



PENDING

(IN202311067737)

Neck exoskeleton device

NEED

Long hours of forward head posture in workplaces and homes are causing chronic neck fatigue and musculoskeletal disorders. Muscle imbalance and prolonged strain lead to 65% of neck pain cases among office workers. But what if neck muscles received support only when needed?

TECHNOLOGY OVERVIEW

This neck exoskeleton device supports the neck muscles during flexion without restricting normal movement. It uses a passive elastic system that activates only beyond a certain range, reducing muscle load and strain. Its wearable, modular design fits daily use without interfering with posture or mobility.

TECHNOLOGY KEY FEATURES

Passive elastic unit engages during flexion; modular head and torso brace; adaptable resistance; clutch-triggered activation at threshold motion; supports without limiting mobility; ideal for prolonged posture correction and fatigue reduction.

[Read more here](#)

MARKET ANALYSIS

India's wearable medical device market is projected to grow at 23.2% CAGR to \$2.8B by 2033. Global exoskeleton market is projected to reach \$10.4B by 2033 at 16.5% CAGR. Key drivers include aging population, ergonomic awareness, and rehabilitation needs. (Sources: BIS Research, DataM Intelligence)

Target Industries

Applicable in ergonomic equipment manufacturers, rehabilitation and physiotherapy service providers, and workplace wellness solution developers. Ideal for sectors focused on musculoskeletal health, assistive wearables, and adaptive devices for high-risk or long-duration posture tasks.

AT A GLANCE

SDG 3 (Good Health & Well-Being),
SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry, Innovation & Infrastructure)

Technology is available for licensing/ co-development.

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