
Design Project 2 – *Hips Don't Lie*

When to operate? Identifying good and poor candidates

IBEHS 1P10 – Health Solutions Design Projects

Tutorial 02

Team 26

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Independent Research Summary

The importance of identifying when to operate is a necessity that if overlooked can be detrimental to an individual's health and the success of the procedure. This summary will additionally analyze identifying good and poor candidates in relation to joint replacement surgery.

Inherently many individuals can live lives without the need towards operation but with the introduction of a disease or problem within one's body it may come to the point whether an operation may be possible in order to regain good health. When traditional remedies and medicine fail it is almost seen as a last resort to operate [1]. A degraded quality of life because of disease such as osteoarthritis for some constitutes the need for operation. With age as the condition continues to develop it can often come to a point where one is unable to live comfortably. This is why average age for joint replacement surgery is around 65 years old [2]. Furthermore, another important factor in determination is pain and function. In a study conducted by NCBI they identified patients and their reasonings towards operation and many highlighted increases in pain and functionality [3]. Overall, when one's quality of life starts to degrade to the point where do most of your activities without pain, it is then that surgery is usually considered.

In continuation, identifying the appropriate candidate towards a successful joint replacement surgery is important as many factors can affect the impact of the operation. Operating on elderly patients has been studied towards being less effective in comparison to younger individuals as research shown less post-operative pain when compared with each other [4]. As a result, for elderly patients who can still maintain functionality surgery is not advisable by many surgeons because of the presence of many co-morbidities [5]. Furthermore, the activity levels of an individual play a crucial role in determining whether a patient can have surgery. Rehabilitation post operation can involve various physical activity that an individual should be able to perform [6]. Lack of proper rehabilitation can result in complications in the future as a result it is essential towards an appropriate candidate being able to commit to weeks of rehabilitation.

Overall, while joint replacement surgery is a very successful way at minimizing pain and complications for complications within ones joints it is evident that a certain criteria has to be met before identifying the need for the surgery. Operation is often seen a last resort and so it is important to ensure that there are no other effective treatments that can be effective in mitigating an individual's problem. As a result, identifying the individuals of the right age, lack of co-morbidities as well as being able to participate in rehabilitation is important when considering joint replacement surgery.

Reference List

- [1] "Joint Replacement Surgery," *American College of Rheumatology*, Feb. 2022.
<https://www.rheumatology.org/I-Am-A/Patient-Caregiver/Treatments/Joint-Replacement-Surgery> (accessed Nov. 30, 2022).
- [2] L. E. Bayliss *et al.*, "The effect of patient age at intervention on risk of implant revision after total replacement of the hip or knee: a population-based cohort study," *Lancet*, vol. 389, no. 10077, p. 1424, Apr. 2017, doi: 10.1016/S0140-6736(17)30059-4.
- [3] C. B. Chang, J. H. Yoo, I. J. Koh, Y. G. Kang, S. C. Seong, and T. K. Kim, "Key factors in determining surgical timing of total knee arthroplasty in osteoarthritic patients: age, radiographic severity, and symptomatic severity," *J Orthop Traumatol*, vol. 11, no. 1, p. 21, Mar. 2010, doi: 10.1007/S10195-010-0086-Y.
- [4] M. Fang, N. Noiseux, E. Linson, and P. Cram, "The Effect of Advancing Age on Total Joint Replacement Outcomes," *Geriatr Orthop Surg Rehabil*, vol. 6, no. 3, p. 173, Sep. 2015, doi: 10.1177/2151458515583515.
- [5] P. Dieppe, K. Lim, and S. Lohmander, "Who should have knee joint replacement surgery for osteoarthritis?," *Int J Rheum Dis*, vol. 14, no. 2, pp. 175–180, May 2011, doi: 10.1111/J.1756-185X.2011.01611.X.
- [6] A. Husney, "Deciding About Knee Replacement Surgery," Jun. 01, 2021.
<https://myhealth.alberta.ca/Health/aftercareinformation/pages/conditions.aspx?hwid=uf10362> (accessed Nov. 30, 2022).