

REPORT • NESA WORLD® X SIGNAL® • Sonographically proven vascular changes

X SIGNAL® IN INTERNAL MEDICINE AND CARDIOLOGY

What non-invasive neuromodulation is exceptionally effective for

Vascular dysfunction

Proven increase of lumen diameter and area of carotid artery after NESA session (RCT, ultrasound, []).

Hypertension - support

Sympathetic tone regulation. Trend towards significant systolic BP reduction.

HRV (heart rate variability)

Proven HR reduction after NESA with corresponding HRV improvement.

Metabolic syndrome

Adjunct therapy in insulin resistance and metabolic dysregulation - via ANS regulation.

Chronic fatigue (CFS / ME)

Mitochondrial support (P5) + ANS regulation (P7). Improved functional capacity.

Dysautonomia / POTS

Proven improvement of post-COVID dysautonomia in women ([]). POTS, orthostatic intolerance.

Endothelial function

Vagal activation ↑ nitric oxide (NO) ↑ vasodilation.

Cardiac rehabilitation

After MI - sympathetic regulation in restorative phase.

Sleep apnea-related symptoms

Sleep and ANS support in patients with OSA.

Chronic inflammatory syndrome

Vagal anti-inflammatory reflex - reduction of inflammatory markers.

Why XSignal® works in this discipline

Sonographically proven vascular changes - first RCT with ultrasound confirmation. • **Parasympathetic dominance** - vagal activation stimulates NO release and vasodilation. • **No medications** - does not interact with antihypertensives or antiarrhythmics. • **Systems approach** - ANS dysregulation is a common knot for many internal conditions. • **Pain-ANS axis** - scientifically confirmed as key for chronic internal conditions.

LD ↑ 1.15 **p < 0.001**

Cohen's d -
vasodilation

significant ANS
change

HR ↓

proven reduction

IMT ↓

Intima-Media
Thickness

RCT

ultrasound level

Scientific evidence: Acute sonographic changes in carotid artery after NESA (RCT) • Pain and the autonomic nervous system • Post-COVID dysautonomia in women

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For demos, training or clinical pilots - get in touch.