

Significant advancements in surgical treatment have provided effective options to reduce the pain and disability associated with certain musculoskeletal conditions. Joint replacement surgery (hip and knee replacement) is considered the most effective intervention for severe osteoarthritis, reducing pain and disability and restoring some patients to near normal function.

Osteoarthritis is one of the ten most disabling diseases in developed countries. Worldwide estimates are that 9.6% of men and 18.0% of women aged over 60 years have symptomatic osteoarthritis, including moderate and severe forms (WHO, 2010a). Age is the strongest predictor of the development and progression of osteoarthritis. It is more common in women, increasing after the age of 50 especially in the hand and knee. Other risk factors include obesity, physical inactivity, smoking, excess alcohol and injuries (EC, 2008b). While joint replacement surgery is mainly carried out among people aged 60 and over, it can also be performed among people at younger ages.

Austria, Belgium, Germany and Switzerland have the highest rates of hip replacement (Figure 3.10.1). These countries also have the highest rates of knee replacement, along with Finland (Figure 3.10.2). Differences in population structure may explain part of these variations across countries, and age-standardisation reduces to some extent the variations across countries. But still, large differences remain and the country ranking does not change significantly after age standardisation (McPherson *et al.*, 2012). Beyond different population structures, a number of other reasons may explain cross-country variations in the rate of hip and knee replacement: i) differences in the prevalence of osteoarthritis problems; ii) differences in the capacity to deliver and pay for these expensive procedures; and iii) differences in clinical treatment guidelines and practices.

The rate of hip and knee replacement has increased over the past ten years in many European countries, due in part to population ageing but also the growing use of these interventions to improve functioning among elderly people (Figures 3.10.3 and 3.10.4). In Denmark, the hip replacement rate increased by 40% between 2000 and 2010, while

the knee replacement rate more than tripled. Similarly, in Spain, the hip replacement rate increased by 25% and the knee replacement rate more than doubled during the past decade. The growth rate for both interventions was somewhat slower in France, but still the hip replacement rate increased by nearly 10% while the knee replacement rate rose by 60% between 2000 and 2010.

The growing volume of hip and knee replacement is contributing to health expenditure growth since these are expensive interventions. In 2009, the estimated price of a hip replacement on average across European countries was about EUR 7 300, while the price of a knee replacement was EUR 6 800.

Definition and comparability

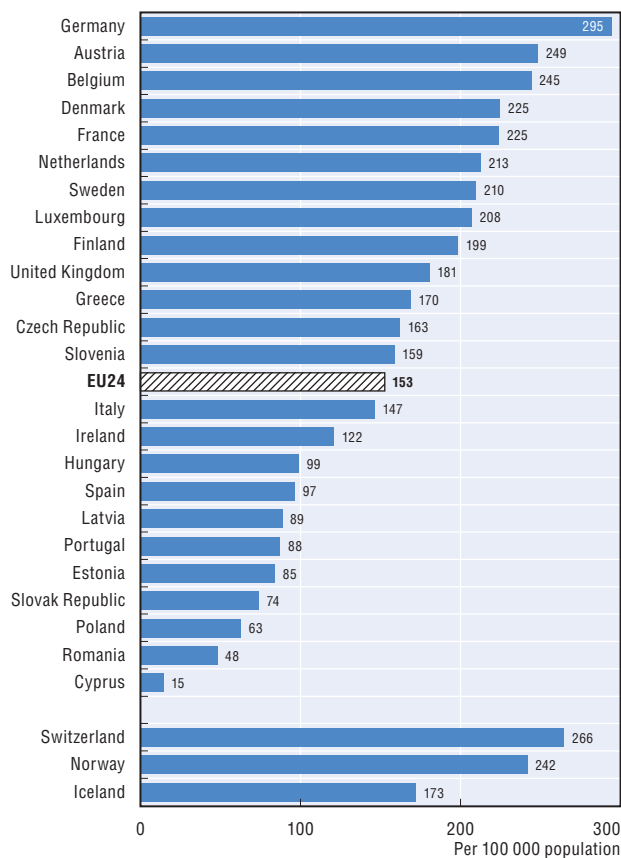
Hip replacement is a surgical procedure in which the hip joint is replaced by a prosthetic implant. It is generally conducted to relieve arthritis pain or treat severe physical joint damage following hip fracture.

Knee replacement is a surgical procedure to replace the weight-bearing surfaces of the knee joint to relieve the pain and disability of osteoarthritis. It may be performed for other knee diseases such as rheumatoid arthritis.

Classification systems and registration practices vary across countries which may affect the comparability of the data. Some countries only include total hip replacement (*e.g.* Estonia) while most also include partial replacement. Certain countries only include initial knee replacement while others also include revisions.

In Ireland, the data only include activities in publicly-funded hospitals (it is estimated that over 10% of all hospital activity is undertaken in private hospitals).

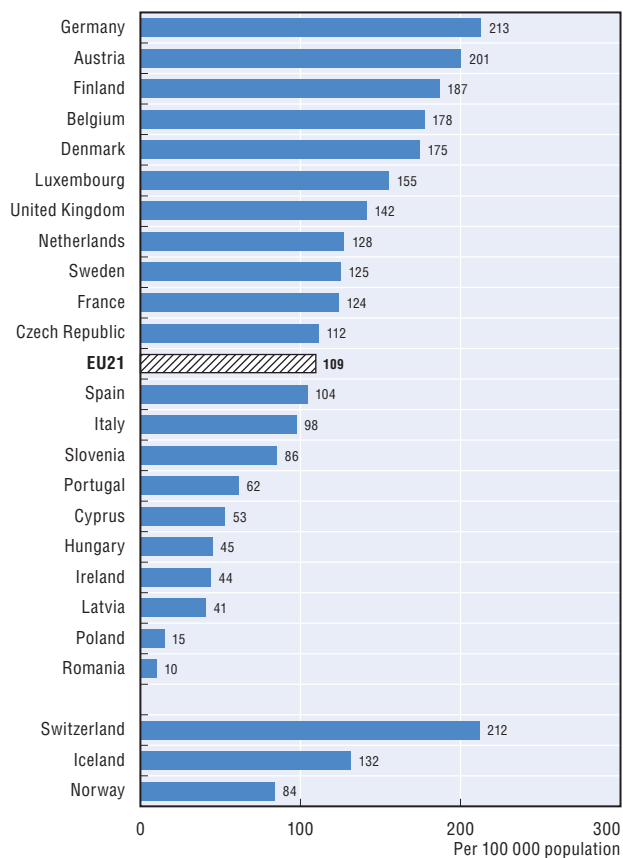
3.10.1. Hip replacement surgery, per 100 000 population, 2010 (or nearest year)



Source: OECD Health Data 2012; Eurostat Statistics Database.

StatLink <http://dx.doi.org/10.1787/888932704608>

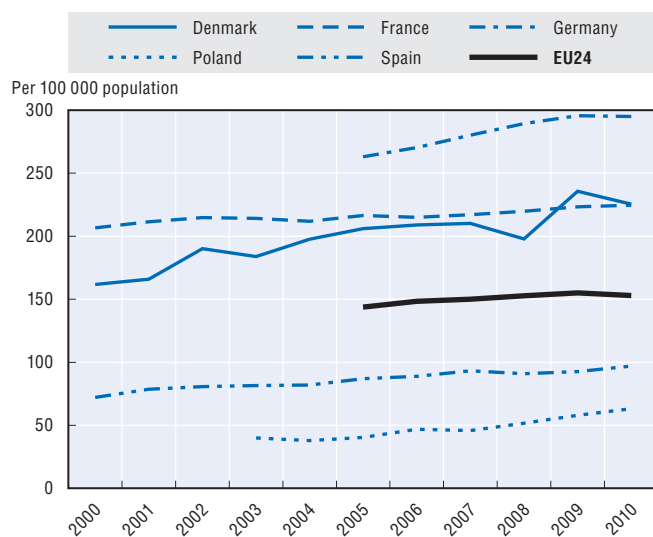
3.10.2. Knee replacement surgery, per 100 000 population, 2010 (or nearest year)



Source: OECD Health Data 2012; Eurostat Statistics Database.

StatLink <http://dx.doi.org/10.1787/888932704627>

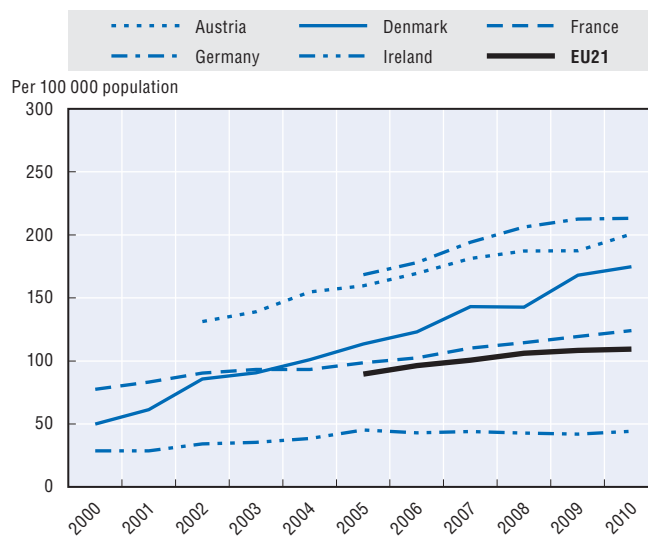
3.10.3. Trend in hip replacement surgery, 2000-10, selected countries



Source: OECD Health Data 2012; Eurostat Statistics Database.

StatLink <http://dx.doi.org/10.1787/888932704646>

3.10.4. Trend in knee replacement surgery, 2000-10, selected countries



Source: OECD Health Data 2012; Eurostat Statistics Database.

StatLink <http://dx.doi.org/10.1787/888932704665>