

MED TECH

OUTLOOK

**RESPIRATORY
DEVICES**

EDITION



**TOP
RESPIRATORY
DEVICES
PROVIDER
2022**

**Avery Biomedical
Devices**

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MEDTECH OUTLOOK**



Avery Biomedical Devices

Energizing Lives with the Avery Diaphragm Pacemaker

Vent-free breathing! That's the goal of Avery Biomedical Devices. For patients tethered to a mechanical ventilator (MV) to breathe, the Avery Diaphragm Pacemaker offers a safe and effective solution through phrenic nerve stimulation. The Company traces its roots back to 1970 stemming from research by Dr. William Glenn and Roger Avery and continues to be the industry leader in diaphragm pacing.



“We are the only diaphragm pacemaker system with full FDA PMA approval and CE Marking Privileges for adult and pediatric use,” says Linda Towler, CEO of Avery Biomedical Devices.

The Avery Diaphragm Pacemaker is a phrenic nerve or diaphragm stimulator. It consists of implanted electrodes and receivers with an external transmitter and antennas. The transmitter & antennas send radiofrequency energy to the implanted receivers just under the skin. The receivers then convert the radio waves into stimulating pulses. These pulses are then sent through the electrodes to the phrenic nerves, causing the diaphragm(s) to contract. This contraction causes inhalation of air. When the pulses stop, the diaphragm relaxes, and exhalation occurs. Repetition of these pulse trains produce a normal breathing pattern.

The Avery pacemaker is superior to MV as air is drawn into the lungs

under negative pressure rather than being forced into the chest under positive pressure. The result is a more comfortable breathing experience for the patient. More importantly, pacing reduces hospital readmissions as the patient is at a much lower risk of upper airway infections including ventilator-associated pneumonias (VAP). From a cost perspective, disposable supplies are less than \$1000 per year as compared with over \$20,000 per year for ventilator related expenses.

Most patients strongly prefer the Avery System over MV because:

- it allows for normal breathing and speech patterns
- eases eating and drinking
- improves sense of smell

The system is small, lightweight, portable and silent allowing for greater mobility to participate in educational and social activities. A true game changer in quality of life for those who previously were relegated to a bulky, noisy ventilator.

The Avery System is indicated for candidates with:

- high spinal cord injury
- brainstem injury or disease
- congenital or acquired central sleep apnea
- diaphragm paralysis from injury or disease.

In its 50+ year history, the Avery System has an unsurpassed record of safety and reliability. Adults and children have been using the Avery System for 10, 20, 30 & 40+ years without incident. One reason for such a decorated history of patient success and safety is the Avery System is the only diaphragm pacemaker

to incorporate a dual redundant design ensuring no single-point failure results in complete loss of life support. Another quality feature, as the skin is left intact, with no wires protruding through the abdomen (infection source), patients are able to shower, bathe and enjoy water therapy.

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Overall, compared to MV, individuals benefiting from the Avery System are able to live healthier, productive lives. Whether it's going to work, participating in class or enjoying social activities with friends and family, adults and children can live vent-free.

The Company prides itself on being present for the clinicians and, above all, for their patients. Besides manufacturing the system at its facility in New York, Avery has a robust customer service department to address any questions or concerns. Avery's mission is to continually improve on its 50+ year history of safety & reliability.

“It is abundantly heartwarming and rewarding to receive phone calls, cards, letters and emails of appreciation. Our reward is making a difference in the life of the people benefiting from our system,” states Towler. 