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Utilizing 3D printers to fabricate lower limb prosthesis

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In this study, additive manufacturing was used to fabricate lower limb prosthetic devices. Amputees greatly benefit from having a custom-made prosthetic device. Additive manufacturing has already proven successful in increasing the accessibility to custom-made hand prostheses, but there still needs to be an evaluation of how additive manufacturing could be employed in the creation of lower limb prostheses. In this study, polylactic acid was utilized as the initial material to 3D print the prosthesis. The results showed that additive manufacturing can be a successful method to produce custom made prosthetic device with appropriate mechanical properties. The price of the produced prostheses was much lower than the existing ones in the market. The results of this study can be used to produce lower limb prostheses for amputees. The patients can save a lot of money by 3D printing their prosthetic device at home when they need a new one.

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