

PROJECT KUTEMBEA*

CREATING LOW-COST PROSTHESIS FOR DIABETIC AMPUTEES IN SOROTI, UGANDA

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Diabetes is spreading through developing nations including Uganda at an alarming rate. In many cases, diabetes isn't diagnosed until a serious complication, such as loss of vision, or a wound that won't heal, manifests itself. Furthermore, the lack of resources, lead to a very high rate of diabetic complications, perhaps the most debilitating of which is lower-limb amputation. In fact, at Soroti Regional Referral Hospital in Uganda, diabetes is the leading cause of amputation.

Project Kutembea is the result of a partnership between The Cooper Union for the Advancement of Science and Art and The Global Diabetes Institute (GDI) at Albert Einstein College of Medicine. The shared goal was to design a low-cost prosthesis to help the diabetic amputees in Soroti Regional Referral Hospital in Uganda, whose loss of limb limits their ability to work and support themselves and their families. Freshmen students from a section of EID 101 rose to the challenge of designing and building two prototypes of a low-cost, below-knee, trans-tibial prosthesis. Using material local to Uganda, the two prototypes cost less than \$30 each. They were designed to be comfortable, robust for use in a rural community with humid climate and needing low maintenance.



*kutembea means "walking" in Swahili

WORK SPACE **SHOWCASE**

THE COOPER UNION ANNUAL STUDENT EXHIBITION
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