

Great Toe Joint Replacement **Patient Guide**



The BioPro[®] First MPJ Hemi Implant

The proven long-term joint fusion alternative.



Long-term
use

+65

The implant has over 65 years of successful clinical use with recorded use since 1952.¹⁰

Clinically
proven

+12

Over a dozen clinical studies support the use of the implant. These studies are published from a variety of authors and backgrounds.

High implant
survivorship

+95%

Multiple studies show implant survivorship rates of +95%.^{2,3,7,10}

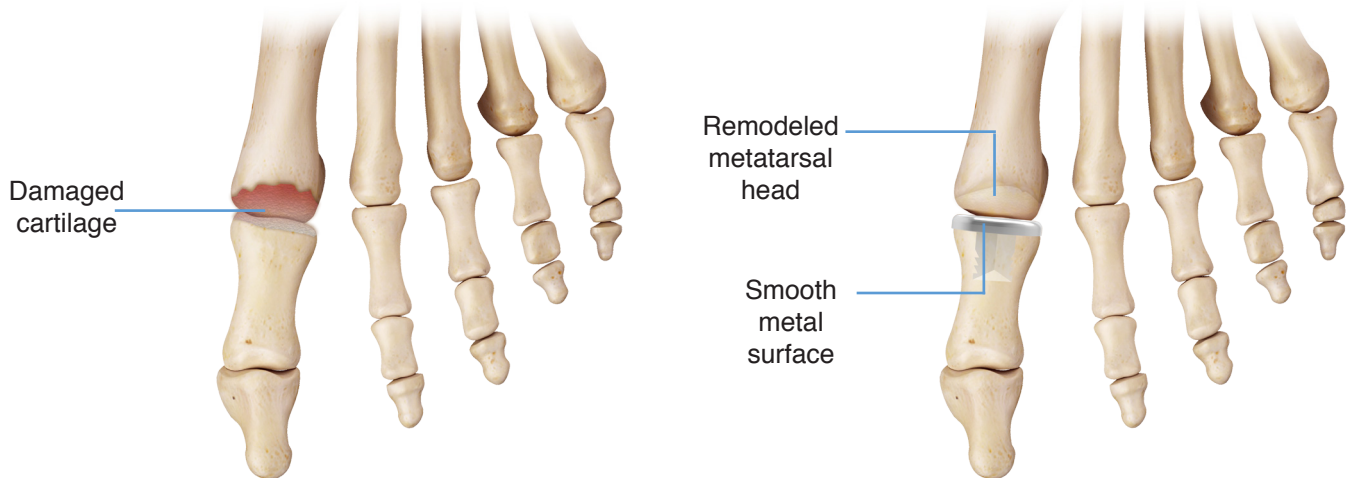
Long-term
implant
survivorship

+20

An implant with clinical data showing survivorship over 20 years.^{7,10}

How it works

In a healthy functioning joint, smooth cartilage covers both ends of the bone. If this cartilage deteriorates due to wear-and-tear or injury, raw bone begins to rub together which may cause pain, stiffness, and loss of flexibility. This condition is commonly referred to as hallux limitus or hallux rigidus. The BioPro Implant treats this condition by resurfacing the phalanx (low force joint side) with a smooth, durable metal implant for the metatarsal head to articulate against.



Why it works

Many factors allow the implant to provide improved range of motion, pain-relief and long-term survivorship.^{1,2,3,4,5,6,7,8,9,10,11,12,13}

Improved range of motion

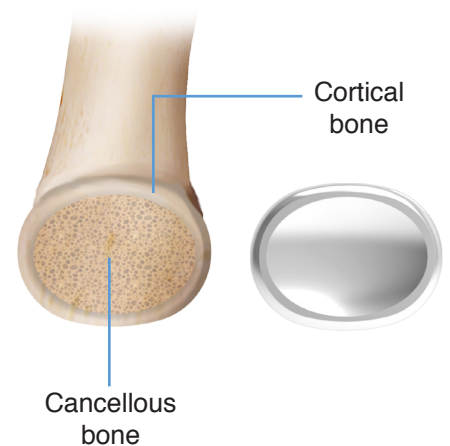
During the surgical procedure, large osteophytes (bony outgrowths) are removed and the joint is smoothed out. This, along with minimal bone resection, allows for decompression of the joint and improved range of motion.

Pain relief

Before surgery, the joint had damaged cartilage or was bone on bone. After surgery, there is a remodeled metatarsal head articulating against a smooth metal spacer allowing for reduced pain and restored motion.

Long-term survivorship

Since the implant is placed on the phalanx, it avoids the weight-bearing forces placed on the metatarsal head. Furthermore, the implant's outer edge rests on hard cortical bone, preventing the implant from receding into the soft cancellous bone. The implant is manufactured from a well established biocompatible material with a durable wear surface that is proven to last over 30 years.⁷



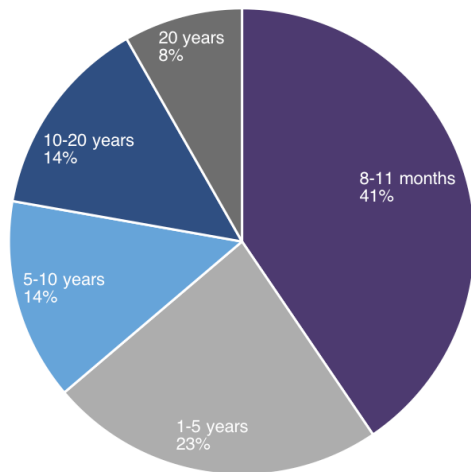
How big is the implant?



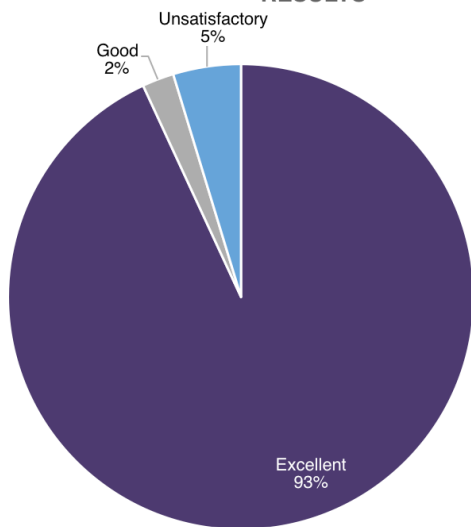
The implant is very similar in both thickness and diameter to a US nickel. It is 2mm thick and available in diameters from 17mm to 23mm depending on a patient's anatomy.

Clinical data

POSTOPERATIVE FOLLOW UP



RESULTS



Long term data

A 40 year review of the BioPro First MPJ Hemi Implant was conducted and then published in 1994. The study included 279 patients ranging from 8 months to 33 years postoperative.¹⁰

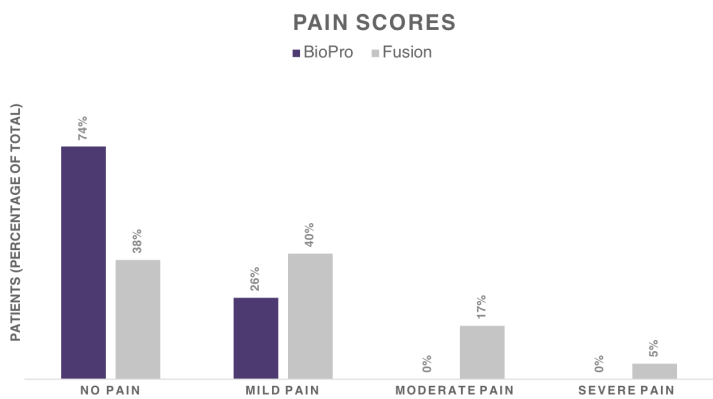
The patients were evaluated through questionnaires that measured pain, joint stiffness, functional disability, and overall satisfaction. They were also clinically examined for range of motion and alignment. In order to achieve "Excellent" results the patient had to be entirely pain free in all activities, with no functional limitation of motion and have normal alignment.

The study showed 93.1% excellent, 2.2% good, and 4.7% unsatisfactory. The study was then followed up on in 1998, in which 189 patients were added.⁷ The follow up on the 468 patients was conducted from 2 months to 38 years postoperative and showed a 97.3% implant survivorship.

Since then, several studies have been conducted on the BioPro First MPJ Hemi Implant.

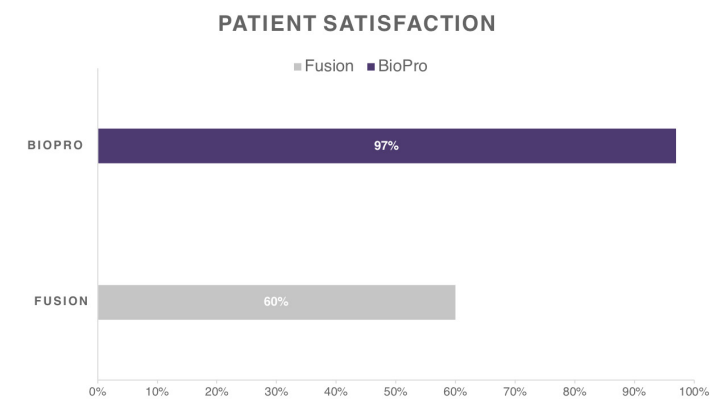
A recent study was published comparing long-term results (average 8.3 years) of the BioPro Implant hemiarthroplasty procedure to arthrodesis (fusion). A total of 78 procedures performed from 2005 to 2011 were reviewed (31 hemiarthroplasty and 47 fusion). The data revealed that hemiarthroplasty provided better functional outcomes with considerably more satisfied patients.¹³

The following charts highlight some key findings.



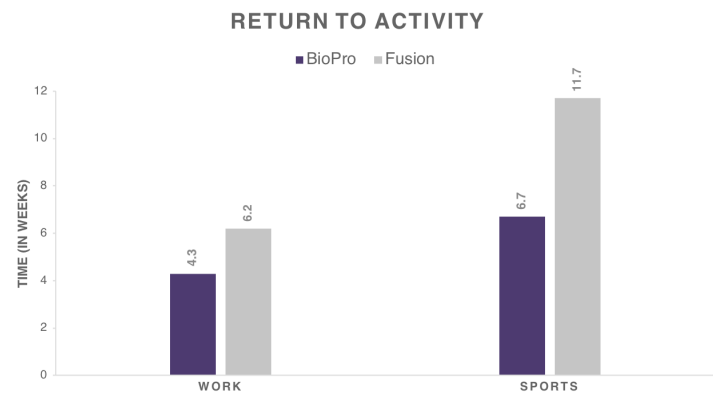
Beekhuizen, Stefan R. et al. The Journal of Foot and Ankle Surgery. 2018;57:445-450

No patients that received the BioPro Implant reported moderate or severe pain, compared to 22% that underwent fusion.



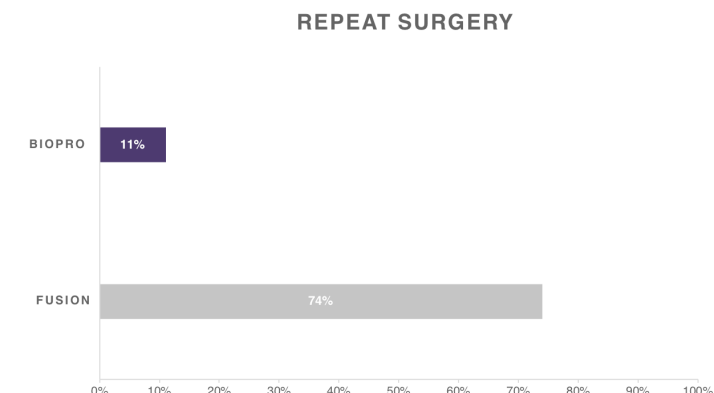
Beekhuizen, Stefan R. et al. The Journal of Foot and Ankle Surgery. 2018;57:445-450

The study showed that 97% of the patients that received the BioPro Implant were satisfied with the procedure compared to 60% that underwent fusion.



Beekhuizen, Stefan R. et al. The Journal of Foot and Ankle Surgery. 2018;57:445-450

It was observed that patients that received the BioPro implant returned to work on average almost 2 weeks faster and returned to sports 5 weeks faster than fusion patients.



Beekhuizen, Stefan R. et al. The Journal of Foot and Ankle Surgery. 2018;57:445-450

In this study 64% of the patients that underwent fusion had repeat surgery to remove the hardware and 10% underwent revision surgery due to nonunion. In the implant group 11% of the patients had revision surgery due to implant loosening or limited range of motion. **The study showed no complications revising an implant to fusion.**

FAQ’s

Is this procedure covered by insurance?

Yes, most insurance plans cover this procedure. It is important to get a pre-authorization from your insurance company prior to surgery.

How long is the recovery?

Partial to full weight-bearing is permitted at the discretion of the surgeon. A standard post-operative shoe or wedge shoe is used for the first 2-3 weeks. Physical therapy and return to soft shoes are usually permitted by the 3rd to 4th post-operative week.

Why choose a metal implant over a synthetic implant?

Implants manufactured from metal, such as cobalt chrome and titanium, have proven to be long-lasting and biocompatible. Synthetic materials have been shown to break down and cause inflammation.¹⁵ Be sure to mention to your doctor if you have a Nickel allergy as cobalt chrome contains nickel and your surgeon will want to use a titanium implant.

Learn more and find a surgeon in your area at:

www.bioproimplants.com/patients

or

call us at (810) 982-7777

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