Bone Surrogate Materials

Biomechanics of Orthopaedic Implants Presentation
Katherine Beardsley
September 9, 2002
Bone surrogate materials

- Hydroxyapatite
- Polyurethane foam
- High density polyetherurethane
Hydroxyapatite

- Similar to mineral portion of natural bone
- Allows for the rigidity of the bone
- Can be used in implants to stimulate new bone growth
Camceram®
Sawbones®
Applications

- Implants can be coated with HA to stimulate bone growth around the implant
- Biomechanical testing
References

- Sawbones website: www.sawbones.com
- CAM Implants website: www.camimplants.com/en
- Heiner AD, Brown SA, Davy DT. Effects of mechanical testing device variables on polymer composite femoral stem strains.