

OF MESH &

Complex *hernia repair* calls for new technology and techniques

BY CARLA CARWILE

Bill Wagner* was cleaning the garage of a friend who had passed away when he tripped over a long-handled garden cultivator and landed, belly first, on one of the sharp prongs. Focused on finishing the job so his friend's estate could be settled, Wagner applied a bandage and kept working. "It hurt like the dickens," Wagner recalls, "but I really had no idea how serious it was."

As time passed, Wagner's abdominal area surrounding the site of the puncture wound began to protrude. His physician diagnosed it as an *incisional hernia*, which is when fat or tissue pushes through a weakness in the protective layer surrounding it. But the physician advised against a major surgical correction given that Wagner had diabetes, underwent a triple bypass in 1997 and had an incident of congestive heart failure two years ago.

At the insistence of friends, Wagner sought a second opinion from David Beck, M.D., FACS, of Associated Surgeons. Repairing his large and complex hernia would not be simple, Beck told the 72-year-old Golden resident, but it could be done by employing an advanced surgical technique called component separation and calling in other medical specialists to manage the concurrent health concerns.

Weighing the discomfort and limitations the hernia was causing him, Wagner was more than ready to take on the challenge.



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THE INSIDE STORY

"The abdominal wall, which extends from immediately below the breastbone down into the groin, is composed of multiple layers of muscle, fascia and tendons," Beck explains. This layered design, he notes, allows surgeons to divide one of the layers and pull them closer to each other to close the defect. The layers "move across each other, somewhat like sliding glass doors."

A hernia occurs when a section of this protective wall wears down, tears or is cut, either through an incision made with a surgical scalpel or—as in Wagner's case—due to a traumatic injury. Non-injury risk factors for developing hernias include obesity, pregnancy, physical stress, aging and genetics.

As the hole in the abdominal wall becomes greater, tissue and organs can push through. Some types of hernias cause virtually no symptoms, while others can prove extremely painful. In some cases, the protruding organs or tissue are constricted so tightly that blood supply is restricted or stopped, creating a potentially life-threatening condition.

TECHNOLOGY AND TEAMWORK

The procedure Beck performed at St. Anthony Central Hospital last May employed both traditional and minimally

MEN



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Fact or Fiction?

Are men more likely than women to develop a hernia? It depends on the type of hernia, experts say. Men are five times more likely to develop the most common variety, the inguinal. The femoral hernia, while much rarer, is far more likely to occur in women.

invasive surgical approaches. An open incision was needed, given the large tear in Wagner's abdominal wall. When it came time to place the special mesh fabric that is used to secure tissue and organs, Beck and his team used laparoscopic techniques and technology.


"We used both sutures and tiny screw tacks to secure it to the inside of the abdominal wall," Beck says. Over time, the sutures and tacks will dissolve, and tissue will grow through the mesh, creating a permanent solution.

The other physician specialists involved in ensuring his patient's safe passage through the procedure proved key, Beck emphasizes. Wagner was seen by his primary care physician, a cardiologist and a pulmonologist before surgery to ensure he was healthy enough for the procedure. During his post-surgical stay, his blood sugar became erratic and his oxygen levels were difficult to maintain. But with the assistance of the hospital medical team, Wagner was able to return home within five days.

A WORLD OF DIFFERENCE

Wagner says he feels like a new man. It is like "the difference between night and day," he says.

Wagner was among the patients who entered the "old" St. Anthony Central Hospital at Sloan's Lake and was discharged from the "new" St. Anthony Hospital in Lakewood.

"Given the magnitude of that move, it was the smoothest of operations," he says. I know it took a lot of logistics and planning, but from my perspective, it was just going for a ride. And the new hospital couldn't be more beautiful." 

**Name changed at patient's request.*

The Many Forms of Hernia

Did you know there are five types of hernias? Read on to learn what makes them different.

Inguinal hernia

It's called "inguinal" because it occurs when the intestines push through weakened tissue in the inguinal canal, an opening between layers of abdominal muscle near the groin.

Hiatal hernia

When a small opening in the diaphragm allows the upper part of the stomach to push up into the chest, a hiatal hernia can form.

Epigastric hernia

A weakness in the muscles of the upper-middle abdomen, above the navel, is the cause.

Umbilical hernia

Tissue around the navel is thinner than that of the abdomen in general, making this area vulnerable to hernias among babies, children and adults.

Femoral hernia

More common in women than men, the femoral hernia occurs in the area between the abdomen and the thigh.

Incisional hernia

When fat or tissue pushes through a weakness created by a postsurgical scar, this is the result.