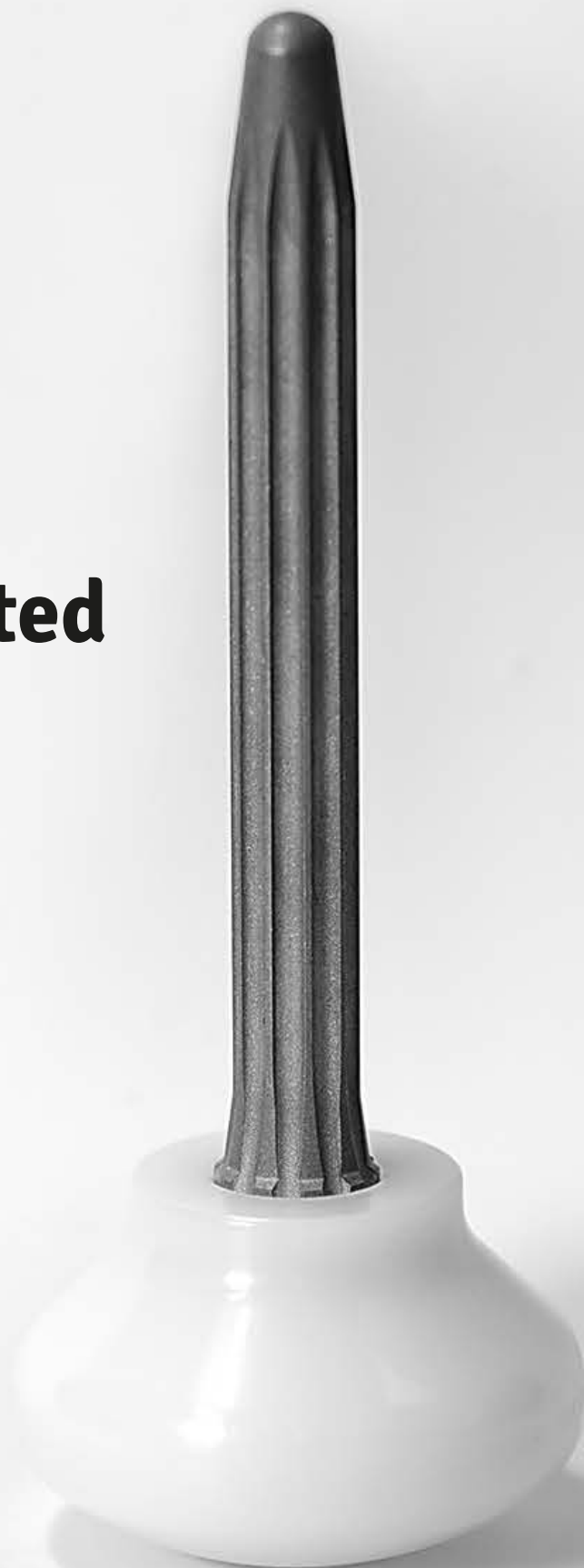




# **Distal load Osseointegrated implant for transfemoral amputees**

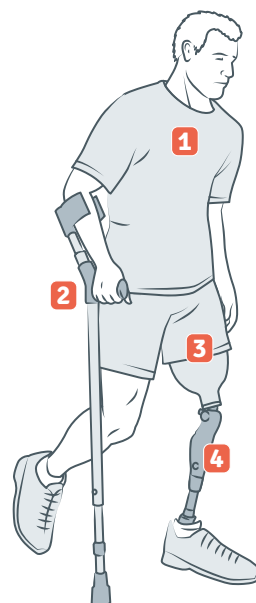


# Keep Walking Implant

The implant is inserted into the medullary canal of the femur, therefore providing a bearing surface at the end of the limb. It relieves typical problems found in transfemoral amputees.



## ✗ Problems with amputees

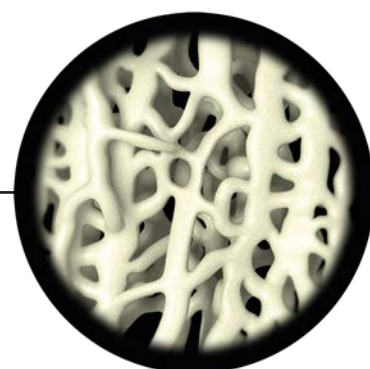


- 1 Fatigue**  
Patients consume more oxygen due to the extra effort they have to make.
- 2 Gait changes**  
Need more walking support.
- 3 Problems with the stump**  
Stump volume changes, sweating and pain.
- 4 Poor control of the prosthesis**
- 5 Osteoporosis of the femur**  
Due to the lack of load transmissions to the femur.

## ✓ Benefits of the implant



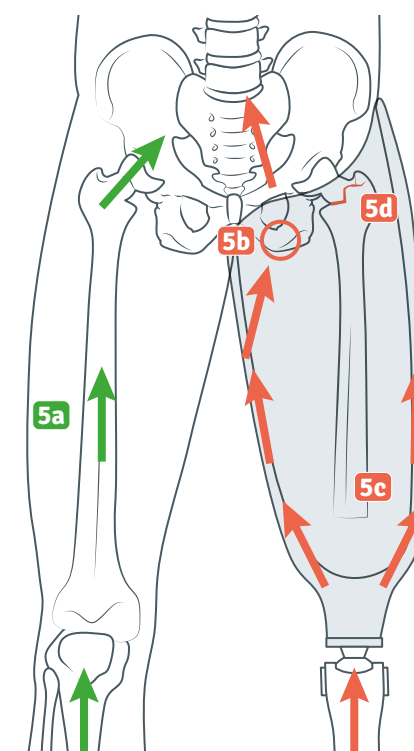
- 1 Greater resistance**  
Self-dependence increases.
- 2 Improved Biomechanics**  
Less support is required.
- 3 Less socket discomfort**  
Ischium support is reduced. Socket ventilation openings can be incorporated.
- 4 Greater control of the prosthesis**
- 5 Improvements in the femur**  
The implant provides distal support in the socket so the femur bears weight again.



Healthy femur



Femur with osteoporosis



**Load Transmission**  
The change in load transfer patterns develops in femur osteoporosis.

- 5a Healthy leg**  
The weight loads pass through the femur, thereby maintaining bone mineral density.
- 5b Amputated Leg**  
The load forces pass from the prosthetic leg to the socket and from here to the ischium and spine.
- 5c** The distal end of the femur hardly receives any loads.
- 5d** This weakens the bone structure increasing fracture risks.

## Parts of the Keep Walking Implant

It can be used on amputated patients or whilst undergoing amputation surgery.

### Stem

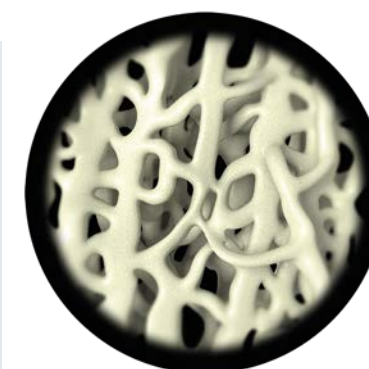
It is press-fit inserted into the medullary canal of the femur. The stem is made of grooved titanium with a rough surface for secondary fixation by osteointegration.

### Spacer

It is made of rounded polyethylene in order to create a wide and comfortable surface for distal weight bearing.

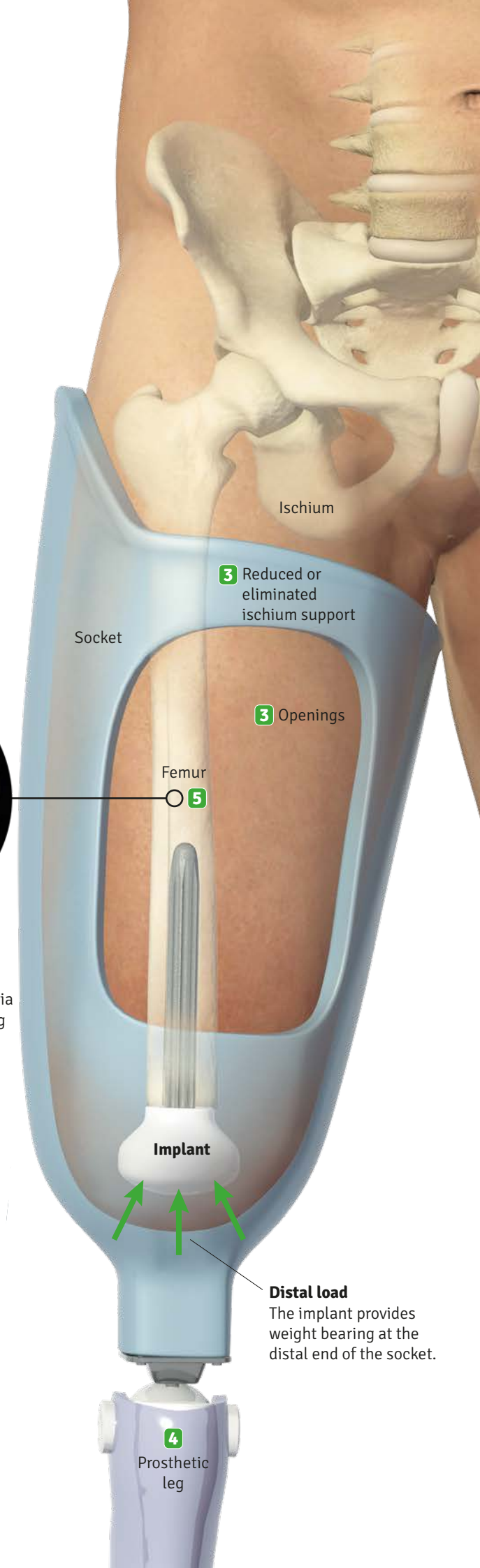
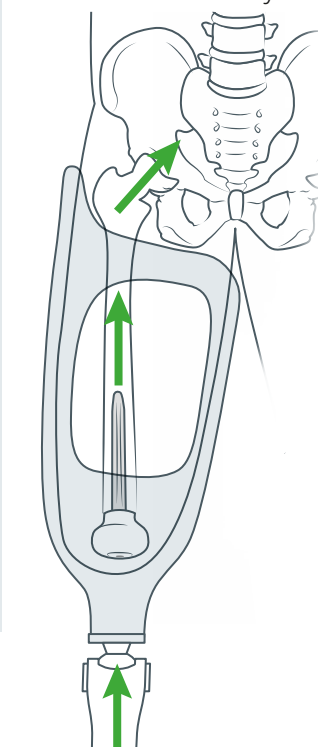
### Plug-Screw

For implant assembly. It enables the evolution of the implant into a direct skeletal attached system (still under development).



Healthy femur

- 5** Weight loads are transmitted via the femur, therefore recovering mineral bone density.

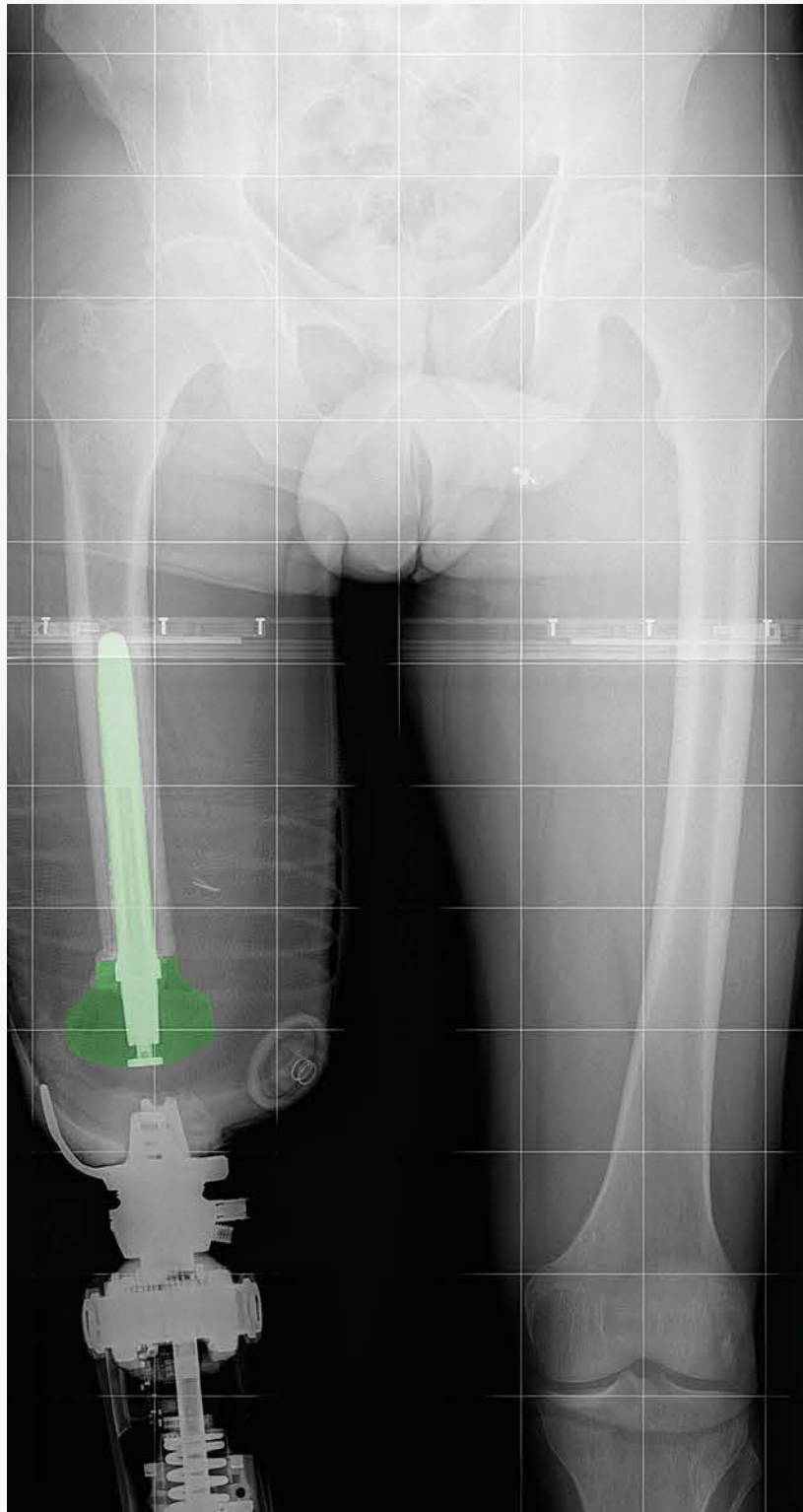


**3** Reduced or eliminated ischium support

**3** Openings

**5**

**Distal load**  
The implant provides weight bearing at the distal end of the socket.



For Further information:



[www.keepwalkingimplant.com](http://www.keepwalkingimplant.com)



[www.tequir.com](http://www.tequir.com)