Docket #: S22-366

Innovative Exoskeleton device for knee osteoarthritis management

Knee osteoarthritis is the most common cause of musculoskeletal pain in adults, leading to limited mobility and various health issues. This breakthrough technology developed by Stanford researchers offers a promising solution. The exoskeleton device, specifically designed to reduce knee contact forces during walking, has shown remarkable potential for pain reduction and improved bone health in individuals with knee osteoarthritis. By intelligently offloading forces from the leg, the exoskeleton device directly addresses the underlying cause of knee pain associated with high loads. The goal is to extend the natural health of the knee, potentially delaying or even eliminating the need for premature knee replacements.

In initial laboratory tests, the device has demonstrated substantial reductions in knee contact forces, exceeding those achieved by existing devices such as personalized gait retraining, assistive knee exoskeletons, and walking poles. With an impressive reduction of approximately 40%, our exoskeleton device holds significant promise for effectively mitigating knee contact forces and revolutionizing knee osteoarthritis management. This technology empowers patients with a non-invasive, highly effective solution that enhances their quality of life, alleviates pain, and promotes better bone health. Join us in making a lasting impact on millions of individuals by revolutionizing knee osteoarthritis management through this state-of-the-art exoskeleton device.

Applications

- Knee Osteoarthritis Management
- Preventative Care
- Non-Invasive Treatment

Advantages

- Enhanced Pain Reduction
- Improved Mobility and Functionality
- Non-Invasive and Non-Surgical Approach:
- Personalized and Adaptive Rehabilitation

Patents

- Published Application: WO2024081367

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