

# An Overview on Recent Advancements in Biomaterials for Femur Bone Replacement

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Femur bone is the longest and strongest bone in human body, also called as Thigh bone. It is around one-fourth of height of individual. At upper end it connects with hip bone and at lower end it connects with patella and tibia. It is composed of three parts such as head, shaft and neck. The function of femur bone is to support the weight of the body and allowing the motion of leg. The femur bone injury is mainly occurred by vehicle accidents, fall from height. Symptoms of femur bone diffuse pain, weakness and inability to bear weight on the injured leg. To replace the damaged femur bone, biomaterial implants are used. The widely used biomaterial for femur bone implants is Stainless Steel (SS 316L) and Titanium (TI-6AL-4V). TI-6AL-4V is the most commonly used materials today for bone implants. It has good biocompatibility, high tensile strength, light weight, high corrosion resistance. The drawbacks in this material are poor strength and corrosive to strong acids. This review paper is mainly focused on the various biomaterials used for femur bone replacement and its recent advancements.

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