

Devices Used for Seizure Monitoring

Device Name	Canadian Availability	FDA/Health Canada Approval	Cost	Age & Weight for Device Usage	Research Backed	Types of Seizures Detected	Functionality	Website	Additional Information	References
Emfit Movement Monitor	Yes	Neither	Monitor: \$625 USD Optional Remote alarm: \$45 USD Shipping to Canada: \$65 USD Medical grade AC adapter: \$45 USD	Any age or weight	Yes	Multiple: Detects seizures with major motor movements (ie. GTCS), event (ie. repetitive muscle jerking) must last minimum 10 seconds or more (adjustable) with no long pauses between movements	Undermattress sensor connected to bedside monitor with embedded software. Detects abnormal movements during sleep and alerts to repetitive, convulsive, continuous movements (jerkings). No direct contact with child. Missed alerts to tonic only seizure and clonic (limited to face).	<a href="https://www.epiusa.net/">https://www.epiusa.net/</a>	Not Applicable	<a href="https://www.epiusa.net/_files/ugd/64b05d_70460ed95a04ac438585c75db0a440.pdf">https://www.epiusa.net/_files/ugd/64b05d_70460ed95a04ac438585c75db0a440.pdf</a>
Epicentr App	Yes	Neither	Free to download but has premium memberships available starting from \$15.99 USD per month, iPhone only	App rating is ages 4 and up	No	Other: Please see functionality	Detects seizure-like patterns by analyzing data from Apple Watch sensors: seizure-like movements, sudden fall patterns, and abnormal heart rates. Best for tonic-clonic seizures. For other seizure types, the heart rate is the only relevant parameter that can be technically tracked (threshold-based).	<a href="https://epicentr.app/">https://epicentr.app/</a>	Detects movements using apple watch that are usual of seizure like triggers such as GTCS motion patterns, heart rate, etc.	Not Applicable.
EpiMonitor (Embrace Plus included), EmbraceMini & Embrace Plus Emoatica	Yes	Devices are approved in USA <a href="#">2024</a>	Empatica devices are currently unavailable for purchase (research & clinical use only). EpiMonitor Embrace Plus available in USA only (requires prescription & subscription fee)	Ages 6 and up	Yes	Multiple	Wrist-worn wearable device that detects subtle changes in electrical conductance at skin surface, skin temperature, acceleration and angular velocity, etc., to detect possible convulsive seizures and alerts caregiver. Requires smartphone, "The Care App," and within 10m distance to watch.	<a href="https://www.empatica.com/">https://www.empatica.com/</a>	Both EmbracePlus and Embrace2 are currently unavailable to purchase. Embrace2 was previously available for Canada.	<a href="https://www.empatica.com/research/publications/">https://www.empatica.com/research/publications/</a>
EpiPal App	Yes	Neither	~\$20-25 CAD per month, Annually \$180 CAD	App rating is ages 12 and up	Yes	Other: More likely to detect GTCS as it detects repetitive shaking movements; software-based platform	EpiPal is a phone and watch app that monitors motion and heart rate data using sensors through your phone/watch to detect potential seizures and falls.	<a href="https://epipalapp.com/">https://epipalapp.com/</a>	Not Applicable	Various literature available online
Inspyre by Smart Monitor	Yes	Neither	Starting at \$150 USD/year (packages will vary) + \$20 USD Activation Fee Watch not included; can be used with compatible smartwatches	Not specified, but University of California tested ages 3 and up	Not specified	Other: More likely to detect GTCS as it detects repetitive shaking movements	Available on iOS and Android	<a href="https://smart-monitor.com/inspyre/">https://smart-monitor.com/inspyre/</a>	Funding support is available on the website.	Various literature available online
Neuronaute+ & ICECap (wireless EEG System)	Yes	FDA approved	Only available for healthcare professionals.	All ages. Weight unspecified.	Not specified	Multiple	Neuronaute receives data from EEG caps, like the ICECap, which is a disposable EEG net available in 5 sizes from neonate to adult, that you can set up in 10 minutes for hospital or home use.	<a href="https://neuraeventry.com/neuronaute/">https://neuraeventry.com/neuronaute/</a>	ICECap disposable EEG net and Neuronaute can only be used within a healthcare system. Particularly beneficial for chronic neurological condition monitoring, such as epilepsy, where continuous data collection over several days is necessary.	Various literature available online
Owlet Devices	Yes; Owlet BabySat <a href="#">2022</a> , available in USA	Dream Sock approved in USA & Canada for <a href="#">2022</a> , pulse oximetry	Owlet Dream Duo 2 \$660 CAD Owlet Dream Sock \$420 CAD Owlet Cam 2 \$200 CAD	Ages 0 to 18 months	Yes	Other: Please see functionality	This device is designed to track an infant's heart rate, oxygen saturation, and sleep patterns and is not approved for seizure monitoring.	<a href="https://owletcare.ca/">https://owletcare.ca/</a>	Owlet Dream app available in Canada to be used with Owlet Dream Sock.	Various literature available online
SAMI	Yes	Neither	Complete kit: ~\$1175 USD Camera only: \$445 USD, Router Kit: \$729 USD, SAMi-3 Camera & iPod Kits ~\$979 USD Shipping: ~\$139 USD	Any age or weight	See note	Multiple: More likely to detect seizures with major motor movements (ie. GTCS)	Camera monitor that connects to a phone/iPad via a free app. It uses motion detection technology to detect any abnormal movements during sleep. Parent testimony says it can detect more subtle movements; however, no research-backed evidence of specific claims (type of seizures monitored).	<a href="https://www.samialert.com/">https://www.samialert.com/</a>	Funding sources available: Danychild Foundation, Josh Provides Epilepsy Assistance Foundations, sen Shaw Foundation (UK and Ireland, epilepsy specific), Dravet Foundation, UGS Foundation, reimbursement, and financing. No specific coverage for Canada.	<a href="https://www.researchgate.net/publication/3660343_Monitoring_for_Sleep-Related_Threat_A_Pilot_Study_of_the_Sleep_Associated_Monitoring_Index_SAMI">https://www.researchgate.net/publication/3660343_Monitoring_for_Sleep-Related_Threat_A_Pilot_Study_of_the_Sleep_Associated_Monitoring_Index_SAMI</a>
SeizAlarm App	Yes	Neither	App free but "helpy Request" subscription available for \$18 USD per month or \$180 USD annually; iPhone only	All ages suitable so long as the Apple Watch fits the wrist	No	Other: Likely seizures with abnormal and irregular body movements (ie. GTCS) and changes in heart rate	Uses sensors on iPhone and Apple Watch to monitor abnormal and irregular movements and changes in heart rate to alert.	<a href="https://seizalarm.com/">https://seizalarm.com/</a>	Only available on iPhone and Apple Watch. Apple Watch allows heart rate monitoring.	Not Applicable.
Vital Sign Monitors	Yes	Not Applicable	Can be found online for ~\$150+	All ages and weights.	See note	Multiple	<b>Disclaimer:</b> This device has been reported to be used by caregivers but is not recommended for seizure monitoring. Vital sign monitors do not detect seizures but may detect changes in heart rate, body temperature, respiration rate, and blood pressure that occur during pre/post seizures.	Not Applicable	Study showed heart rate, systolic, and diastolic blood pressure increased during epileptic seizures, while SaO2 decreased.	<a href="https://journals.lww.com.esproy.tb.ucalgary.ca/clinical/neurophys/fulltext/2020/01000/changes_in_vital_signs_during_epileptic_and_12.aspx">https://journals.lww.com.esproy.tb.ucalgary.ca/clinical/neurophys/fulltext/2020/01000/changes_in_vital_signs_during_epileptic_and_12.aspx</a>
Pulse Oximeters	Yes	Not Applicable	Can be found online for ~\$35+	All ages and weights.	See note	Multiple	<b>Disclaimer:</b> This device has been reported to be used by caregivers but is not recommended for seizure monitoring. Pulse oximeters do not detect seizures but may detect desaturations, tachy/bradycardia, etc. occurring during or pre/post seizure.	Not Applicable	Study linked to neonates with HIE and perinatal stroke noted unexpected falls in SpO2 on pulse oximeter may be helpful in detecting seizures. Another study used pulse oximeters with electrodermal activity and found 58% sensitivity for detecting GTCS and complex partial seizures, 0.01%r false detection rate.	<a href="https://pubmed.ncbi.nlm.nih.gov/30365876/">https://pubmed.ncbi.nlm.nih.gov/30365876/</a> <a href="https://www.seizure-journal.com/article/S1059-1311(16)30114-5/fulltext">https://www.seizure-journal.com/article/S1059-1311(16)30114-5/fulltext</a>

Information only valid up to August 21<sup>st</sup>, 2025. Please verify information using the corresponding sources listed above.

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