



# UNDERSTANDING TOTAL ANKLE REPLACEMENTS



## Dr. Gregg Koldenhoven

is an Ankle Joint Replacement Orthopaedic Doctor.  
His clinic locations are in Longmont, Lafayette, &  
Westminster Colorado.

The gold standard for surgical treatments of the ankle is an **ankle fusion**. An ankle fusion is a procedure that locks the joint in a 90 degree angle, allowing the bone to grow together, or fuse. In the 1980s, the total ankle replacement was introduced as an alternative to the ankle fusion; however, many ankle replacements of the '80s were failing, leaving limited options for people suffering from ankle pain.

One ankle doctor set out on a quest to create a viable surgical solution for ankle arthritis patients. The doctor's goal was pain reduction and restored mobility. The ankle team carefully studied previous ankle replacement designs to determine the causes of ankle implant failure. With that knowledge in hand, and using design elements already proven successful in hip implants and knee implants, the ankle engineers designed a total ankle replacement intended to stand the test of time. **The result was the INBONE® Total Ankle.**

**The INBONE® Total Ankle Replacement** has many features that enhance its performance: Long anchoring stems; the prosthesis has anchoring stems to secure it in place, within both the tibia and talus; physician customized for patient needs. When it comes to joint implants, one size does not fit all.

Studies are still being conducted in regard to how long the implant will last; nonetheless, scientists are hopeful that the implant will last anywhere from 10-20 years. In the event that the prosthesis does wear down, the first component that is showing signs of wear is the “cartilage” (aka: poly insert). If the Poly insert does wear out, in most cases it can be replaced without replacing the entire implant.



*Completed Total Ankle Replacement*

**Recovery** from the procedure varies from person to person. The “typical” post-operative rehabilitation consists of 24-48 hours in the hospital, 2-3 weeks in a splint, 4 weeks in a cast, 4-6 weeks in a walking boot, with a total of 10-12 weeks of non-weight bearing.

I am excited to offer my patients the option of the **INBONE Total Ankle**. Patients have been very pleased with their outcomes. Their activity levels vary; some are enjoying long walks while others have started playing tennis and skiing, something they once thought was a thing of the past!

**[Click HERE for an Informational Video Covering  
INBONE TOTAL ANKLE REPLACEMENT](#)**

**Interested in learning more about ankle fusions? Check out Dr. Koldenhoven’s FAQs regarding Ankle Fusions vs. Total Ankle Replacements. For more information about the total ankle replacement surgery and your ankle pain and ankle arthritis, please schedule an appointment with Dr. Koldenhoven at 303-772-1600.**

### **Florence McKinney - Total Ankle Joint Replacement Recipient**

At first glance, you would never guess Florence McKinney has a bionic ankle. This sweet woman, in her mid-70s, is still active and enjoying life. Every day you will find Florence and her husband, Francis, taking 1.5 to 2 mile walk. “My (ankle) replacement has great range of motion”.

Florence’s ankle complications began, by accident, on a November morning in 1974. On a Saturday morning, after a light snow the night before, Florence headed to Mt. Calvary Lutheran Church in Estes Park to practice the organ. When it was time to go she decided to take a short cut across the lawn instead of using the steps. With that decision, her fate was sealed. Florence fell, sliding down the three foot embankment and slamming her right foot into the sidewalk. “I thought ‘Oh God, help me!’”

One plate and two screws later, Florence was cast from hip to toe. “The full leg cast was on for seven weeks.” Within six months, Florence made a full recovery and was back to her life’s journey, “I didn’t have any problems until about five years ago.”

Florence’s pain had progressed to the point that she realized she needed to do something drastic. Upon a consultation with Dr. Gregg Koldenhoven, Foot & Ankle Specialist at Front Range Orthopedics and Spine, she was given three options: live with the pain, a fusion or a total joint replacement.

Dr. Koldenhoven counseled Florence on her decision about whether or not a total ankle replacement was the right choice for her, “Age, lifestyle and goals for long-term activities are all important components of deciding whether someone is a good candidate for total ankle Arthroplasty,” responded Dr. Koldenhoven. “With Florence, I purposefully explained the benefits of all three choices.”

### **Florence McKinney - Total Ankle Joint Replacement Recipient (Continued)**

Florence was in his office to get rid of the pain so living with it wasn't an option. She didn't like the idea of a fusion because she didn't want to lose her motion. Her only choice left was a total ankle replacement. "Together we made an informed decision on her proper course of treatment," said Dr. Koldenhoven.

The decision was made. Florence chose the total ankle replacement.

It is common knowledge in the medical field that ankle replacements do not typically have the lifespan of a knee or shoulder replacement; however, now there is a newer technology on the market known as the "INBONE" by Wright. Dr. Koldenhoven's comments on the INBONE device, "I feel the (INBONE) technology has really made a difference with regards to advancing total ankle Arthroplasty. It has excellent fixation of the components which likely will translate into a longer lifespan of the device in patients. The company continuously studies the components to see if there are potentially any further improvements that can be made to the design."

The INBONE device is expected to take much more wear and tear, while being a less invasive surgical procedure. According to Wright, "The INBONE Ankle modular design feature of the tibial stem allows the physician to select the appropriate number of pieces based on patient size and bone structure. This results in a more precise fit and less-invasive installation process with minimal bone removal. Other procedures offer only stems available in a specific size which does not allow a customizable fit." An added bonus: many of the engineers designing this technology are located right here in Colorado.

Today Florence and her husband enjoy regular walks, retirement, and yes, Florence still plays the organ (once a month) at church.

When asked whether or not Florence would recommend the procedure to someone else, she responded, "Mine went so well I would encourage them to do it. If the doctor gives them that option, I don't have any reservation about it."