

# Stella BIO



## ELECTROMYOGRAPHY & ELECTRICAL STIMULATION FOR CLINICAL & HOME USE



Stella BIO is the 4+2 channel world's most sensitive electromyograph with implemented electrostimulation.

Stella BIO is based on four main technological concepts:

### 1. EMG-triggered functional electrical stimulation (EMG-FES, FES)

Patient initiates the movement. When EMG activity reaches a pre-set threshold level, the functional electrostimulation starts.

### 2. Electrical muscle stimulation (EMS)

Electric muscle stimulation (EMS) is a way to trigger muscle contraction via external electric impulses.

### 3. Electromyography measurements and biofeedback (EMG Biofeedback)

EMG biofeedback is a method of retraining muscle by creating new feedback systems as a result of the conversion of electrical activity of the muscle into visual and auditory signals.

### 4. Transcutaneous electrical nerve stimulation (TENS)

Transcutaneous electrical nerve stimulation (TENS) is a therapy that uses low voltage electrical current to provide pain relief.



Use EMG-triggered electrostimulation EMG-FES and EMG Biofeedback programs with games to:

- Enhance voluntary movement
- Make patients more aware of muscle activity
- Help to control the movement
- Train functional tasks (hand opening & grasping, hand-to-mouth)

This is a medical device. For your safety, use it in accordance with the manual or label. If in doubt, consult a specialist as this medical device may not be suitable for you.

# PATIENT GROUPS

Neurological (post-stroke, SCI, TBI, CP, neuropathy, foot drop etc)

- regain of lost functions
- strengthen the muscles
- decrease of the spasticity
- improve of the coordination

## Pelvic floor disorders

To improve urinary incontinence (urge, stress and mixed), fecal control, sexual disfunctions

- women after labour,
- women practising high-impact sports,
- older men and women with weak pelvic floor due to aging,
- men after prostatectomy

Learning to **control and strengthen** pelvic floor muscle is **crucial** in therapy of pelvic floor disorders.

## Orthopedic (after surgeries, muscle weakness, post-injury recovery)

- decrease of pain
- prevent muscle disuse
- strengthen muscles

Available programs:

- atrophy training
- muscle spasm relaxation
- circulation training
- agonist/antagonist training

## Pain management

Pain in neck area, shoulder, lower back, knee, ankle and other joints

Use different kind of TENS programs:

- conventional
- frequency modulated
- acupuncture-like TENS (AL-TENS)
- burst

to relieve and manage acute and chronic pain

## Sports

Healthy athletes can choose out of several sports programs:

- Exercise prep
- Active recovery
- Strength & Endurance training
- Power training

Training modules and protocols are pre-arranged, easy to follow and apply for specific patient groups.

Rehabilitation **games** make the process of training more interesting, engaging and fun!



"We've used Stella BIO as a part of our rehabilitation process. While using the EMG Biofeedback programs, my son was rediscovering his body and his muscles, how they work. Games are an excellent motivator for Kajetan and they work really well." Beata, Kajetan's mom (Spinal Muscular Atrophy patient)



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