



THE VALUE OF JOINT REPLACEMENT IN TREATING PATIENTS WITH OSTEOARTHRITIS

Total Joint Replacement is a valuable treatment option for many of the 27 million Americans who suffer from Osteoarthritis, a disease for which there is no cure.

Despite its proven personal and economic benefits, total joint replacement is severely underutilized.

MEDICAL TECHNOLOGY
**life changing
innovation**

the disease

27 MILLION AMERICANS SUFFER FROM OSTEOARTHRITIS ¹

Osteoarthritis (OA) is a progressive, destructive disease of the major joints for which there is no cure.² It is one of the leading causes of disability and functional limitation in the U.S.^{3,4} In fact, 19% of disabled adults report arthritis or rheumatism as their disability, compared to 16% that report back or spine problems and 6% that report heart trouble.⁵

OSTEOARTHRITIS IS ASSOCIATED WITH MORE SERIOUS HEALTH PROBLEMS

Patients with walking impairments from OA are reported to run a risk of early death that is 1.48 times higher than the general population. Risk factors for mortality include “a history of diabetes, cardiovascular disease, or cancer and increased walking disability.”⁶

In fact, 40% of men and 57% of women with knee OA are physically inactive.⁷ The CDC reports that 47% of adults with arthritis in the U.S. have one or more other serious health problems.

Common health issues and their rates in adults with arthritis include:

- Heart disease, 24%
- Chronic respiratory conditions, 19%
- Diabetes, 16%
- Stroke, 7%⁸

OSTEOARTHRITIS IMPACTS THE ECONOMY BY DRIVING UP EMPLOYER AND HEALTH COSTS

Bone and joint disorders, including OA, account for 440 million lost days at work and \$110 billion in lost wages each year—**more than any other medical condition**.⁹ Workers with OA are one-third less productive than non-afflicted workers.¹⁰

Though there is no “cure” for OA, total joint replacement can help patients return to work and their normal lives.

the treatment

TOTAL JOINT REPLACEMENT HELPS PATIENTS RETURN TO THEIR LIVES AND CONTRIBUTES TO IMPROVED GENERAL HEALTH

Total joint replacement is a surgical procedure in which certain parts of an arthritic joint or damaged bone are removed and replaced with an artificial joint to restore mobility and relieve pain.¹¹ The most commonly performed total joint replacement surgeries are for the hip and knee,¹² and in both cases, patients' physical function is shown to improve: 79% improvement after total hip replacement and 56% improvement in function after total knee replacement.¹³

In fact, the most striking statistic could be that total joint replacement dramatically reduces risk of death. Medicare patients who receive total hip or knee replacement show nearly half the risk of death after seven years;^{14,15} overall, patients are 40% less likely to suffer from heart complications including heart attack, stroke and heart failure.¹⁶

ECONOMIC BENEFITS OF TOTAL JOINT REPLACEMENT

Total knee replacement surgery generates net societal savings of approximately \$19,000 per patient lifetime due to reduced disability costs and improved productivity.¹⁷ For all knee replacement surgeries performed in the U.S. in 2009, aggregate lifetime savings are estimated at \$12 billion.¹⁷ And, hip and knee implants have shown a dramatic decline in price over the past six years at 23% and 17% respectively.^{18*}

Total joint replacement has proven successful in returning patients to their jobs. Studies have shown that 98% of working patients return to work following total knee replacement and 90% of working patients return to work after total hip replacement.^{19,20}

* Reduction in hip and knee implant prices is adjusted for medical inflation.

the challenges

TOTAL JOINT REPLACEMENTS ARE UNDER-UTILIZED

Only 13% of candidates receive total knee replacements and less than 25% receive total hip replacements.^{21,22} A *New England Journal of Medicine* study reported that, although women are more likely to report hip or knee joint problems, they are less often put on a joint replacement waiting list and less likely than men to undergo joint replacement.²³ Furthermore, wide racial disparities exist in the delivery of total joint replacement surgery. Despite similar disease prevalence, African Americans are 39% less likely to receive total knee replacement surgery.²⁴

WHY?

The vast majority of primary care physicians have been shown to inadequately understand the benefits of total joint replacement, and do not appropriately discuss total joint replacement as an option with many indicated patients.^{25,26}

- Only 17% of primary care physicians correctly identified total joint replacement success rates.²⁷
- Only 26% of primary care physicians discussed total joint replacement with elderly candidates.²⁸

Impending surgeon shortages may also result in further reductions in access to needed care.^{29,30}

- From 2005-2020, the supply of all orthopedic surgeons is expected to increase only 2%, while the demand for orthopedic surgeons' services is expected to increase 23%.³¹
- The number of orthopedic surgeons who perform total joint replacement surgery is projected to decline as much as 34% by 2016 as compared to 2008.³²

RISKS ASSOCIATED WITH TOTAL JOINT REPLACEMENT

Surgeons should explain all risks to their patients. For more information, please consult the information at the following websites:

- <http://orthoinfo.aaos.org/topic.cfm?topic=A00375>
- http://www.niams.nih.gov/Health_Info/Joint_Replacement/

Potential adverse outcomes associated with joint replacement [any of which may necessitate re-operation to revise or replace the implant(s)] include but are not limited to breakage of the device itself, loosening, intra-operative or post-operative fracture of the bone, infection, wear, and disassociation or migration of the implant. Risks may be affected by patient factors such as age, weight, activity level, rehabilitation compliance and the presence of co-morbidities, as well as by the surgical procedure.³³ Complications associated with the surgical procedure can include incorrect ligament balancing, poor cement technique and mal-rotation of implant parts.³⁴ Any of these can require revision surgery. Early, severe adverse events are reported in under 6% of patients and most often become manifest within four days following the implant procedure.^{35,36} These cannot be reliably predicted in nearly 60% of patients by preoperative risk evaluation.³⁷

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The Value of Joint Replacement for Patients with Osteoarthritis

Osteoarthritis is a progressive, destructive disease of the major joints for which there is no cure. It is a leading cause of disability in the U.S.

27 MILLION

Americans suffer from Osteoarthritis (OA).¹



Osteoarthritis drives up employer health costs.



LOST WORK DAYS/YEAR

Due to bone & joint disorders including OA.²

\$110 BILLION/YEAR IN LOST WAGES

Bone and joint disorders drain more wages each year than any other medical condition.²



Total joint replacement has been shown to restore mobility, relieve pain, and help osteoarthritis patients return to normal life.



HEALTHIER HEARTS

Patients 40% less likely to suffer from heart complications including heart attack, stroke and heart failure.³



RISK OF DEATH CUT IN HALF

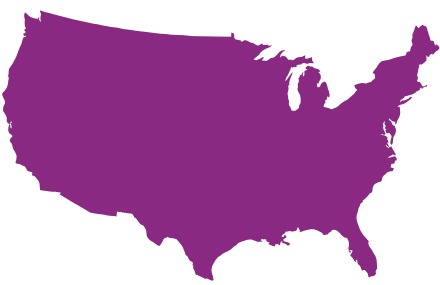
Medicare patients who receive total hip & knee replacement show nearly half the risk of death after seven years.^{4,5}



RAPID RECOVERY

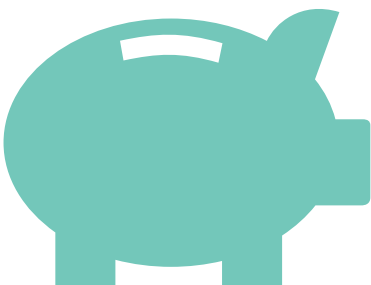
98% of patients return to work following total knee replacement and 90% following total hip replacement.^{6,7}

Total joint replacement is cost-saving and provides great value.



\$12 BILLION IN SAVINGS

Estimated lifetime savings from knee replacements performed in 2009.⁸



\$19,000 PER PATIENT LIFETIME

Amount saved over a patient lifetime due to reduced disability costs and improved productivity.⁸



23% PRICE DECLINE

Hip and knee replacements have shown a dramatic decline in price within the past six years.^{9*}



17% PRICE DECLINE

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* Reduction in hip and knee implant prices is adjusted for medical inflation.

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