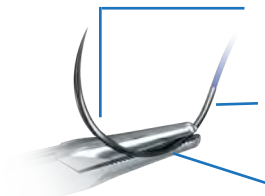
Building on a decade long partnership and the 100-year B. Braun legacy, PRN Pharmacal is able to provide cost savings over other manufacturers without compromising quality or clinical performance.

Products that meet your needs.

Through extensive experience, we created a comprehensive product line with over 80 of the most commonly used absorbable and non-absorbable sutures to meet the requirements of most specialties and surgeries.

Absorbable-Monofilament		Absorbable-Braided		Non-Absorbable-Monofilament	
VPL	Ethicon™	VPL	Ethicon™	VPL	Ethicon™
Monomend® ST	Vicryl®	Polymend® MT	Vicryl®	PRO-STA®	Prolene®
Monomend® MT	Monocryl®			NY-STA® FLX	Ethilon®
Monomend® MaX	PDS® II				

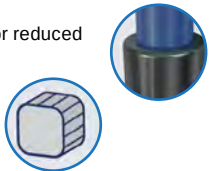
CV Pass needles



- Excellent penetration
- Taper point eases penetration with low trauma
 - Short cutting point improves penetration through calcified tissues with less force

- Fine Needles
- Provide up to 43% less cross-section surface for reduced tissue trauma and less bleeding

- Semi-square body design
- Improves bending strength resistance
 - Enhances stability in the needleholder



Quality

at your fingertips!



VPL needle nomenclature

Example: HR26: 1/2 circle, round bodied, 26 mm long needle.

Needle angle of curvature

H	1/2 circle	
D	3/8 circle	
G	Straight	

Body type

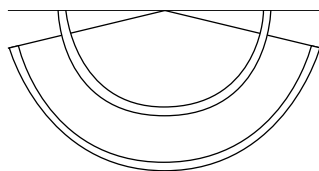
R	Round bodied	
S	Reverse cutting needles	
MP	Micro-Point	

Needle length

Distance between the needle point and the needle end, measured alongside the needle in mm.

Wire size

S	Heavy-bodied needle
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H = 1/2 D = 3/8 G = Straight

Needle comparison

VPL Sutures feature six different types of needles.

Reverse cutting needles	
DSMP Reverse cutting needle with micro-point	
DS Reverse cutting needle	
HSs Reverse cutting needle with heavy body	

Taper needles	
HR Taper needle	
HRs Taper needle w/heavy body	
Straight cutting needle	
GS Straight cutting needle	

Needle selection

Needle comparison chart and VPL suture needle selection.

3/8 Circle reverse cutting needle with micro-point

Needle length	VPL needle	Ethicon™
11 mm	DSMP11	P-1
13 mm	DSMP13	P-3
16 mm	DSMP16	PS-3
19 mm	DSMP19	PS-2

3/8 Circle Reverse cutting needle

Needle length	VPL needle	Ethicon™
19 mm	DS19	FS-2
24 mm	DS24	FS-1
30 mm	DS30	FSL

1/2 Circle reverse cutting needle

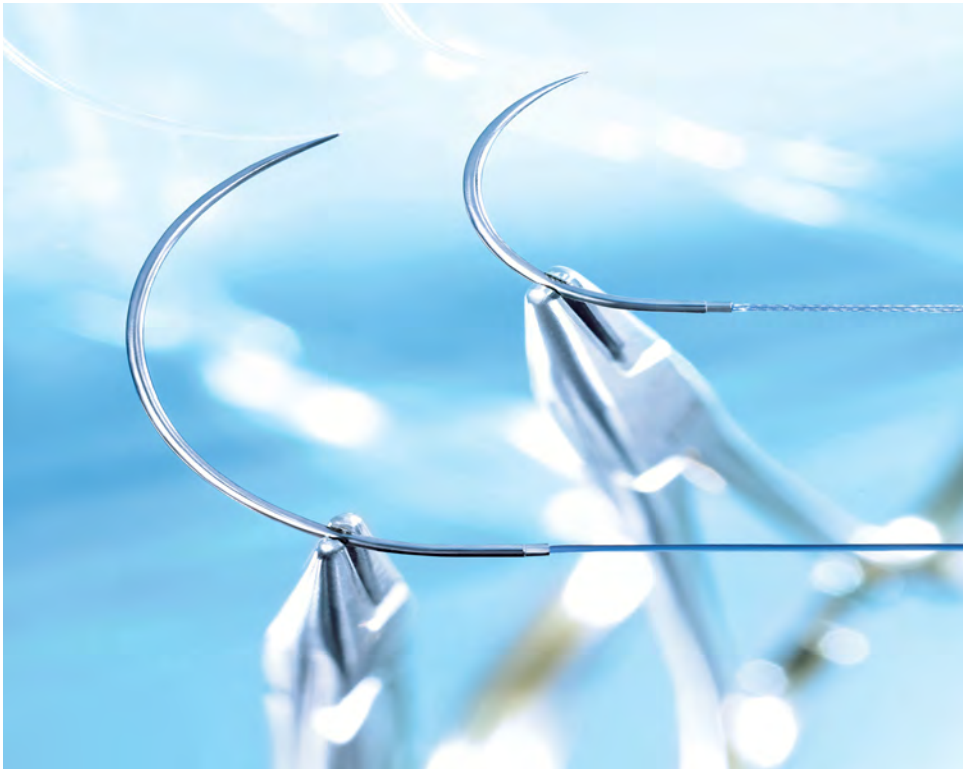
Needle length	VPL needle	Ethicon™
26 mm	HS26s	CP-2
37 mm	HS37s	CP-1

Straight cutting needle

Needle length	VPL needle	Ethicon™
60 mm	GS60	KS

Taper needle

Needle length	VPL needle	Ethicon™
17 mm	HR17	RB-1
22 mm	HR22	SH-1
26 mm	HR26	SH
26 mm	HR26s	CT-2
37 mm	HR37s	CT-1
48 mm	HR48	CTX



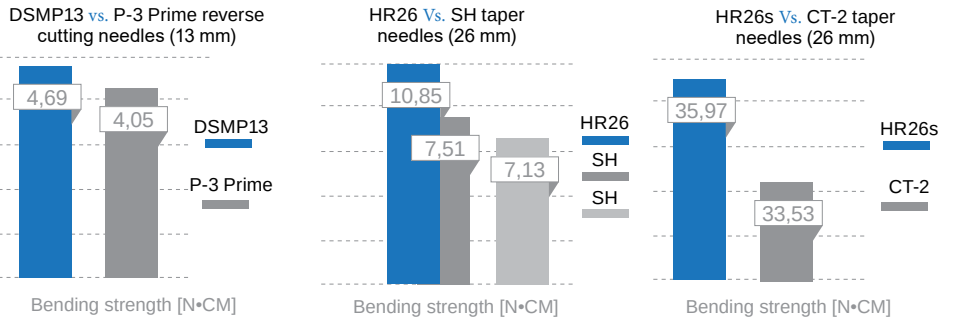
Sutures

you can depend on!

Bending Strength test
 Head-to-head tests¹ have shown some VPL needles have the highest bending strength compared to leading competitors.

RESULTS: The leading competitor needles, P-3 Prime, SH and CT-2, required less force to bend than VPL's DSMP13, HR26 and HR26s needles.

¹Data on file; internal laboratory tests

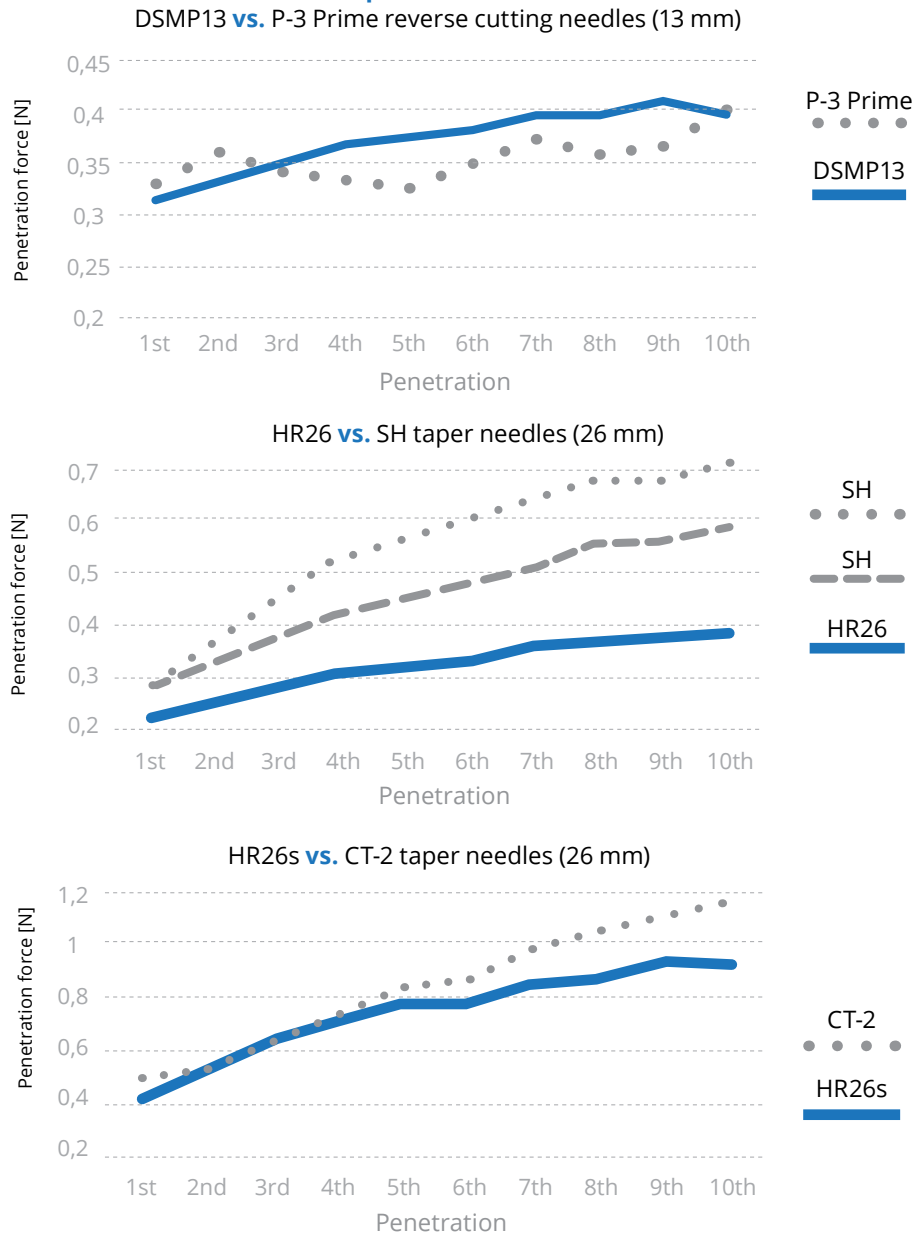


Time is trauma in surgery - it is imperative that a needle stays sharp.

Recent laboratory tests² have shown a notable difference in needle sharpness from VPL Sutures.

RESULTS: The VPL sutures DSMP13, HR26, and HR26s needles had the lowest needle degradation and required less force for penetration versus the leading competitor's P-3 Prime, SH and CT-2 needles.

Needle penetration tests



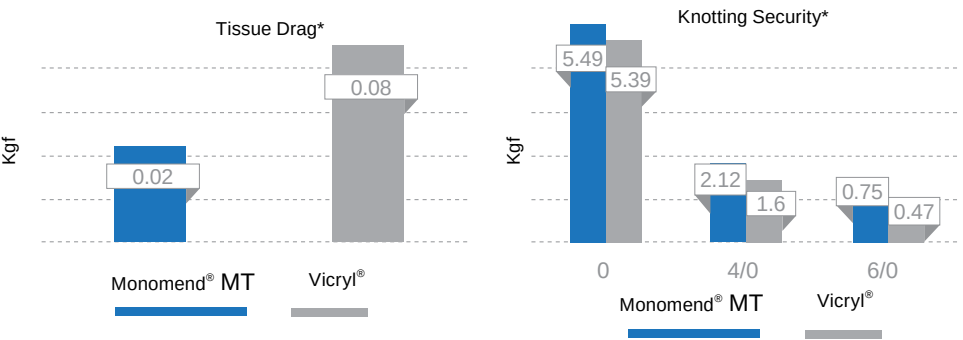
²Data on file; internal laboratory tests

Monofilament for all indications

VPL Sutures is the only brand that provides the possibility of using a monofilament suture for all surgery types.

The monofilament advantage

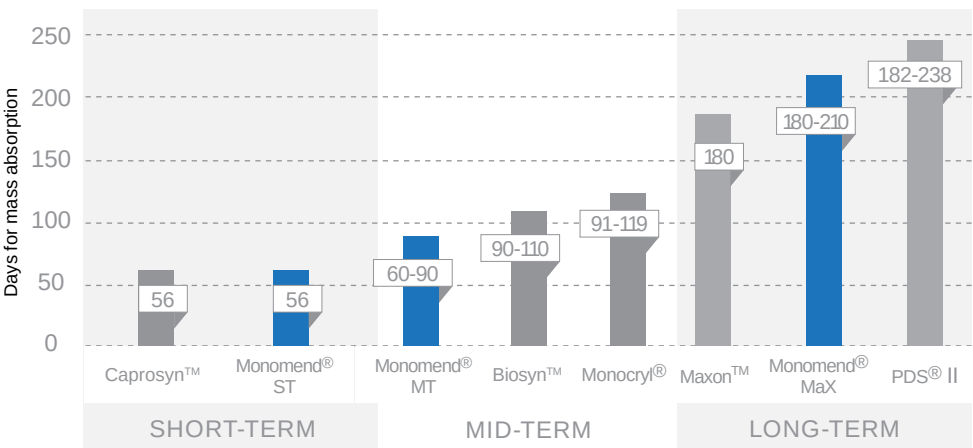
- Less infection³ than multifilament sutures due to decreased bioadhesion and improvement in the ability of phagocytes to reach bacteria on or within the suture
- Improved wound healing due to smooth passage through the tissue
- Secure knot performance



Why use a faster absorbing suture?

Matching the correct suture with wound healing time assures both security of knot stay and decreased likelihood of unnecessary foreign material in the patient beyond time required. Monomend[®] brand sutures provide absorption rates by design.

In-Vivo Absorption Time*



³ Data based on human study entitled Alexander JW, Solomkin JS, Edwards MJ. Updated Recommendations for Control of Surgical Site Infections. Annals of Surgery. 2011;253(6):1082-1093. *Source: manufacturer website.

Monomend® brand sutures

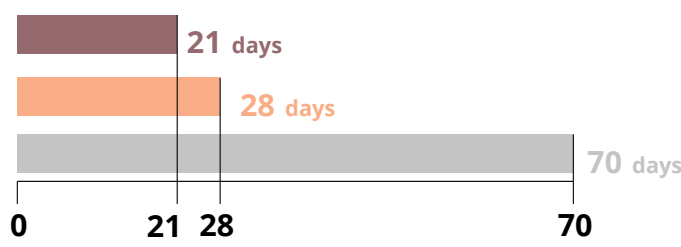
Monomend® brand sutures degrade to biocompatible products, reducing tissue reaction and resulting in a highly efficient mass absorption time. The Monomend® line includes short-term, mid-term and long-term suture options.

Available in racetrack packaging

Oval-shaped racetrack packaging ensures less memory. This gives sutures fewer turns around the track, which allows for less memory and faster, more efficient wound closure.



Days of wound support



Monomend® ST

Oral and mucosal tissues and surgeries requiring rapid absorption
0% → 56 days

Monomend® MT

Subcutaneous, soft tissue
0% → 60-90 days

Monomend® MaX

Slow healing tissues and for tissues that have compromised wound healing
0% → 180-210 days

Monomend® ST

Glyconate

Monofilament suture with rapid absorption

Monomend® ST is a short-term absorbable monofilament suture for surgeries requiring rapid absorption.

- High knot-pull tensile strength
- Low tissue drag for easy passage through the tissue
- Decreased risk of infection
- Maximized wound security throughout the critical wound healing phase

Indications:

- Mucosal sutures in facial and oral surgery
- Dermal sutures, particularly on young animals
- Urinary and gall bladder surgeries

Structure	Monofilament
Color	Undyed
Chemical Composition	Glyconate
Coating	Uncoated
Origin	Synthetic
Sizes	USP 5/0 to USP 3/0
Mass Absorption	Complete mass absorption by day 56
Indications	Monomend® ST is a short-term absorbable monofilament suture for oral mucosal and surgical disciplines requiring rapid absorption.



Monomend® MT

Glyconate

The only true mid-term absorbable monofilament suture

Monomend® MT is an excellent mid-term absorbable monofilament suture developed with the surgeon in mind.

- High knot-pull tensile strength, better than Monocryl® and Vicryl®
- Up to 35% less tissue drag than Monocryl® and 75% less than Vicryl®, resulting in less tissue damage
- Decreased risk of infection
- Secure wound healing
- Maximized wound security throughout the critical wound healing phase
- Unique synthetic co-polymer for rapid mass absorption by hydrolysis in 60 to 90 days with very low tissue reaction

Indications:

- General closure
- Skin repairs
- Subcuticular closure
- Soft tissue including muscle, stomach, intestine, uterus, bladder and ligatures

Structure	Monofilament
Color	Violet
Chemical Composition	Glyconate
Coating	Uncoated
Origin	Synthetic
Sizes	USP 5/0 to USP 1
Mass Absorption	Complete absorption by hydrolysis in 60-90 days
Indications	Monomend® MT is a mid-term absorbable monofilament suture indicated for use in general soft tissue approximation and/or ligation, but not for use in cardiovascular and neurological surgery.



Monomend® MAX

Poly-p-dioxanone

Long-term absorbable monofilament suture

Monomend® MAX is a long-term synthetic monofilament suture ideal for cases where extended wound support of more than 4 weeks is desired.

- Smooth passage through tissue
 - Reliable knot-pull and high knot tensile strength
 - Decreased risk of infection
 - Degradation profile adapted to the specific healing process of each tissue layer
 - Low tissue reaction
- Indications:

 - General closure
 - Subcuticular closure
 - Cardiovascular surgery
 - Soft tissue, including muscle, stomach, intestine, uterus, bladder and ligatures

Structure	Monofilament	
Color	Violet	
Chemical Composition	Poly-p-dioxanone	
Coating	Uncoated	
Origin	Synthetic	
Sizes	USP 5/0 to USP 1	
Mass Absorption	Absorption by hydrolysis in 180-210 days	
Indications	Monomend® MAX is a long-term absorbable monofilament suture indicated for slow healing tissues that need extended support of more than 4 weeks for patients with compromised wound healing.	

Polymend® MT

Poly(glycolide-co-L-lactide 90/10)

Mid-term absorbable braided suture

Polymend® MT provides:

- Secure wound healing
 - Exceptional knot characteristics
 - High-performance needles
 - Easy tissue passage and easy removal
 - High pliability for easy suturing
- Indications:

 - General wound closure
 - Subcuticular closure
 - Abdominal muscle and fascia
 - Ophthalmic surgery
 - Orthopedic surgery
 - Soft tissue including muscle, intestine, hernia, uterus, liver, bladder and ligatures
 - Not recommended for infected wounds

Structure	Braided	
Color	Violet	
Chemical Composition	Poly(glycolide-co-L-lactide 90/10)	
Coating	Poly(glycolide-co-L-lactide 30/70) + Calcium stearate	
Origin	Synthetic	
Sizes	USP 5/0 to USP 1	
Mass Absorption	After 56-70 days	
Indications	Polymend® MT is a mid-term absorbable braided suture for wound closure, orthopedic surgery and soft tissue repairs.	

PRO-STA® FLX

Polyethylene / Polypropylene

Non-absorbable polyethylene / polypropylene monofilament suture

PRO-STA® FLX provides:

- Smooth passage through tissue and easy removal
- Highest biocompatibility
- Optimal elastic and elongation properties
- Minimized acute inflammatory reaction in tissues
- Unsurpassed strength
- Highly pliability for easy suturing

Indications:

- General surgery
- Skin grafts
- Ear crops
- Cruciate ligament repair
- Hernia repair
- Cardiovascular surgery
- Ophthalmic surgery
- Intestinal anastomosis
- Soft tissue including intestine, tendons and ligaments

Structure	Monofilament	
Color	Blue	
Chemical Composition	Polyethylene / Polypropylene	
Coating	Uncoated	
Origin	Synthetic	
Sizes	USP 4/0 to USP 1	
Mass Absorption	Non-absorbable	
Indications	PRO-STA® FLX is a non-absorbable monofilament suture intended for use in general surgery, ear crops and soft tissue repairs.	

NY-STA®

Polyamide (Nylon)

Non-absorbable nylon monofilament suture

NY-STA® provides:

- Low tissue drag
- Decreased risk of infection
- High knot-pull tension strength
- Excellent skin closure needles

Indications:

- General soft tissue
- Abdominal fascia
- Intestinal surgery
- Cruciate ligament repair
- Hernia repair

Structure	Monofilament	
Color	Black	
Chemical Composition	Polyamide (Nylon)	
Coating	Uncoated	
Origin	Synthetic	
Sizes	USP 4/0 to USP 2/0	
Mass Absorption	Non-absorbable	
Indications	NA-STA® is a non-absorbable nylon monofilament suture intended for use in general soft tissue approximation and/or ligation, including use in cardiovascular, ophthalmic and neurological procedures.	

MONOMEND® and Polymend® sutures fulfil all the requirements of the European Pharmacopeia (EP) and United States Pharmacopeia (USP) – current edition – for sterile, synthetic absorbable sutures. NY-STÅ® and PRO-STÅ® FLX sutures fulfil all the requirements of the European Pharmacopeia (EP) and United States Pharmacopeia (USP) – current edition – for sterile non-absorbable sutures

Applications

How to proceed in suture selection depends on specific surgical requirements. Sutures should be selected depending on the wound size, patient condition, tissue type, suturing technique and surgeon's experience. For indications and additional product information, see product Package Insert (PI) included with each suture box or www.prnpharmaco.com.

Contraindications

MONOMEND® ST is contraindicated for approximation of tissues that are under tension and for fixing synthetic/biologic implants. MONOMEND® ST is unsuitable if wound support is required for more than 7 days. MONOMEND® ST is not indicated for use in cardiovascular or neurosurgery. MONOMEND® MT suture are contraindicated where prolonged support of the wound closure is required. Usage of MONOMEND® MaX is contraindicated for approximation of tissue under tension and for the suturing of synthetic implants like vascular grafts or cardiac valves. Polymend® MT is contraindicated for applications where prolonged wound support by the suture material is required (e.g. cardiovascular surgery).

Due to the gradual loss of strength, which can occur in vivo over a longer period, the use of NY-STÅ® is contraindicated when permanent retention of suture strength is of importance. NY-STÅ® microsutures, having a limited tensile strength retention, are not recommended for conventional wound closure in intracutaneous/subcutaneous, cardiovascular and gastrointestinal indications as well as for the fixation of vascular prostheses.

Warning notes

The user should be familiar with the surgical procedures before employing suture materials for wound closure, as the risk of wound dehiscence may vary with the site application and suture material used. Acceptable surgical practice must be followed with respect to drainage and closure of infected or contaminated wounds. The use of absorbable suture material may be inappropriate in patients with any conditions or suffering from diseases which, in the opinion of the surgeon, may cause or contribute to delayed wound healing (e.g. elderly, malnourished, debilitated patients, etc.). When using absorbable suture material, the surgeon should consider the use of supplemental non-absorbable sutures in the closure of the abdomen, chest, joints or other sites subject to expansion, stretching or distension, or which may require additional support.

Do not reuse sutures: Infection hazard for patients and/or users and impairment of product functionality due to reuse. Risk of injury, illness or death due to contamination and/or impaired functionality of the product. Sutures should be stored at room temperature. Do not expose sutures to extreme temperatures for an extended period of time. Do not use sutures after expiry date.

Precautionary notes

Care should be taken to avoid damage when handling surgical needles. When working with suture material, great care should be taken to ensure that the surgical instruments used, such as forceps and needle holders, do not cause any crushing or crimping damage to the suture material. Adequate know security required the standard surgical technique of flat, square ties, with additional throws as indicated by surgical circumstances and the experience of the surgeon. Grasp the needle in an area one-third (1/3) to one-half (1/2) of the distance from the attachment end to the point. Grasping in the point area could impair the penetration performance and cause fracture of the needle. Grasping at the butt or attachment end could cause bending or breakage. Reshaping needles may cause them to lose strength and be less resistant to bending and breaking.

Consideration should be taken in the use of absorbable sutures in tissues with poor blood supply as suture extrusion and delayed absorption may occur. Subcuticular sutures should be placed as deeply as possible to minimize the erythema and indication normally associated with the absorption process. Under some circumstances, notably orthopedic procedures, immobilization of joints by external support may be employed at the discretion of the surgeon.

User should exercise caution when handling surgical needles to avoid inadvertent needle stick injury. Inadvertent needle stick with contaminated surgical needles may result in the transmission of bloodborne pathogens. Discard used needles in "sharps" containers.

Adverse reactions

As with all other suture materials long contact with salt solutions, such as urine and bile, can lead to lithiasis. As for all sutures, usage may cause transient local irritations at the wound site and a transient inflammatory foreign body response may occur. Hardening of tissues may not always be avoided during absorption of subcuticular sutures and existing infections may also occasionally be enhanced. An existing infection may be negatively influenced by any foreign body. The degradation of the suture may also be slightly accelerated depending on patient and severity of infection. Failure to provide adequate wound support in sites where expansion, stretching or distention may occur. Failure to provide adequate wound support in patients may delay wound healing. An occasional wound dehiscence and granulation may not be excluded. Broken needles may result in extended or additional surgeries or residual foreign bodies.

Sterilization

Sutures must not be resterilized. Open, unused or damaged packs should be discarded. Open MONOMEND® MaX sutures are sterilized by ethylene oxide gas.

How supplied

Sutures are supplied sterile, in pre-cut lengths, attached needles, with permanent needle attachment techniques. Each box contains 1 dozen (12) sutures.

Caution

Federal law restricts this device to sale by or on the order of a licensed veterinarian.



prnpharmacial.com

800.874.9764

8809 Ely Road, Pensacola, FL 32514

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