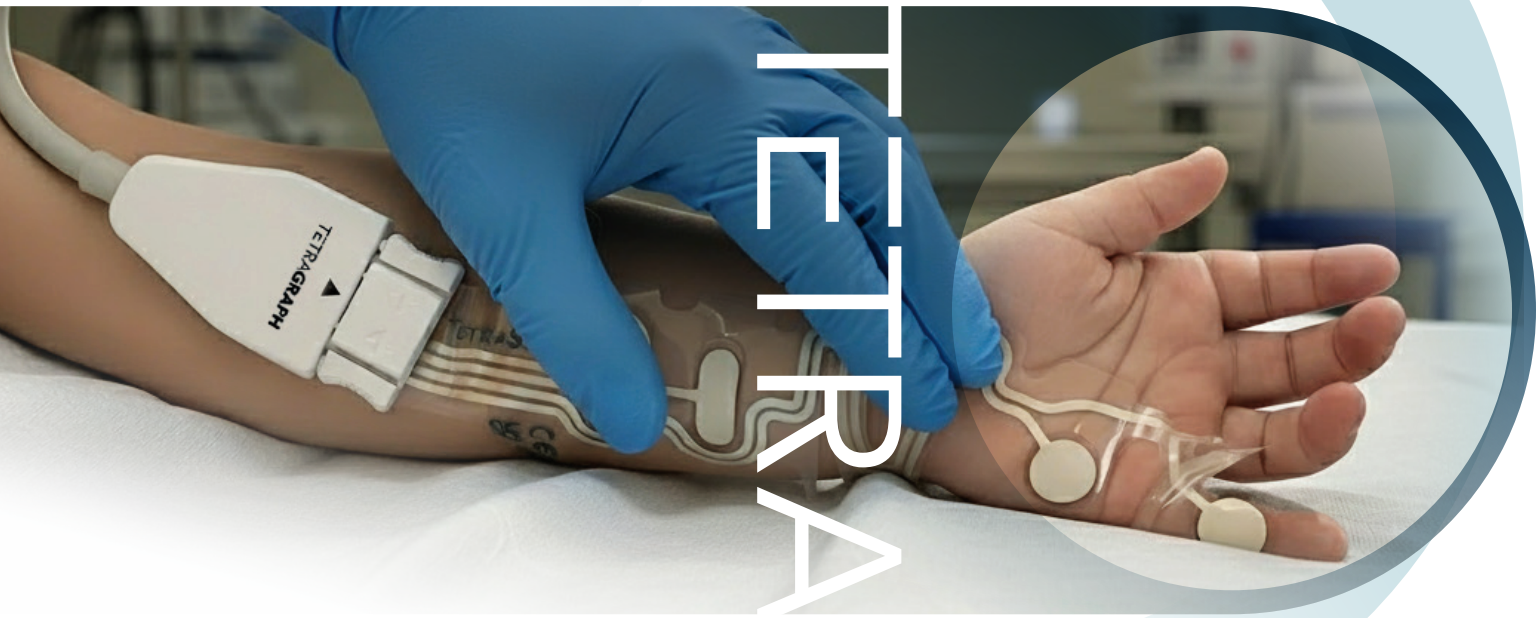
Next-Generation TetraGraph® with TetraSens® Pediatric



TETRAGRAPH

Every Child Deserves Gold-Standard Monitoring

Every child deserves a safe recovery. Yet, studies show that **16–40%** of patients experience residual paralysis when anesthesia is managed without objective monitoring (Faulk et al., 2024; Domenech et al, 2019; and Kotake, 2013). This risk is now preventable: **the latest guidelines call for quantitative electromyography (EMG) monitoring** as the standard of care (Veyckemans, 2025). With its pediatric-specific design, the Next-Generation TetraGraph® with the TetraSens® Pediatric sensor makes advanced monitoring simple, reliable, and gentle—helping clinicians protect their smallest patients at the moments that matter most.

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The Clinical PROBLEM

Residual paralysis is common:
Nearly 1 in 3 children still have residual neuromuscular block (TOF <0.9) at extubation when not quantitatively monitored (Faulk et al., 2024).

Consequences are serious:
rNMB increases risks of airway obstruction, hypoxia, aspiration, re-intubation, and delayed recovery.

Gaps in practice:
Historically, pediatrics relied on qualitative or no monitoring, leaving fragile patients exposed.

Why it Matters:

New ESAIC/ESPA Guidelines (2025):
Recommend quantitative neuromuscular monitoring in children and explicitly prefer EMG over AMG for accuracy and reliability.

Global consensus:
Subjective and acceleromyography (AMG) methods are no longer enough, objective EMG is the new standard of care.

The SOLUTION

Next-Generation TetraGraph with TetraSens Pediatric Sensor

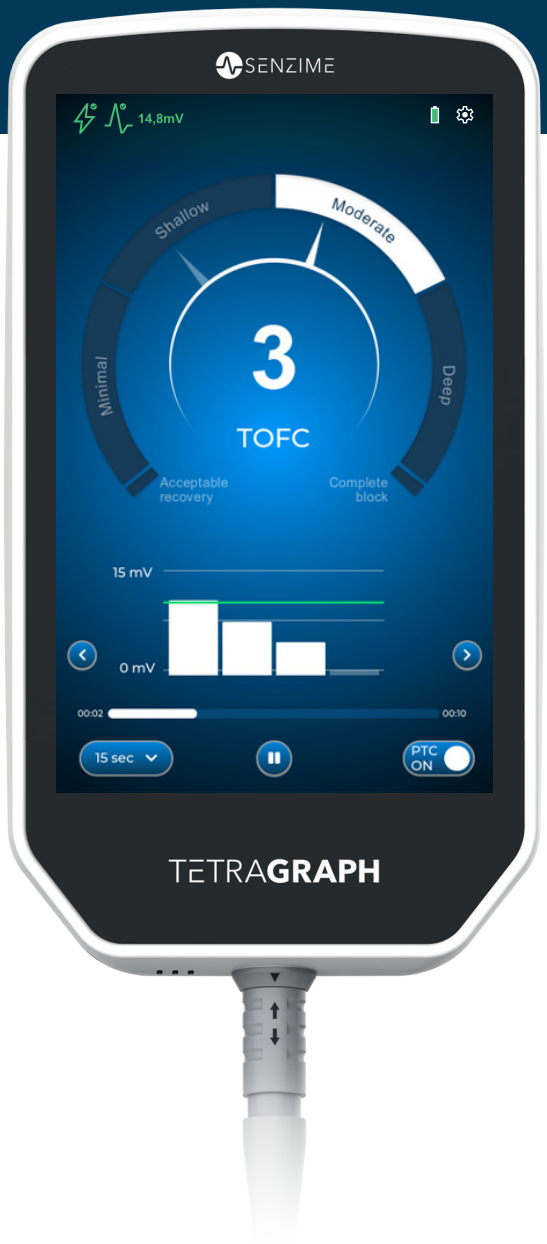
Pediatric-specific and skin-safe design:
Regulatory-cleared separately and specifically for infants ≥1 month*, with a low-profile, flexible electrode array gentle on delicate skin.

Proven signal strength feedback:
EMG technology delivers strong, consistent signals—even in children <2 years or with tucked arms where AMG fails. Individualized signal strength confirms correct sensor placement at the start and ensures accurate readings throughout the case.

Seamless workflow:
Quick and easy setup, no calibration required, and continuous TOF data without interrupting clinical flow.

Smarter dosing decisions:
Intuitive TetraGraph Level-of-Block Gauge™ provides real-time feedback to guide precise NMBA and reversal dosing, optimizing safety and minimizing unnecessary drug use.

Safety you can trust:
Ensures full recovery before extubation, protecting your most vulnerable patients.



Quick Evidence Snapshot

16–40% of patients show residual paralysis without quantitative monitoring (Faulk et al., 2024; Domenech et al, 2019; and Kotake, 2013).

Objective EMG monitoring significantly reduces residual block vs. clinical signs or AMG (Motamed, 2023; Carvalho, 2020).

Proven feasibility in kids:
In a study at a children's hospital, intraoperative EMG monitoring was successful and preferred to PNS and AMG monitoring for pediatric patients, including neonates and small infants (Owusu-Bediako, 2022).

Guidelines 2025 (ESAIC/ESPA):
Recommend quantitative monitoring and explicitly favor EMG over AMG for accuracy and reliability (Veyckemans, 2025).

Why EMG > AMG for Pediatrics

No movement required:
Works even in neonates, arms-tucked, or small muscle mass.

Consistent, artifact-free signals:
No drift or recalibration.

Trusted at extubation:
Ensures TOF ≥ 0.9 before artificial airway removal.

Scan the QR code to learn more, or visit **Senzime.com/Pediatric**

Order Information:

SEN2013 TetraSens Pediatric (box of 15)
SEN2015 Next-generation TetraGraph

*Age is defined based on the Food and Drug Administration's FDA's guidance: "...the upper age boundary for neonates (through the first 28 days of life) and the lower age boundary for infants (29 days) are defined in days rather than months, consistent with national statistical standards for reporting neonatal and infant mortality according to post-natal age."

References

1. Faulk, Debra J., et al. "The Incidence of Residual Neuromuscular Block in Pediatrics: A Prospective, Pragmatic, Multi-institutional Cohort Study." *Cureus*, vol. 16, no. 3, 2024, e56408.
2. Motamed, C. "Intraoperative Monitoring of Neuromuscular Blockade." *Life*, vol. 13, no. 5, 2023, p. 1184.
3. Carvalho, H., et al. "Forty Years of Neuromuscular Monitoring and Postoperative Residual -Curarisation: A Meta-analysis." *British Journal of Anaesthesia*, vol. 125, no. 4, 2020, pp. 466–482.
4. Owusu-Bediako, Kwaku, et al. "Feasibility of Intraoperative Quantitative Neuromuscular Blockade Monitoring in Children Using Electromyography." *Saudi Journal of Anaesthesia*, vol. 16, no. 4, 2022, pp. 412–418.
5. Veyckemans, Francis, et al. "ESAIC/ESPA Guidelines on Neuromuscular Blockade in Anaesthetised Children." *European Journal of Anaesthesiology*, 2025. (in manuscript)

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