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Researchers at Anant National University create novel pain relief jacket and knee cap for elders

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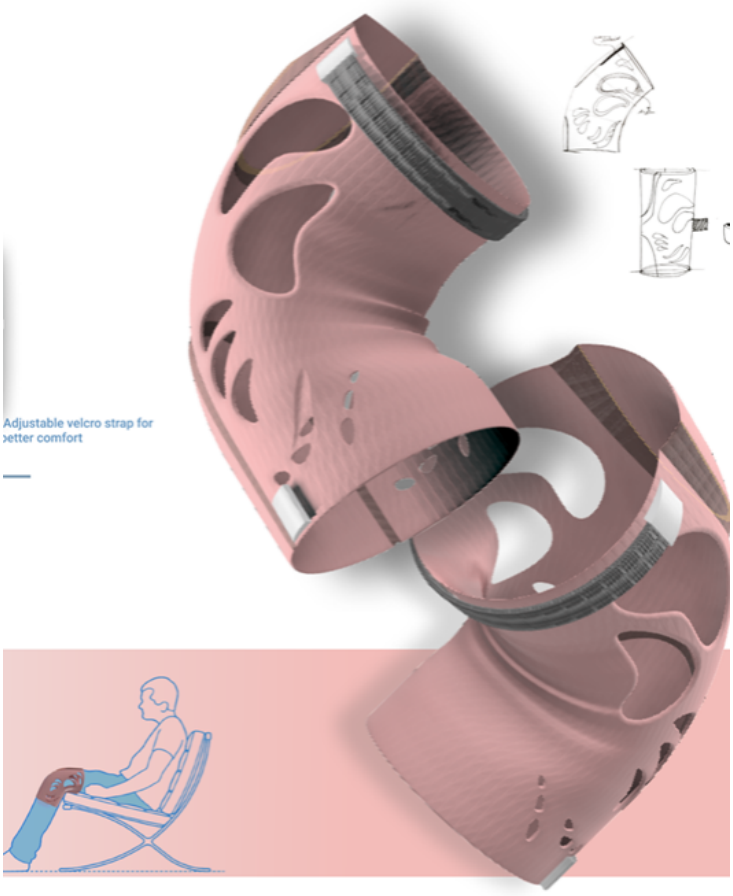
The idea behind the Pain Relief Jacket was planted due to the alarming increase in arthritis patients across age groups



Students at Anant National University in Ahmedabad, under the mentorship and guidance of their professors, have created unique Pain Relief Jacket and Knee Cap for the elderly. The creation of these products has happened post studying the need for such innovations amongst people.

It was found that the Centers for Disease Control and Prevention (CDC) has estimated that nearly 180 million adults in India have been diagnosed with some form of arthritis, representing approximately 18% of the adult population. Additionally an estimated 48.9 million adults reported difficulty performing daily activities due to their arthritis symptoms, thus making arthritis a leading cause of disability in India in 2019.

The customisable arthritis jacket has been designed to provide support, compression and warmth. The jacket mechanism contains three Peltier devices that rotate and produce heat to the spine through a gel medium, as well as rotate vertically to the spine and position themselves to the location of the pain.

On the other hand, the kneecap's pore-like structure allows continuous airflow around the knees, thus preventing sweating, a key USP of the product. The kneecap uses stretchable elastic material between the quadriceps muscles of the upper thigh and the tibialis anterior muscle of the lower part of the leg. It comprises magnetic acupressure objects placed evenly around the kneecap, which provides constant relief to the knees while working.