

New technologies in joint replacement

Nowadays, thanks to technological advancement in research and development, new implants, surgical instrumentation and surgical techniques in hip and knee replacement, we can offer patients several different choices of treatment through new technologies. We will describe in a short and easy manner some of these options. If you are a patient who suffers from hip or knee pain and you are considering a joint replacement, get in touch with your doctor to determine if you are a suitable candidate for these new technologies.

Metal on metal Hip Replacement:

What is it? It's the prosthetic substitution of the diseased joint using an artificial metallic acetabular component and an artificial metallic femoral head.

Advantages:

- Slower implant degeneration and waste.
- Longer implant longevity.
- Increased activity level.
- Allows the use of larger heads.
- Increased range of movement.
- Less risk of dislocation.

Disadvantages:

- More expensive.
- Excessive metal debris.
- Long-term effects of excessive metal debris unknown.
- Only indicated in younger patients.
- Can cause a disease called metallosis.



Ceramic on Ceramic prosthesis

What is it? It is the prosthetic substitution of the diseased hip joint in which the contact surfaces of the prosthesis are made out of an artificial ceramic acetabular component and an artificial ceramic femoral head.

Advantages:

- Slower implant degeneration and waste.
- Longer implant longevity.
- Lower generation of debris.

Disadvantages:

- More expensive.
- It requires the use of a navigational system.
- It can cause uncomfortable squeaking.
- Implants can easily break.
- Not all patients are ideal candidates.



Minimally invasive hip or knee replacement.

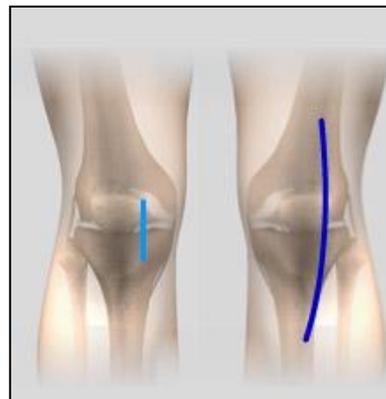
What is it? It is the surgical substitution of a diseased hip or knee with an artificial prosthetic implant through a small incision (2-3 inches) (5-8cm) with minimal damage to surrounding tissue.[The usual surgical technique is through an incision that's (5-8 inches) (15-20cm) long.]

Advantages:

- Minimal damage to surrounding tissue.
- Less postoperative pain.
- Accelerated recovery.
- Aesthetic scar.
- Less bleeding.

Disadvantages:

- More expensive.
- It requires specialized surgical instrumentation.
- It requires the use of a navigational system or C arm.
- Increased complication rate.
- Increased surgical time.
- Not all patients are ideal candidates..



Hip or knee replacement using a navigational system:

What is it? It is the surgical substitution of the diseased joint using an artificial knee or hip prosthesis assisted by computer, robot or navigational system using technology similar to GPS.

Advantages:

- Exact implant position.
- Less debris generation over the years.
- Better implant functionality.

Disadvantages:

- More expensive.
- Requires specialized surgical instrumentation.
- Requires a specialized hospital centre.
- Requires the use of a navigational system.
- Increased complication rate.
- Increased surgical time.
- Not all patients are ideal candidates..



Simultaneous joint replacement surgery.

What is it? It is the surgical substitution of 2 diseased joints using an artificial knee or hip prosthesis in one surgical intervention. It can be Hip-Hip, Knee-Knee or Hip-Knee replacements.

Advantages:

- 1 surgery, 2 joint replacements.
- 1 hospital stay for both surgeries.
- Less expensive than 2 hospital stays.
- Shorter rehab period.

Disadvantages:

- Higher complication rate.
- Increased surgical time.
- Increased bleeding.
- Patient requires learning how to walk again.
- Difficult rehabilitation.
- Not all patients are ideal candidates..



Hip resurfacing.

What is it? It is the surgical substitution of the diseased femoral cartilage using a metal acetabular cup liner and a metal head liner without compromising the femoral neck and proximal femur.

Advantages:

- It can easily be turned into a Total Hip Replacement.
- Slower implant degeneration and waste.
- Longer implant longevity.
- Increased activity level.
- Increased range of movement.

Disadvantages:

- More expensive.
- Excessive metal debris.
- Long term effects of excessive metal debris unknown.
- Only indicated in younger patients.
- Can cause a disease called metallosis.
- Increased surgical time.
- Increased complication rate.
- Increased bleeding and wound size.
- Not all patients are ideal candidates.



Unicompartmental knee replacement.

What is it? It is the partial surgical substitution of a diseased knee without compromising parts of the knee that are still healthy. It is usually reserved for the medial compartment of the knee.

Advantages:

- Minimal damage to surrounding tissue.
- Easier to do than a Total Knee Replacement.
- Accelerated recovery.
- Can easily be turned into a Total Knee Replacement.

Disadvantages:

- Decreased longevity compared to Total Knee Replacement.
- Limited indications.
- Not all patients are ideal candidates.



Patelofemoral knee joint replacement.

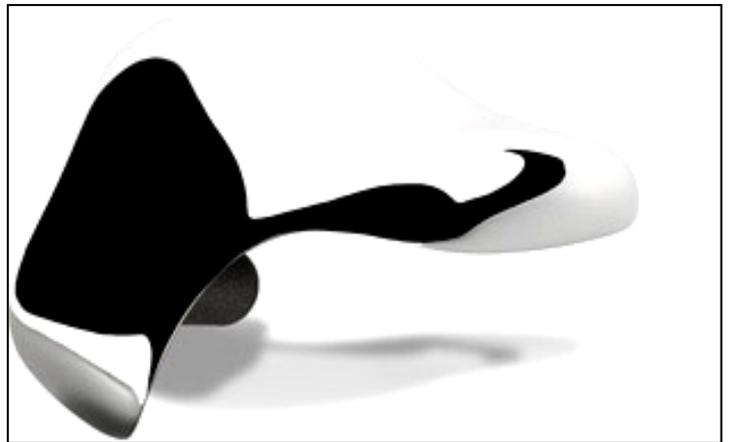
What is it? It is the partial surgical substitution of a diseased patelo-femoral joint without compromising medial and lateral femoro-tibial joints that are still healthy.

Advantages:

- Minimal damage to surrounding tissue.
- Easier to do than a Total Knee Replacement.
- Accelerated recovery.
- Can easily be turned into a Total Knee Replacement.

Disadvantages:

- Decreased longevity compared to total knee replacement.
- Limited indications.
- Not all patients are ideal candidates.



As always, if there are further questions, please let us know, and with pleasure we'll contact you to dispel your worries.

Remember we are here to help you.

Dr. Stefan Martínez van Gils & Dr. Isaac Cervantes.

NOTE: The main reason for the above information is to aid patients. We are not responsible for the decisions made by patients without previously consulting their attending physician.