

SAN ANTONIO ORTHOPÆDIC SPECIALISTS

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Frequently Asked Questions About Minimally Invasive Surgery

What is MIS?

MIS stands for Minimally Invasive Surgery. It is often confused with minimal or mini incision surgery. The concepts are entirely different. The mini or minimal incision surgery makes a smaller incision in the skin, but does basically the same operation underneath the skin as the standard procedure. Surgeons can often be heard saying that incisions heal “side to side, not end to end.” By this they mean that a one inch incision heals in exactly the same amount of time as a three or ten inch incision. This is true. Doing a surgery originally designed for a ten or twelve incision through a three inch incision, for the most part just makes it more difficult to do, and offers little (if any) benefit to the patient beyond improved appearance of the scar. In the long run, the function of the joint is likely no better and the recovery no quicker than a standard approach. Further, the accuracy of the position of the implants may be not as good as the standard approach.

Minimally Invasive surgery refers to the manner by which the muscles and tissues underneath the skin are handled. The less damage created on the way in, the less there is to repair on the way out, and the more rapid the rehabilitation should be. It happens that most of the incisions are also smaller, though this is not the initial intent of the procedure. A truly better term might be “tissue sparing surgery”, but it may be some time before this, more accurate term catches on.

How long are the incisions in MIS hip and knee surgery?

Briefly, the incisions are as long as they need to be, and no longer. These procedures and the instruments for them are designed for smaller incisions. The incision still will vary with the size of the patient. The five foot tall female with small bone structure and no “extra weight” will need a smaller incision for her knee replacement than the six foot six inch retired linebacker. That being said, the knee replacement incisions are between four and six inches normally. The direct anterior total hip arthroplasty employs a single incision of about four inches. The front incision for the two incision hip is usually between two and two and a half inches, while the back incision is between one and a half and two inches. The G3 (see also FAQ Hip) varies more with the relative weight of the patient than the other tissue sparing procedures. Generally these incisions are between three and eight inches.

How can the surgeon see to do MIS surgery?

A common argument against MIS surgery by those who don't (or often can't) do MIS surgery is that they cannot see enough to do the surgery properly. This is true only for small incisions when paired with standard procedures. The MIS procedures and instruments are designed to allow the surgeon to see enough to do the surgery properly. Structures commonly exposed during standard

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approaches that are not critical for orientation are not exposed during tissue sparing surgery. For some X-Ray and/or computer navigation is also used to assist in proper placement of the artificial joint.

What is different about the way that the muscles are handled?

Many surgeons have posted video footage of traditional hip or knee replacement surgery on the internet. For those of you who have seen these videos, you may have noted that there is a great deal of brute force employed. Orthopaedic surgeons lovingly refer to this as “brutane”. Also, the leg is twisted or turned into all sort of odd and unusual positions. Lastly, traditional techniques often detach muscles or cut far into tendons so as to allow for the adequate exposure.

By contrast, MIS does not cut into tendons. MIS uses different approaches, different instruments, and different more gentle positioning of the leg. Therefore, the MIS surgeon leaves the “brutane” at home. At least in theory, this gives rise to less inflammation, and less pain post operatively. Whether by this exact mechanism or by some other mechanism, the patient who undergoes MIS surgery generally recovers normal function much more rapidly than their traditionally operated friends.