Researchers at the University of South Florida have developed a laparoscopic suturing device that can be utilized with any generic suture.

Laparoscopic surgery is a minimally invasive surgical technique that uses small incisions, a camera, and thin surgical instruments. Many surgeons report that this surgical procedure is challenging for several reasons including the fact that they are operating in 3-D space while viewing the procedure on a 2-D screen. Laparoscopic suturing is also a commonly reported challenge due to small incisions. Many of the commercially available tools to assist with laparoscopic suturing require the use of specific sutures designed exclusively for that device. Since the sutures for each of these devices are limited, the surgeon's choice of suture material is also limited. These sutures are also very expensive. Accordingly, there is a need for a suture assist device that can be used with any type of suture.

USF researchers have developed a laparoscopic suturing device with a robust needle, that is less susceptible to breakage, and that works with any generic suture. The device can place sutures as a single stitch or running stitch and is able to suture large areas of tissue. It includes a handle and an elongate shaft rotatably mounted to the handle. A manually controlled toggle knob is secured to the elongate shaft to allow manual rotation about its longitudinal axis. Further, a spring-loaded pusher advances and retracts the needle carrier when the toggle knob is in a first and second position. This technology increases flexibility for the surgeon and decreases operative expense.

ADVANTAGES:
- Works with any suture type
- Utilizes a more robust needle less susceptible to breakage
- Decreased operative expenses
- Increased surgical flexibility

A Quick and Efficient Surgical Tool That May Also Prevent Post-Op Hernias

An Illustration of the Proposed Laparoscopic Surgical Device