

THE Pulse Page

THE MOST RECENT
ADVANCEMENTS
IN MEDICAL SCIENCE

The BioniCare® Knee System by VQ OrthoCare®

The Center for Disease Control reports that an estimated 46 million adults in the United States have some form of arthritis. The most common form of arthritis is osteoarthritis of the knee, which affects more than 27 million Americans nationwide and will affect nearly half the American population during their lifetime.

Osteoarthritis is a disease of the joints. For osteoarthritis of the knee, inflammation, severe knee pain and loss of movement occur as the joint breaks down and the bones rub together. Specific lifestyle factors can contribute to developing osteoarthritis of the knee. This includes obesity

total knee replacement (TKR) surgery. More than 545,000 TKR's are performed every year, costing the U.S. healthcare system an average of \$15 to \$18 billion annually. Individuals undergoing TKR surgery are subjected to surgical complications, side effects and a lengthy recovery period, often resulting in prolonged time off of work and therefore more financial implications for the patient.

Recognizing the need for an innovative and alternative treatment option for osteoarthritis of the knee, VQ OrthoCare®, a leading provider of non-invasive medical solutions, created the award-winning BioniCare® Knee System. Cleared by the FDA in 2003, the BioniCare Knee

placement candidates with clinical and radiographic evidence of severe osteoarthritis of the knee avoided a TKR over a four-year period after only an average of only 11

months of BioniCare therapy. This is compared to only 7 percent of matched control patients treated at Johns Hopkins and not receiving BioniCare treatment. The revolutionary treatment provides significant improvement in pain, range of motion for daily activities and overall improvement in the knee as shown in published studies of one, three and 12 months.



and past knee injuries, which can both increase a person's development risk by approximately 60 percent. Osteoarthritis of the knee affects an individual's entire lifestyle and can make simple movements, such as walking, unbearable.

Various treatment options are available for those living with osteoarthritis of the knee, including NSAID's and cortisone injections, however, these options only mask and do not improve the joint. Another option for individuals living with osteoarthritis of the knee is to undergo

System is the only treatment that can claim to improve the osteoarthritic knee. BioniCare is also a non-invasive, non-surgical and non-pharmaceutical treatment option. Developed specifically to treat osteoarthritis of the knee by mimicking the naturally occurring signal present in a healthy knee joint, the BioniCare Knee System delivers a low-level pulsed electrical signal to the knee held in place on the inside of a joint unloading brace or night-wrap. In a study lead by two Johns Hopkins orthopedic surgeons, 62 percent of total knee re-

The BioniCare Knee System is treating more than 80,000 patients nationwide and is the only device that can claim to improve osteoarthritis of the knee. The BioniCare Knee System has allowed individuals to live pain-free, regain mobility and participate in an active lifestyle, including walking, running, playing sports like basketball or golf, skiing and competing in marathons.

To learn more about VQ OrthoCare or the BioniCare Knee System, visit <http://vqorthocare.com> or call (800) 444-1456. R_x

1 Centers for Disease Prevention and Control (CDC): http://www.cdc.gov/arthritis/data_statistics/faqs/cost_analysis.htm

2 Kotlarz H, Gunnarson CL, Fang H, et al. "Insurer and Out-of-Pocket Costs of Osteoarthritis in the US." *Arthritis Rheum.* December 2009. 60;12:35 46-3553. Epub ahead of print November 30, 2009

3 BR, Mariano ER, et al. "Hospitalization costs of total knee arthroplasty with a continuous femoral nerve block provided only in the hospital versus on an ambulatory basis: a retrospective, case-control, cost-minimization analysis." *Reg Anesth Pain Med.* 2007 Jan-Feb; 32(1):46-54

4 Mont MM, Hungerford DS, et al., "Pulsed Electrical Stimulation to Defer TKA in Patients with Knee Osteoarthritis," *Orthopedics,* October 2006 (10): 887-889