



LIMBEFINITY

OneLim : Adj ta le l we lim p theti f hild en

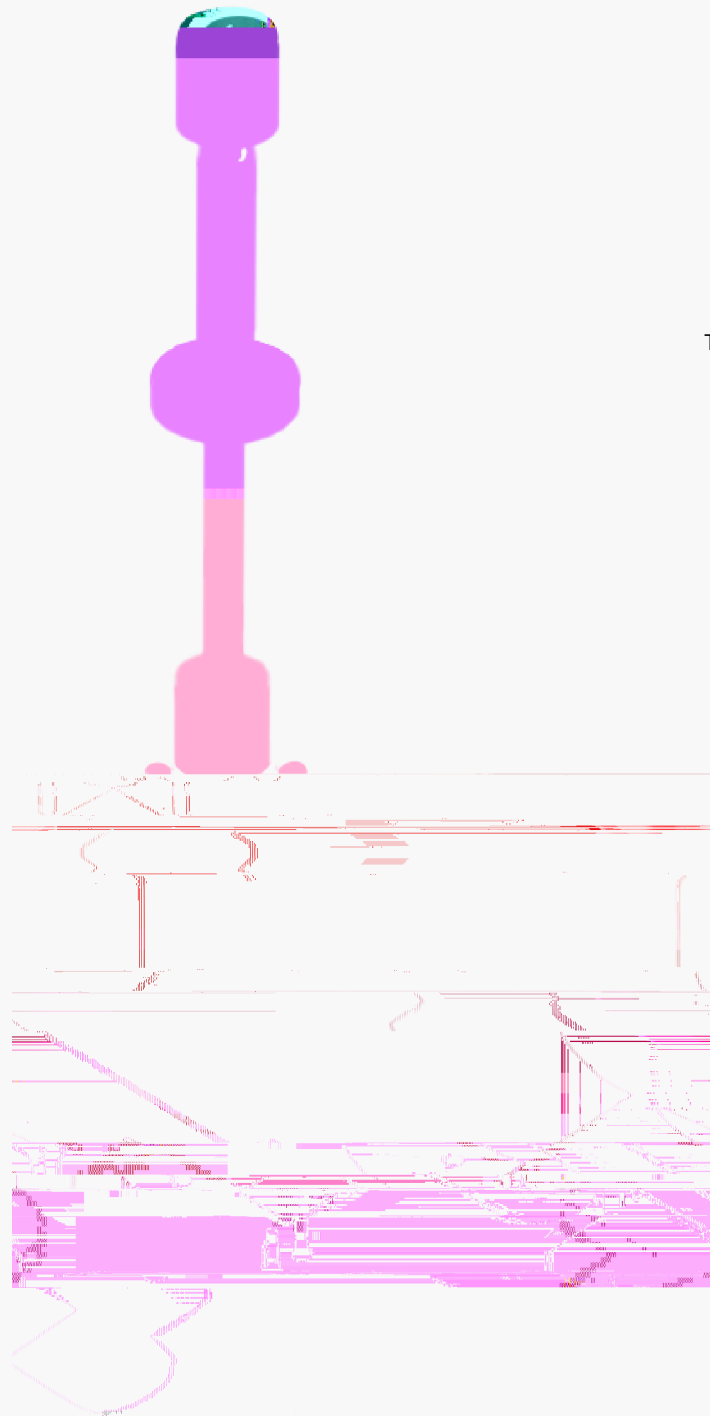


The Problem

Having an improperly fit lower limb prosthetic can cause long-term damage to the human body. The added physical stress can cause hip, back, and knee pain. If one limb is longer than the other, the posture and gait become unbalanced. If the foot is disproportionate to the length of the limb, the feet will compensate by turning outward. In either case, the imbalance creates a wearing on the hips and causes osteoarthritis.

To prevent this issue, the patient requires a new assembly 1 to 2 times annually between ages 1 to age 14, with each component of the assembly needing 3 appointments for proper refitting. This causes the parent to take the child out of school or miss out on quality time as they miss work.

The OneLimb Assembly is composed of OneFoot and OneLeg. Our assembly ensures proper connection with any prosthetic component via the pyramid joints. This provides the end user with complete flexibility when using our products.



The hollowed interior that the male pyramid adapter fits into.

Next Steps

Limbfinity plans to continue to iterate this design by making updates to material and improving overall design aesthetic. Limbfinity will also provide customization capabilities to the end user to improve customer engagement.

To conduct more testing on patients, the assembly will need to have FDA clearance and a partnership with a local, Boulder, CO, pediatric prosthetist or orthotic specialist.

How We Help

- Annual savings of 10 thousand dollars in healthcare
- Hours saved in doctor's office
- Prevention of future health issues
- Simpler coverage
- Replacing multiple prosthetics into one assembly for two years

Conclusion

Through the Engineering through Social Innovation course offered by the University of Colorado Boulder, and sponsored by the Engineering for Social Innovation program, Limbfinity was able to design, manufacture, test, and present a functional prototype of the product.

Because when it comes to your children, there is *one* solution.