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**Indications***

Integra® Endoscopic Gastroc Release System is indicated in the treatment of posterior heel cord contracture (equinus) in those patients who fail to respond to conservative management.

**Contraindications**

- Distortion of anatomy
- Previous soft tissue injury at the surgical site
- Active infection at surgical site
- Bone block equinus, tendoachilles equinus.
- Spastic neuromuscular equinus.

**System Description**

The Integra Endoscopic Gastroc Release System includes a range of instruments for an endoscopic approach to the gastrocnemius aponeurosis recession. The cutting instrument consists of a single-use endoscope attachment for a 4mm 30° rigid endoscope with a working length of either:

- 157mm or longer “EGR 157”
- or
- 138mm or longer “EGR 138”

The cutting instrument features a retractable blade for cutting the gastrocnemius aponeurosis. Associated instruments include an fascial elevator, a cannula, and a cannula obturator, which are all provided sterile and are disposable.

**Features and Benefits**

- The unique features of this product include trigger-activated blade articulation and an improved method for endoscope locking. This product will only require one portal.
- An articulating blade at the distal end of the instrument capable of selective cutting of the muscle fascia.
- A central lumen through which a 4mm endoscope can be passed.
- A stop feature within the central lumen which provides a reference for the proper positioning of the endoscope.
- A window adjacent to the cutting blade that allows the blade and the surrounding tissue to be clearly visualized through the endoscope.
- A locking mechanism which securely grasps the endoscope’s rigid sheath in order to maintain its proper position for optimal viewing.
- A fluid pathway from the proximal end of the endoscope attachment to a location adjacent to the endoscope’s distal tip.

*See package insert for full prescribing information
Surgical Technique

As the manufacturer of this device, Integra does not practice medicine and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any implant procedure is responsible for determining and using the appropriate techniques for implanting the device in each patient.

Step 1 • Positioning the Patient

1. The heel may be placed on a sterile bulky towel roll if the patient is supine. This allows the instruments to pass freely. The surgeon must take care, however, to not allow the knee to be in recurvatum when assessing ankle dorsiflexion. Alternatively, as an isolated procedure, the EGR may be performed with the patient in the prone position. General anesthesia is preferred.

Step 2 • Incision

2. Palpate the Achilles tendon. Identify a region 10 cm–15 cm proximal to the medial malleolus where the gastrocnemius aponeurosis is located, at its widest point. This is usually 1.5 cm to 2 cm distal to the distal most portion of the gastrocnemius muscle belly. Make a 1 cm–2 cm vertical incision medially, slightly posterior to the medial most portion of the inner ankle/leg.

   Use blunt dissection through the subcutaneous tissue, down to the level of the deep fascia.

   Make a vertical sharp incision into the deep fascia using a #15 blade (or equivalent). This will expose the gastrocnemius aponeurosis and obvious synovial fluid.
Step 3 • Creating the Pathway

3-1 Using the fascial elevator, bluntly separate the deep fascia from the aponeurosis. This will create a layer which protects the neurovascular structures—posterior to the deep fascia, including the saphenous vein, sural nerve and saphenous nerves.

3-2 At this point, with the fascial elevator fully inserted, gently move the elevator proximal and distal to free the aponeurosis from the deep fascia. Insert the obturator into the cannula. Remove the fascial elevator and introduce the cannula/obturator assembly into the same pathway. Remove the obturator from within the cannula and insert a 4mm, 30° endoscope. The neurovascular structures should be completely protected in the correct placement of the cannula.

Step 4 • Identification of the Gastrocnemius Aponeurosis

4-1 Insert the endoscope into the cannula to visualize the gastrocnemius fascia.

4-2 The aponeurosis is easily visualized: crossing transverse fibers will be noted.

Note
If the device is not in the correct layer of tissue, visualization will be difficult. Also of note, in a patient with lots of adipose tissue visualization can be blurred. Using a syringe with saline on the irrigation port, or cotton tip applicators will aid visualization.

Note
In order to prevent soft tissue obstruction in the blade retraction mechanism, which may result in non-retraction of the device during surgery. It is suggested that a saline connection be introduced into the irrigation port located on the EGR cutting instrument.
Step 5 • Division of Gastrocnemius Aponeurosis

5-1 Temporarily remove the endoscope and insert it through the EGR cutting instrument, locking the two together with the scope clamp. With the blade in the retracted position, introduce the cutting instrument/endoscope assembly into the cannula through the medial port, moving the distal tip of the assembly to the far lateral side of the Gastrocnemius Fascia.

5-2 With the knee fully extended and ankle maximally dorsiflexed creating tension, deploy the blade by rotating the collar and as you observe the monitor, divide the gastrocnemius fascia in a lateral-to-medial direction by withdrawing the instruments through the cannula. Follow the curvature of the gastrocnemius fascia while making your release.

Note
Prior to introducing the EGR cutting instrument/endoscope assembly into the cannula, it is suggested that the retraction handle of the device be manually tested to ensure that deployment/retraction of the blade may be achieved.

Note
The use of excessive intraoperative force on the deployment/retraction handle of the device may result in non-retraction of the blade.

5-3 Keeping dorsiflexion tension while cutting, as well as pushing against the cannula from below, are two technical maneuvers that will increase the depth of the gastrocnemius release, if necessary.
Essential Product Information

Warnings
• While performing this endoscopic procedure if any problem should arise (such as anatomical anomalies, inadequate visualizations, inability to identify anatomy, or questions concerning technique or instrumentation) the surgeon should abandon the endoscopic gastrocnemius recession and convert to an open procedure.
• Confirm proper cannula placement adjacent to the gastrocnemius fascia prior to employing the EGR instrument. Improper location of recession/incision can lead to tendon damage, possible tendon transection, or neurovascular injury.
• This device was designed to surgically release the gastrocnemius aponeurosis; accordingly, care should be used to avoid cutting muscle or tendon with this instrument.
• Do not use excessive force to place the cannula into the operative pathway.
• Failure to properly release gastrocnemius fascia can lead to under-correction of equinus.

Precautions
For safe and effective use of this system, the surgeon should be familiar with the recommended surgical procedure and the principles of minimally invasive and endoscopic procedures. For a copy of the surgical technique, please contact your local Integra Sales Representative/Product Specialist, or visit the Integra website.
### Integra Endoscopic Gastrocnemius Release System

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>310040</td>
<td>EGR157 Sterile Package Complete*</td>
</tr>
<tr>
<td>310138</td>
<td>EGR138 Sterile Package Complete*</td>
</tr>
</tbody>
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* EGR 157 to be used with scopes 157mm or longer
* EGR 138 to be used with scopes 138mm or longer