

LifeShirt®: Non-Invasive Sleep Diagnostics for the Clinic or the Home

Obstructive Sleep Apnea (OSA), characterized by a cessation in normal airflow during sleep, affects nearly 38 million Americans yet remains largely undiagnosed. Untreated, OSA can seriously impact overall health and has been linked with a host of comorbid conditions including congestive heart failure, stroke, diabetes, depression and obesity.



LifeShirt is a simple to use, Type III portable monitoring device that provides clinics with high-quality data collection and a non-invasive alternative to traditional, high-cost sleep studies for the diagnosis of OSA.

LifeShirt allows sleep professionals to confidently and economically test their patients for sleep apnea, at the clinic or in their home, delivering sleep lab science in a comfortable, easy to wear garment.

"LifeShirt is a revolutionary tool in the diagnostic toolbox that allows sleep disorders to be diagnosed more effectively, economically and quickly. The end result is that patients no longer have to wait so long to begin treatment."

— Steven James, M.D., Pharmaceutical Industry Sleep Physician

LifeShirt Delivers Key Benefits

- Produces nearly identical results to in-lab PSG for the diagnosis of OSA⁽¹⁾
- Offers ease of use operation for both staff and patients
- Provides analysis of breathing patterns as an aid in classifying apneas
- Incorporates respiratory inductance plethysmography (RIP) technology
- Distinguishes obstructive sleep apnea from central sleep apnea⁽²⁾
- Accommodates all patients with sizes from pediatrics (5-17 years) to adult 5XL (650 lbs)

LifeShirt is a Type III device measuring the following channels

- Thoracic Respiratory Movement
- Abdominal Respiratory Movement
- ECG/HR
- Oxygen Saturation
- Body Position/Accelerometry

Clinical endpoints include AHI/RDI, Obstructive, Central & Mixed Apneas, Periodic Breathing and Breath Rate, Oxygen Desaturation Index, Heart Rate Analysis, and Body Position Analysis.

Additional channels may be added to LifeShirt, including EEG, so that the system can be classified as a Type II device. Endpoints using these peripheral channels include sleep time and stages.

(1) Goodrich, Suanne and Orr, William C. An investigation of the validity of the LifeShirt in comparison to standard polysomnography in the detection of obstructive sleep apnea, *Sleep Medicine* (2008) doi:10.1016/j.sleep.2007.11.003
2) Class II Special Controls Guidance Document: Apnea Monitors; Guidance for Industry and FDA, U.S. Department of Health and Human Services, Food and Drug Administration, Center for Devices and Radiological Health, July 17, 2002.



The LifeShirt® and Sleep Diagnostics

How it Works

- Patients are fitted at the clinic by a trained technician
- Wearing a LifeShirt, patients sleep comfortably at home or the clinic
- LifeShirt records airflow, respiratory effort, ECG, blood oxygenation, and movement
- Data is uploaded from clinic per a secure Internet connection
- Sleep studies are scored* by our sleep analysts using VivoLogic® Software
- A comprehensive sleep summary report is supplied by VivoMetrics
- VivoMetrics conducts overread service or submits report to your designated physician

*Note that VivoLogic software provides optional autoscoring capabilities as well.

"As a physician in pediatrics, I believe the LifeShirt System can have a profound impact on doctors' ability to better screen their pediatric patients for sleep disorders."

— Chris Landon, M.D., Pediatric Pulmonologist and Director, Pediatric Diagnostic Center, Ventura, CA



Premium Data Services and Customer Support

VivoMetrics understands the business of sleep diagnostics and provides comprehensive solutions for your sleep business. Rest assured of a smooth implementation and on-going success with the following available resources:

- End-to-end data processing services
- Overread support via staff physician
- 24/7 customer service and support
- Onsite installation and training
- Remote training available via webinars

Schedule a LifeShirt Demo Today

Observe a demo at your clinic and we think you will realize how LifeShirt can help you reduce staff set-up time per sleep test, provide your patients a comfortable alternative, and get the quality results you expect. Contact us to learn more.

Contact VivoMetrics, Inc. at 805.667.2225 or sleep@vivometrics.com



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