GE Healthcare

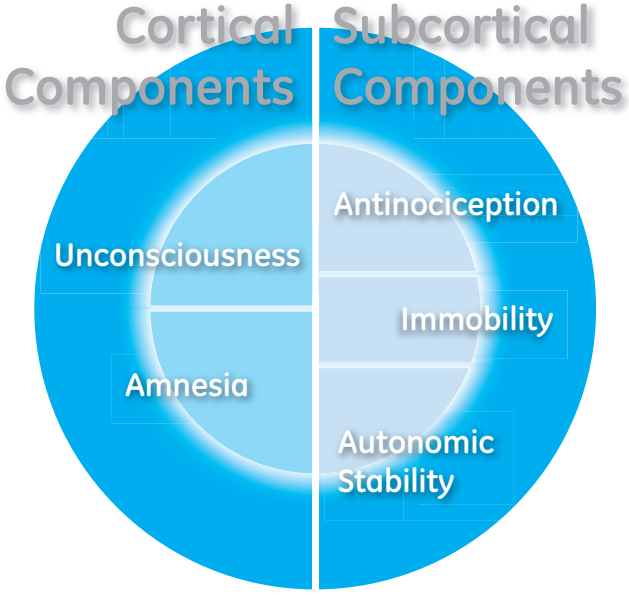
Quick Guide

Adequacy of Anesthesia

by anandic

What is Adequacy of Anesthesia?

The Adequacy of Anesthesia (AoA) concept signals GE Healthcare's commitment to provide clinical measurements for the components required for general anesthesia. These measurements help the clinician deliver tailor-made anesthesia to the patient.



Components of Adequacy of Anesthesia

Cortical components

Unconsciousness refers to the lack of awareness of the outside world. It is this component where the patient is asleep during general anesthesia.

Amnesia refers to the patient's loss of memory of the operation. It is imperative that the patient does not have any memory recollections of the events during the operation.

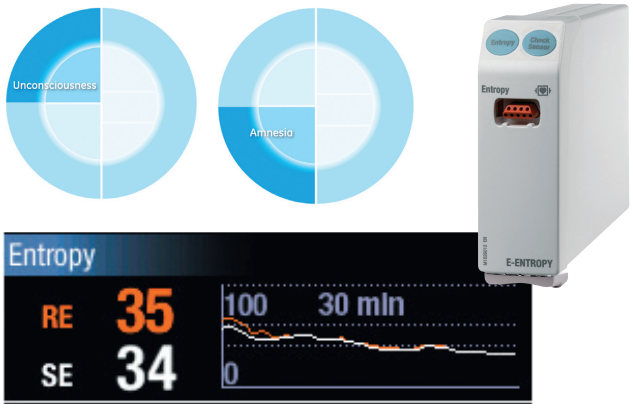
Subcortical components

Antinociception refers to inhibition of the nociceptive processing in the nervous system. Analgesia is the treatment to provide antinociception.

Immobility refers to the patient's lack of motion. Complete immobility should be ensured to maintain a stable surgical field.

Autonomic stability refers to the absence of excessive hemodynamic responses.

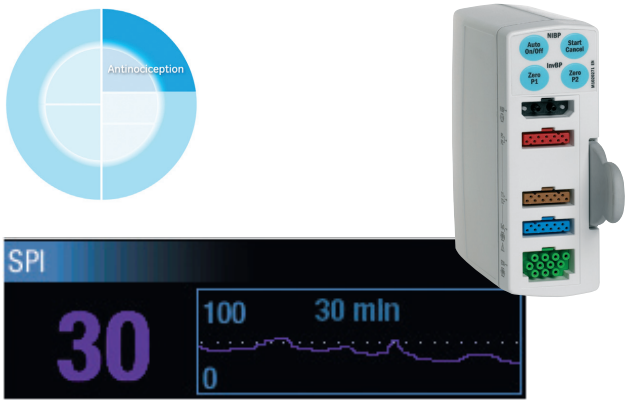
GE Healthcare's solution



Entropy*

Entropy is indicated for adult and pediatric patients older than 2 years within a hospital for monitoring the state of the brain by data acquisition of electroencephalograph (EEG) and frontal electromyograph (FEMG) signals. **Response Entropy (RE)** and **State Entropy (SE)** are processed EEG and FEMG variables.

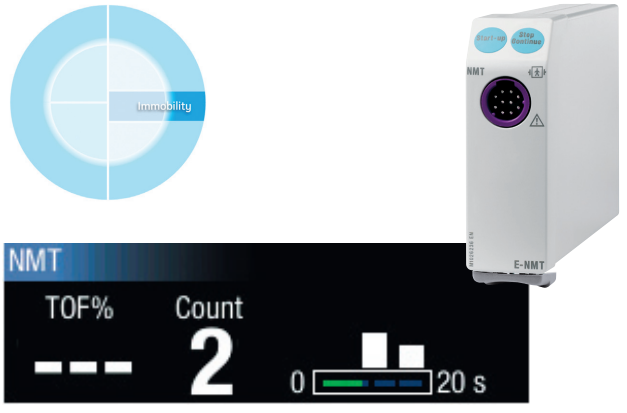
The device that produces this measurement is the E-ENTROPY Module.



Surgical Pleth Index*

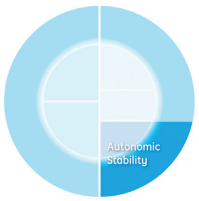
The Surgical Pleth Index (SPI) is indicated for monitoring the patient's responses to surgical stimuli and analgesic medications during general anesthesia. SPI is based on readily available pulse oximetry signals. They are **pulse wave amplitude** and **pulse rate**.

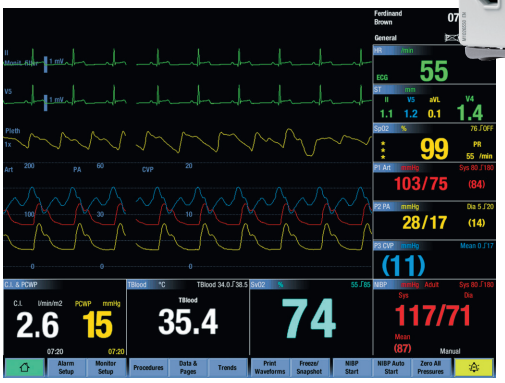
The devices that capture the SPI are the E-PSM(P), E-PRESTN and E-RESTN Modules. SPI should be measured using specified finger sensors only.



Neuromuscular Transmission

Neuromuscular transmission (NMT) is the transfer of an impulse between a nerve and a muscle in the neuromuscular junction. GE Healthcare's E-NMT Module provides quantitative, automatic measurement of muscle response to stimuli. You can use the following modes: **Train-of-four ratio (TOF%), TOF count, post tetanic count (PTC), single twitch (ST) or double-burst stimulation (DBS).** There are several sensors available for different applications.

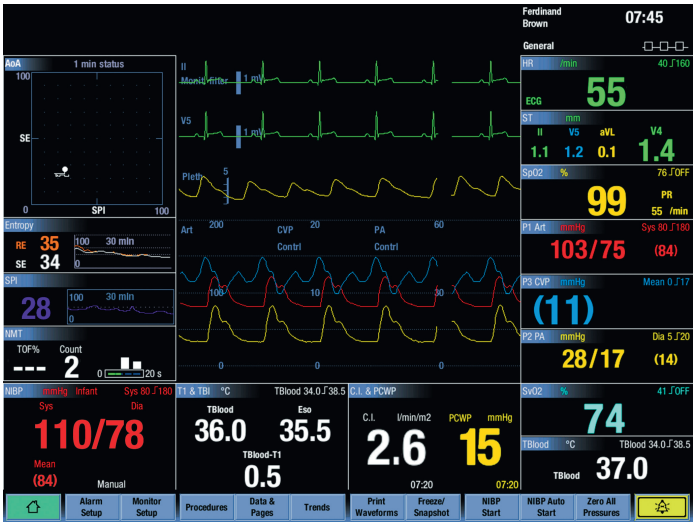




Multiparameter hemodynamic modules

GE Healthcare's hemodynamic module family, with different parameter combinations, completes the picture of components of AoA. Sudden hemodynamic changes may increase the workload of the patient's heart and by monitoring different hemodynamic parameters, the clinician can help protect the patient from excessive hemodynamic changes and maintain autonomic stability.

Integrated information helps clinician maintain tailor-made anesthesia



The configurable AoA split screen of GE's CARESCAPE modular monitors, combined with hemodynamic parameters and respiratory gas measurements, provides a comprehensive visual view of patient's status.

In the unique AoA split screen, you will find the BalanceView, which combines and plots SPI and SE values. This view helps the clinician monitor the effects of the analgesic and anesthetic pharmaceuticals during general anesthesia.

Additional resources

For white papers, guides and other instructive materials about GE Healthcare's clinical measurements, technologies and applications, please visit **http://clinicalview.gehealthcare.com/**

* GE, GE Monogram, CARESCAPE, Entropy and Surgical Pleth Index are trademarks of General Electric Company.

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Consult the monitor User's Guide for detailed instructions.

Use GE proprietary supplies and accessories only for all measurements.

SPI may not be available in all markets. Please check with your local representative.

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About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our "healthymagination" vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com.

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