

Hand prosthetic gives teen new independence

25 August 2011, by Nancy Owano



(PhysOrg.com) -- A 15 year old British girl, Chloe Holmes, has been in the news as being among the youngest in Europe to wear a special prosthetic hand with state of the art bionic fingers. The bionic digits have enabled her to cut her own food, to eat with knife and fork, and brush her teeth for the first time since stricken with streptococcal septicemia, after coming down with chicken pox, at three years of age. The illness caused her to lose all her fingers on the left hand. She was left with one thumb and half a finger on her right hand. Sensors in the sleeve of her prosthetic hand made by Touch Bionics in Scotland enable her to manipulate objects, no small achievement considering the difficulties amputees have traditionally faced in living with prosthetic hands.

The company has enhanced its technologies to the point of enabling prosthetic [fingers](#) to grip narrow objects, referred to as the "credit card grip," and "power hold" motions for wider objects like coffee mugs.

The bionic hand that has helped her experience such milestones cost approximately £38,000 (\$54,700). An older, and far less expensive, generation of artificial hands have enabled people with hand amputations to open and close their

hands; a newer generation of myoelectric prostheses enable the manipulation of fingers for greater hand independence. Touch Bionics has since 2007 been turning corners in myoelectric prostheses with enhancements that showcase how far the technology has come.

The company's BioSim software allows medical practitioners to observe patients' myoelectric impulses and to deploy control options and features.

Touch Bionics has a family of prosthetic products: i-LIMB Pulse, for advanced activity needs, the i-LIMB hand, and ProDigits for partial hand absence.

The i-LIMB hand, with its five individually powered digits, won the 2008 Royal Academy of Engineering MacRobert Award. It's a prestigious prize in the UK, awarded for innovations in engineering.

More information: via [Daily Mail](#)

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APA citation: Hand prosthetic gives teen new independence (2011, August 25) retrieved 25 September 2021 from <https://phys.org/news/2011-08-prosthetic-teen-independence.html>

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