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IISc develops self-regulating footwear for diabetics

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The 3D printed specially-designed sandals can be customised to an individualâ??s foot dimensions and walking style



Researchers in the Department of Mechanical Engineering, Indian Institute of Science (IISc), Bengaluru in collaboration with the Karnataka Institute of Endocrinology and Research (KIER), have developed a set of unique self-regulating footwear for persons with diabetes.

The footwear – a pair of specially-designed sandals – developed by the IISc-led team is 3D printed and can be customised to an individual's foot dimensions and walking style. Unlike conventional therapeutic footwear, a snapping mechanism in these sandals keeps the feet well-balanced, enabling faster healing of the injured region and preventing injuries from arising in other areas of the feet.

The footwear can be especially beneficial for people who have diabetic peripheral neuropathy – those who suffer from nerve damage caused by diabetes, leading to a loss of sensation in the foot.

The team is collaborating with start-ups Foot Secure and Yostra Labs to commercialise their product.