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Assistive Utensil: A Spork for Hand Tremors and Spatial Awareness
Ana Font Hernandez, Jacob Kabariti, and Troy Taylor

Taken for Granted—The Act of Eating

Tremors make the everyday activity of eating a challenge.

This uncontrollable limb shaking affects a person's nutrition and psychological health (e.g., state of frustration, social withdrawal from the embarrassment of eating in the company of others, etc.)

Proposal

An utensil that aids with balance, self-reliance, and the mental well-being of individuals suffering from tremors.

Device Benefits

Interior balance weight to help counter hand/arm shaking.

Enlarged handle to compensate for weak gripping ability.

Deep spoon/fork (spork) bowl to accommodate food loss due to tremors.

Spatial sensor with haptic feedback to assist the visually impaired.

Issues to address

Design (work in progress)

Roll joints allow weight bar to pitch during shaking

Interior bar weight supported by roll joints

Haptic feedback sensor

Thick handle grip

Spork bowl eating end

The Issue at Large

Tremors are an involuntary, rhythmic muscle contraction leading to shaking movements.

Tremors can occur on its own or be a symptom associated with a number of neurological disorders such as MS, stroke, Parkinson’s, drug withdrawal, etc.

One study estimated that approximately 7 million people in the USA have tremors, and between 0.5 – 1 million have Parkinson’s [1]

According to the World Health Organization, an estimated 253 million people live with vision impairment [2]

The Next Steps

Testing the device with tremor and blind patients.

Finding funds for the project.

References


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