SUMMARY

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The use of alumina ceramics for total hip arthroplasty in Europe dates back almost 40 years. Pierre Boutin implanted the first ceramic-on-ceramic hip replacement in France in 1970.

Implant technology has improved the wear rate of implants. In other words, today, it is possible for your hip implant to last much longer no matter what age you have surgery. With new technology like ceramic-on-ceramic surfaces, implants simply wear better. Traditionally, implants were made to articulate with a metal femoral head and a polyethylene (plastic) acetabulum. Polyethylene is a soft material that inevitably wears. Therefore, young, active patients with total hip replacements can experience polyethylene wear within several years in some cases. Osteolysis, or bone resorption, becomes progressive, which may require polyethylene liner exchange and bone grafting at some point, or the problem will get even worse. In contrast, ceramic on ceramic bearings exhibit low wear and osteolysis is limited. As a result, this can inevitably prolong the lifespan of a hip replacement implant.

The use of alumina ceramic in total hip replacement has a long and successful clinical history. By taking a ceramic femoral head and articulating it against a ceramic acetabular component you can minimize particle debris, which can cause early implant failure. The alumina oxide material provides both high strength and wear resistance, and has been shown to last longer than traditional metal and plastic components. The manufacturing of these products has evolved into a state-of-the-art process to ensure a high-quality

component. Today, 100% of all products are inspected before leaving the implant to help ensure a proper fit and function. No matter what your age, everyone wants to continue an active lifestyle Ceramic-on-Ceramic technology can help you achieve that goal. By providing a superior quality implant that simply wears less than traditional total hip implants. Greater implant longevity equals better quality of life.

- Alumina ceramic has numerous properties that make it an ideal bearing surface in hip replacements, most notably its high density and smooth surface finish, which is superior to a metallic finish.
- Improvements in ceramic quality, taper technology and tribology have all increased confidence in ceramics for clinical applications.
- Alumina head fracture and head or socket wear are the most frequent causes of failure in ceramic arthroplasties.
- Deep vein thrombosis (DVT) is a major complication after hip arthroplasties in Europe and North America. The reported incidence of DVT in Europe and North America ranges from 12 to 23% following total hip arthroplasty. The US Food and Drug Administration (FDA) approved the use of the low-molecular weight heparin dalteparin sodium in a once-daily, 14-day dosing regimen to prevent DVT after hip surgery
- Calf and popliteal thrombi are the most common forms of DVT.