

The Use of Mesh in Hernia Repair

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Also called a "patch," or "screen," mesh has been used for about 25 years, and represents a leap forward in the art of hernia repair.

Repairs utilizing mesh patches may also be called a "Lichtenstein Repair," because it was a surgeon named Irving Lichtenstein, MD, who popularized tension-free techniques as an outpatient procedure under local anesthesia. Prior to this, surgeons only used mesh for large or recurrent hernias, or when they thought it was absolutely necessary. They believed the mesh was a "foreign body" and would increase the risk of infection. However, subsequent studies proved the superiority of mesh, and by the mid-1990s, more surgeons were starting to use mesh in their procedures, and discovering the advantages of hernia repair without tension.

There are many kinds of mesh products available, but generally what surgeons use is a sterile, woven material made from a synthetic plastic-like material, such as polypropylene. The mesh can be in the form of a patch that goes under or over the weakness, or a plug that goes inside the hole. Mesh is very sturdy and strong, yet extremely thin. It is also soft and flexible to allow it to easily conform to body's movement, position and size. Mesh is used in both **open** and laparoscopic tension-free hernia repairs.

Here's How Mesh Works:

- The mesh is generally available in various measurements and can often be cut to size.
- Depending on the repair technique used, the mesh is placed either under or over the defect in the abdominal wall and held in place by a few sutures.
- The mesh acts as "scaffolding" for new growth of the patient's own tissue, which eventually incorporates the mesh into the surrounding area.
- The patient cannot feel the mesh, and because the repair is tension free, he or she may resume activity levels sooner after surgery than is usually seen with tension repair techniques.

As to which type of mesh should be used for each repair, there are a number of options available depending on the surgeon's approach and needs of the patient. Umbilical hernias, inguinal hernias, and ventral / incisional hernias can usually be repaired either laparoscopically (using a scope and camera through a few small entry holes) or through an "open approach" (larger incision access) repair techniques. For instance, a surgeon may utilize one of several mesh repair systems for an **inguinal hernia that is being repaired laparoscopically**. These include:

- **PROCEED* Surgical Mesh** - a multilayer tissue-separating mesh
- **ULTRAPRO* Partially Absorbable Lightweight Mesh** - a lightweight monofilament mesh for abdominal wall reinforcement
- **PROLENE* polypropylene Mesh** - polypropylene mesh for the repair of abdominal wall defects

For repair of **inguinal hernias with an "open approach" type of repair** (not laparoscopic), the surgeon may use these mesh products:

- **ULTRAPRO* mesh** - a lightweight monofilament mesh for abdominal wall reinforcement
- **PROLENE mesh** - polypropylene mesh for the repair of abdominal wall defects
- **PROLENE* polypropylene Hernia System** - a unique 3-in-1 hernia device for the combined anterior and posterior repair of hernias.
- **PROLENE* 3D Patch polypropylene mesh** - a one-piece, low profile hernia device for the repair of abdominal wall hernias

For repair of **umbilical hernias with a laparoscopic approach**, your surgeon may select the following product:

- **PROCEED mesh**, a multi-layer tissue-separating mesh.

For the repair of **umbilical hernias through an open approach**, your surgeon may select the following product:

- **PROCEED mesh**, a multi-layer tissue-separating mesh
- **ULTRAPRO mesh** - a lightweight monofilament mesh for abdominal wall reinforcement
- **PROLENE mesh** - polypropylene mesh for the repair of abdominal wall defects
- **PROLENE hernia system** - a unique 3-in-1 hernia device for the combined anterior and posterior repair of hernias
- **PROLENE 3D Patch mesh** - a one-piece, low profile hernia device for the repair of abdominal wall hernias.

For the repair of **ventral / incisional hernias through a laparoscopic approach**, your surgeon may select the following product:

- **PROCEED mesh** - a multilayer tissue-separating mesh

For the repair of **ventral/incisional hernias through an open approach**, your surgeon may select the following product:

- **PROCEED mesh**, a multi-layer tissue-separating mesh
- **ULTRAPRO mesh** - a lightweight monofilament mesh for abdominal wall reinforcement
- **PROLENE mesh** - polypropylene mesh for the repair of abdominal wall defects

You can read more about these products on the [Innovations in Mesh](#) page.