

exoPill

# AI-Powered Wearable Healthcare Solution

Data-driven Personalized Care  
with Therapeutic Solution

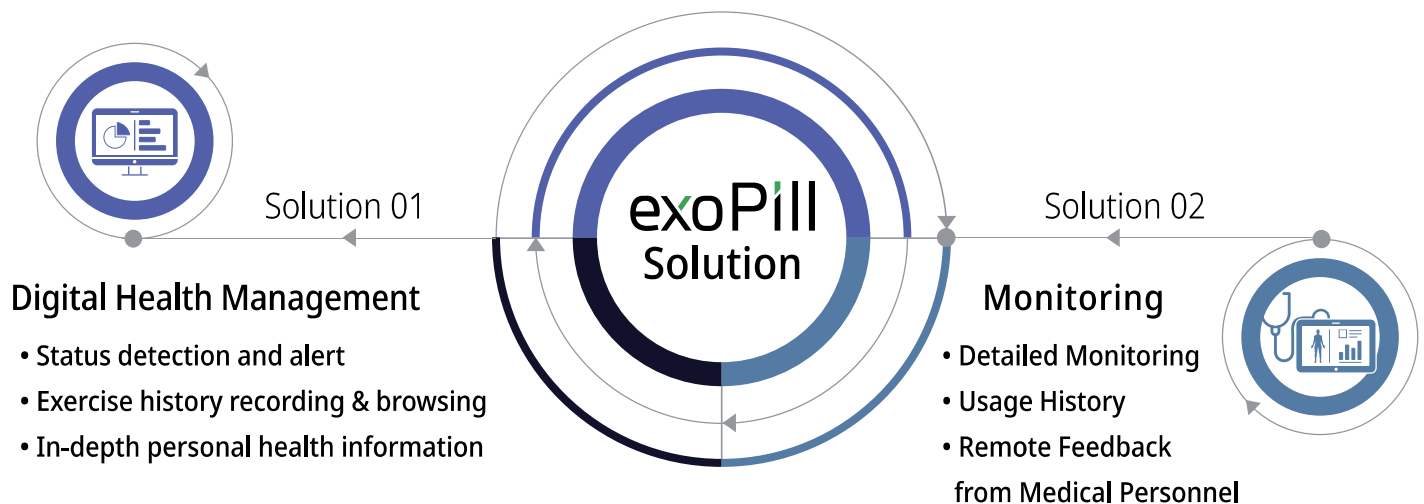


EXOSYSTEMS

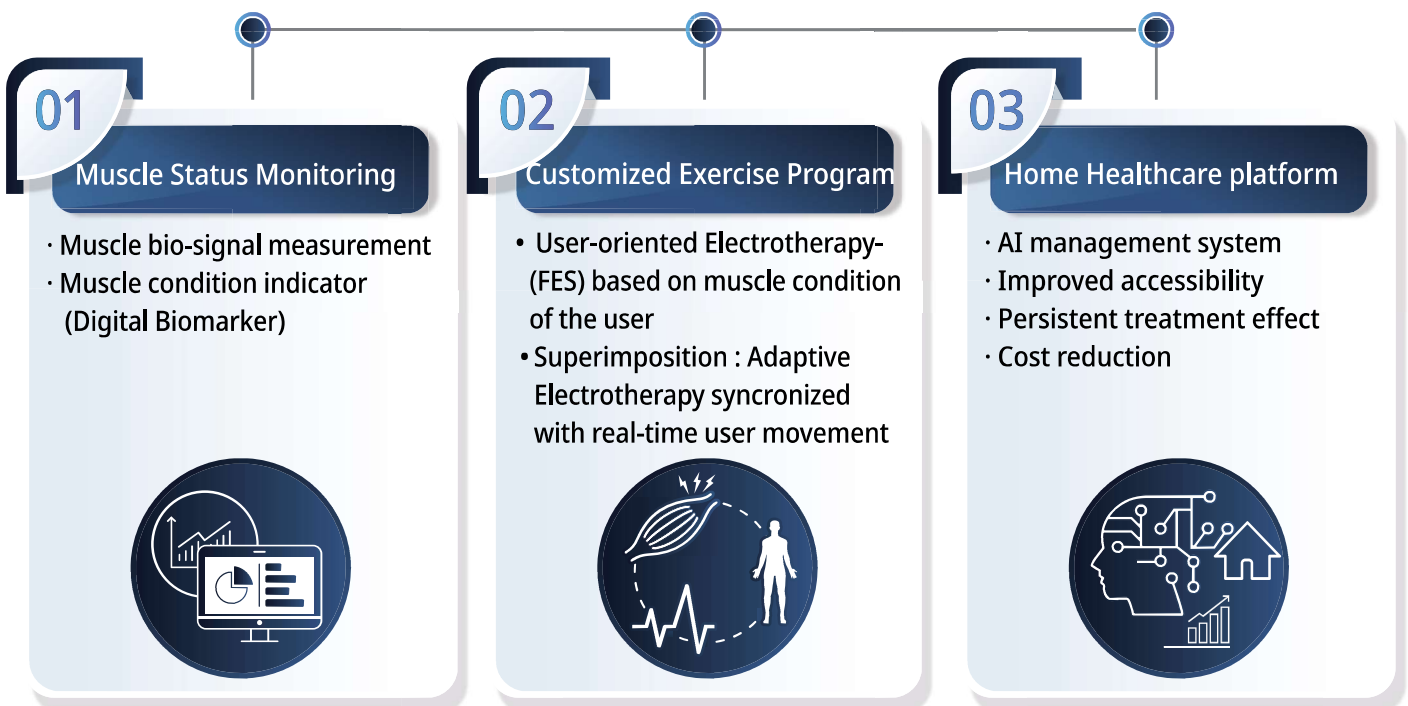
# exoPill

exoPill is a digital healthcare solution to provide personalized treatment based on AI analysis of the muscle biometric data acquired by its wearable device.

## EASY CARE, SIMPLE MANAGEMENT



## Core Value



# Recover your muscle, Recover your life.



## exoPill



### Professional Electrotherapy

- Modes specialized in 7 different symptoms
- 30 levels of fine electrical intensity control

\* Functional Electrical Stimulation(FES): a technique that uses low-energy electrical pulses to artificially generate body movements in individuals who have been paralyzed due to injury to the central nervous system.



### EMG Measurement Functionality

- Muscle condition quantification by EMG measurement
- Indicator computation via AI data analysis



### Mobile Sync & Stand-alone Mode

- Product operation and measurement result check
- Stand-alone operation with Cradle control



### Electrical safety

- Entering automatic sleep mode when device is inactive for more than 5 minutes.



### Simple and convenient wireless system

- Universal attachment of modules on any part of your body
- No need to untangle wires before/during usage.

## Product for Medical Institution

[8 channels]



[16 channels]

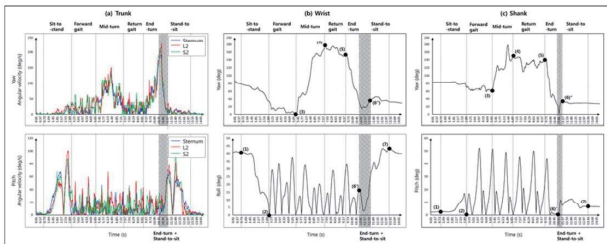


\* Coming soon in 2023

# Muscle Functionality Monitoring

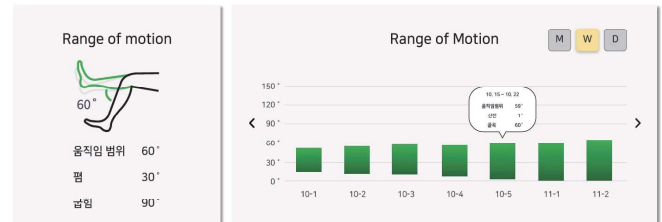
The data are visually recorded and furthermore suggest further direction by acquiring and analyzing various muscle data such as muscle strength, endurance, fatigue, and balance.

## Gait Pattern / Balance / Characteristics



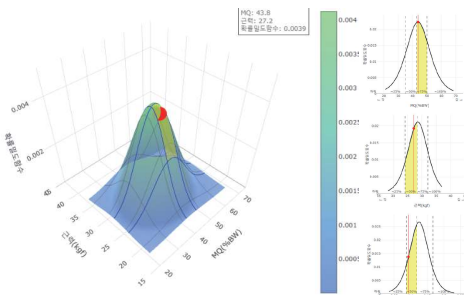
**Physical activity monitoring**  
via data analysis

## Range of Motion(ROM) Measurement



**Accurate measurement and monitoring**  
of user's joint range of motion(ROM)

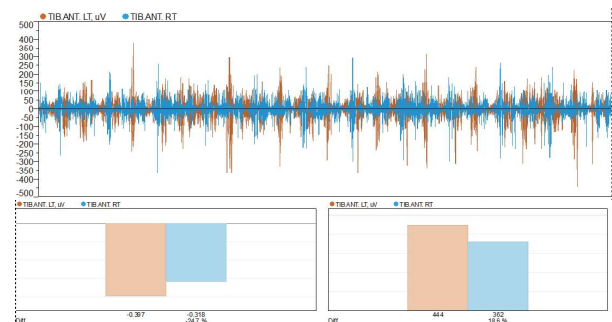
## MQ(Muscle Quality): Muscle Strength / Muscle Endurance



**Quantifying and classifying personal muscle data**  
based on measured muscle strength and muscle characteristics

**Locating one's muscle status**  
within a probability density function

## Left and Right Muscle Balance

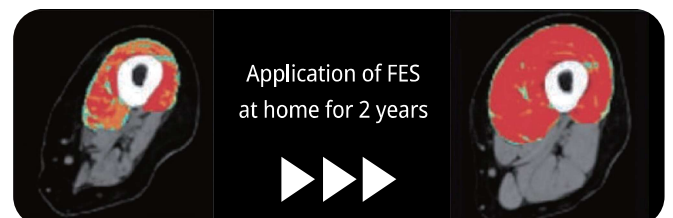
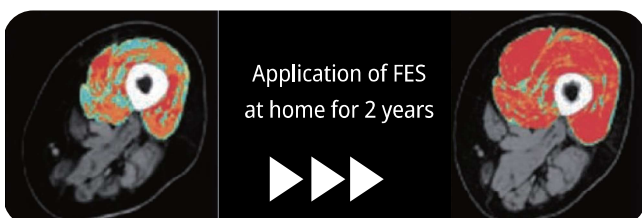


**Left and right muscle balance data monitoring**

## Rehabilitation Effect of Home-based FES on Denervated Muscles

Medical-level neuromuscular electrical stimulation applies low-energy electrical pulses to artificially generate body movements.

- Cross section of muscle of observed via CT scan after the subject performed FES at home for 2 years



# Check your muscle status on your smartphone!

\* Download from Google Playstore

Regularly check your muscle status and AI analysis result on exoPill App.



## AI Analysis and Mobile Management System



### ● Muscle status measurement

Regular monitoring of objective muscle condition by measuring left and right balance, ROM, muscle fatigue, strength, and endurance.

### ● My exercise record

Improving exercise time and performance based on objective muscle status, exercise pattern, and record data.

### ● Share results

Export and share muscle measurement, exercise, and electrotherapy record in image format.



## Personalized Muscle Improvement Program

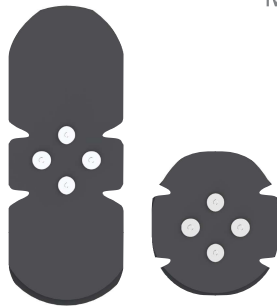
Provides customized muscle functionality improvement solution by providing sets of exercise programs and personalized electrotherapy optimized for one's quantitative muscle condition thanks to our by AI biomarker technology.



# Package Contents



\*Modules placed on a Cradle



Wet-electrode pad (4 EA)



15 W Power Adapter (1 EA)

\* Lightly remove dust or debris on the electrode surface with running water immediately after use. Recommended number of use is 15 to 20 times.

## Specification

### 01 Cradle

<b>Power Supply</b>	5V External adapter
<b>Size</b>	189 mm x 85 mm x 57 mm
<b>Weight</b>	270g
<b>Support Mode</b>	Stand-alone mode, app interworking mode
<b>Connection</b>	Bluetooth(BLE) 5.0
<b>H/W Configuration</b>	MCU, BLE Connection module, Charging Pin, Touch button, FND, LED, Buzzer
<b>Input</b>	Touch button (At the upper part of the cradle)
<b>Output</b>	Module status and FES setting display via FND and LED Cradle status display via LEDs and buzzers
<b>Basic Function</b>	Module battery charge Bluetooth based module health monitoring Bluetooth based module operation control(Stand-alone mode)

### 02 Module

<b>Power Supply</b>	Built-in battery (3.7V / LiPoL / 250mAh)
<b>Size</b>	50 mm x 59 mm x 23 mm
<b>Weight</b>	40g
<b>Connection</b>	Bluetooth(BLE) 5.0
<b>H/W Configuration</b>	MCU, BLE Connection module, Charging pin, Touch button, LED Bluetooth action command (App, Cradle)
<b>Input</b>	'+' / '-' Touch button (At the upper part of the module)
<b>Output</b>	Functional Electrical Stimulation (FES) Biosignal : sEMG, IMU Status display LED

**EXOSYSTEMS**

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