

zoe™ } }

What's your Zo?

FDA Approved
:
Unique
:
Reliable
:
Portable
:
Battery Powered



Non-Invasive Thoracic Fluid Status Monitoring



Tech Specs

• **Class II medical device**

Mode of Operation: Intermittent use

• **Power:** 6 volts DC ZOE™ medical grade power adapter CUI, INC, Model #UE20-060200SPA1
4 AA alkaline batteries

• **Enclosure:** Flame-resistant AVS plastic

Dimensions: 8 (W) x 5 (L) x 2 (H) in.
20 (W) x 12.5 (L) x 2 (H) cm

• **Weight:** One pound or 2.2 kg

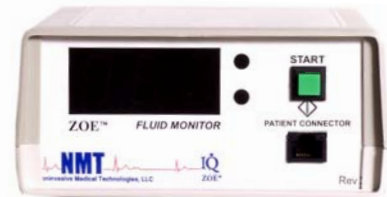
Electrodes: ZOE™ disposable hydrogel leads only

• **Measurement Current:** 2.0 mA, 100 kHz

• **Operating Temperature & Storage Temperature:** 15° - 40° C, or 41° - 113° F

• **Relative Humidity For Operation & Storage:** 20% - 80% non-condensing

• **Atmospheric Pressure:** 50 – 106 kpa



• Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

• This equipment has been tested and found to comply with the EMC limits for the Medical Device Directive 93/42/EEC (EN 55011 Class II & EN 60601-1-2). These limits are designed to provide reasonable protection against harmful interference in a typical medical installation. The equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to other devices in the vicinity.



ZOE™ is Manufactured By: Noninvasive Medical Technologies, LLC, 3201 University Drive, Suite 360, Auburn Hills, MI 48326, USA

Paramount Enterprise

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Zo is an early predictor of thoracic fluid status

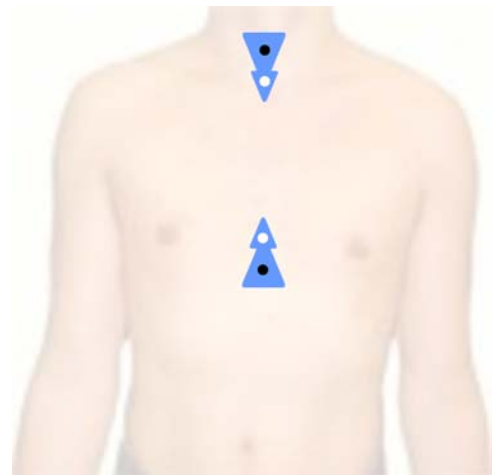
- ZOE™ is an affordable, light-weight and easy to use Fluid Status Monitoring System.
- ZOE™ measurement is a quick and easy method for determining whether individuals are experiencing fluid congestion or dehydration.
- ZOE™ delivers the fluid status within seconds!



Normal Zo in human subjects has been determined to range from 19-30 ohms. Less than 19 ohms indicates that the subject may be over hydrated, and Zo greater than 30 indicates that the subject is becoming dehydrated.

Two hydro-gel electrodes are placed at the top and bottom of the breastbone, also known as the sternum. ZOETM measures the time it takes a low frequency current to travel between the two sensors, indicating fluid level.

Fluid decreases resistance or impedance and dry environments increase electrical resistance or impedance. Consequently, the more fluid in the body, the less resistance or lower the Zo measurement, and the dryer the body the higher Zo number that is displayed on the ZOE™.



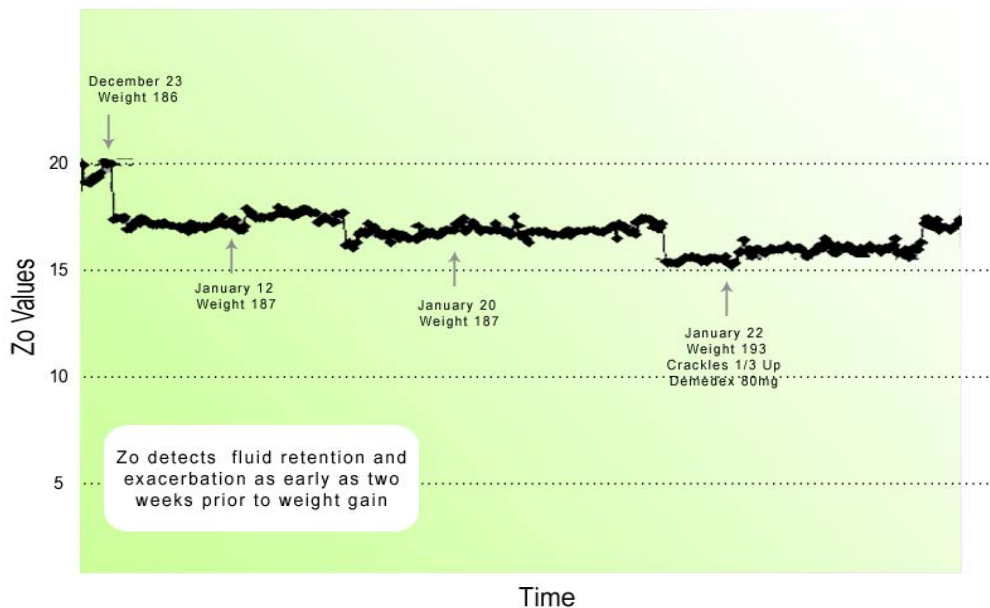
Electrode Placement >

Trend Based Analysis

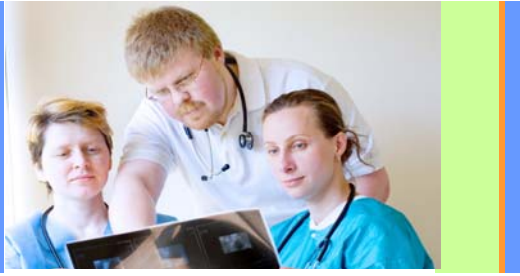


Case Study } Paul is a 68 year old male, diagnosed..

...with left ventricular systolic heart failure. He has been receiving inotropic infusion therapy twice per week for the last four months. In a blinded study the IQ Noninvasive Hemodynamic Surveillance Monitor was utilized to measure his response to therapy. In retrospect, the Zo (base impedance) indicates early decompensation over the course of three weeks. The patient had no weight gain, clear lung sounds, normal vital signs, no early signs or symptoms of exacerbation and no change in self report assessment until January 21. On January 21 the patient called the clinic stating that, "he did not get the same kick" post infusion therapy as usual. When the patient returned to the clinic as instructed, on January 22, his weight had increased by six pounds, he had crackles in his lungs one third up, his self assessment was "poor", and his Zo had dropped below 16. He received 80mg Demadex, another inotropic infusion and was admitted to the hospital.



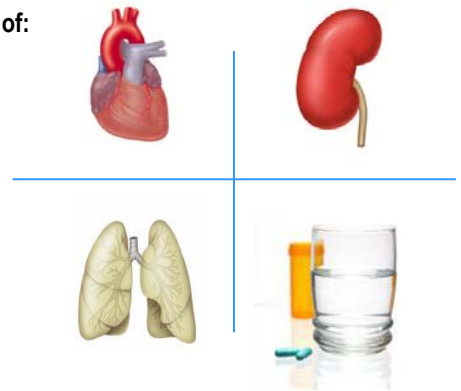
Warns Days in Advance



Zo <19 has 94% specificity for HF identification*

The ZOE™ monitor is recommended for intermittent and continued monitoring of:

- Heart failure and CABG patients (Pre and Post Surgery)
- Dialysis patients
- Patients prone to dehydration or on increased dosage of diuretics
- Conditions related to Fluid Congestion in the Chest (Pneumonia, Edema, etc.)



Chest X-Ray Findings	N	Zo (Ohms)
Cephalization	46	20.8
Interstitial Edema	32	18
Alveolar Edema	25	14.5

In January 1999, Dr. David Milzman published a study of 203 patients entering the emergency department with acute heart failure. Prior to obtaining a chest x-ray, these patients were placed on an IQ cardioplethsmograph for Zo measurement. Patients that showed isolated pulmonary congestion on their chest x-ray had Zo measurements of 18 ohms. Patients' x-rays showing pulmonary edema had Zo measures of 14.5 ohms or less. The results of this study caused Dr. Milzman to name Zo measurement the "noninvasive chest x-ray."
 Ref: Society of Critical Care Medicine, January 1999, Volume 27, p66A, Abstract 94*

Comparable to X-ray

ueusa.com/zoe

CHF

Patients on Diuretics

Interstitial Edema

End Stage Renal Disease

Maternity

Dehydration

Pneumonia

CAPD Patients

Alveolar Edema

Home Care

Fluid Mgmt.

ZOE
TM