Innovation to speed up recovery time from a finger injury

LOCATION: Málaga
DURATION: 1'43"

SUMMARY: Researchers from the Mechanical Engineering Department of the University of Málaga have developed a device that facilitates the passive movement of fingers. It speeds up recovery time from a fracture, a sprain or tendon surgery.

VTR:

A prosthesis that exactly simulates the movements of fingers, that's the result of the work of these researchers from the Mechanical Engineering Department of the University of Málaga. This device speeds up recovery time from a fracture, a sprain or tendon surgery.

ALEX BATALLER
Industrial Engineering professor

"To recover mobility after suffering an injury, a fracture or, mostly, undergoing flexor tendon surgery. Very easy to use devices, in contrast to what we can currently find on the market, which is very sophisticated and complex."

Each device is designed virtually, personalised, and reproduces the movements of the patient's fingers, in addition it adapts to the length of their phalanges. Using this design and a 3D printer, the device is created with the desired characteristics.

JUAN ANTONIO CABRERA
Industrial Engineering professor

"We exactly reproduce the movement of the finger… Each patient has different measurements and a different movement pattern."

When a finger is immobilized after an injury, problems such as oedemas or swelling in the scar may come up, as a consequence of the lack of movement. With this device we can program movements that don't require any effort from the patient, avoiding these problems and speeding up recovery time.

ALEX BATALLER
Industrial Engineering professor

"To use a device that acts as a splint, immobilises the finger and, at the same time, can be programmed to perform these rehab exercises. There's movement after a few days, but always passive, the patient mustn't try to do any effort."

The device also has a control system that can be used by the patient or programmed following medical guidelines. Now, the next step is to conduct a clinical trial and check both its comfortability and the real improvement produced in patients.

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