A Helping Hand for Arthritis Pain Relief & Rehabilitation

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23% of all adults in the US are affected by arthritis which is the stiffening and inflammation of joints. As it stands right now, arthritis is incurable; the only form of “healing” comes from rehabilitation. However, many products on the market right now targeting consumers with arthritis only addresses in an either/or format: one can either get pain relief or one can get rehabilitation. In response to the lack of products that address both pain relief and rehabilitation, we decided to design a finger strengthener that utilizes springs for rehab purposes and heat and vibration for pain relief. The strengthener allows for the consumer to exercise their finger muscles since repetitive exercises to the affected joints show results of rehabilitation. When the spring is pushed down, a wooden dowel presses down on a button which activates the vibration motor. In terms of pain relief, vibrations of 60 Hz minimum are shown to relieve pain; heat of 130-135ºF also helps with pain relief. By having the pain relief aspect activated after the rehabilitative aspect, our design works as a sort of work & reward system. By having such a design, we are able to address the rehabilitative and pain relief needs of the consumer.