

## Still Making Sparks

By Marjory Garrison

The science behind electrotherapy is a lot like the science behind baking bread: You can add new ingredients, but the way the dough rises doesn't change much.

Manufacturers can add features to electromedical products or devise new ways for these products to be applied, but "the science behind electrotherapy doesn't change," says Hans Reiss, president of BioMedical Life Systems.

Electromedical garments — and the basic science behind them — have been around since the 19th century. As Linda Simon writes in her book *Dark Light: Electricity and Anxiety from the Telegraph to the X-Ray*, in the late 1800s electrified corsets were advertised to exhausted housewives as "Exhilarating!" Today's manufacturers say that early science has only been honed and focused, made safer and more efficient. The basic concept hasn't changed much: applying electric current to the body's surface.

But while the concept hasn't changed, its application has. Transcutaneous electrical nerve stimulation (TENS), which relieves muscle pain in the neck, lower back and elsewhere, continues as a market staple. But the field has expanded into areas such as occupational therapy, speech and language pathology and stress management. One increasingly popular therapy, cranial electrotherapy stimulation (CES), is being used to relieve depression, anxiety and insomnia.

And manufacturers point out there is always room for product improvement. The electromedical products range has expanded to include reusable, electroconductive garments such as socks, various wraps, back supports and sleeves with built-in electrodes. According to Reiss, manufacturers also are turning out products that are more durable and portable, and that allow a patient to stimulate multiple areas of the body using only one device.

### Simple, Durable Products

Durability is the key, say those in the field. "We're making products to be used again and again," says Gary Smith, president of Medical Science Products. Since electrodes are customized to fit a patient's needs — "tailored to an individual's skin type, where on the body the electrodes will be worn, how often they'll be used and the duration of each individual treatment" — he explains, once a patient learns how to apply them and stay compliant, it is to their benefit that the same electrodes can be used repeatedly.

Manufacturers note that shortening the learning curve for patients has considerable impact on product development. The market should never lose sight of simplicity, they say, offering products that are straightforward and easy to use.

But some experts believe many new products, more complicated to operate and more expensive, have lost this focus. "I'm surprised to see people adding so many bells and whistles to devices. It just gets frustrating. Why do you need all these features?" asks Dr. Daniel Kirsch, founder and chairman of Electromedical Products International. "Our new pain control device, like our primary CES device, has one button."

When the science is basic, there's little reason for electrotherapy products to be complicated, experts say. In product development, says Kirsch, "we go for less. Both practitioners and patients are busy and want things simple. I think we should use the technology advantage to make [products] simpler, cheaper and more user-friendly."

### Therapy Gains Acceptance

Electrotherapy may face boundaries in innovation, but, according to manufacturers, there are no boundaries for sales of these products.

The \$3.5 billion market for electrical and magnetic neurostimulation devices in North America is expected to more than double to nearly \$7.7 billion by 2008, according to the market research firm Kalorama Information. Some segments, the firm says, may even see 50-percent annual growth rates during the years to come.

"Combined with new telemedicine strategies, implanted sensors and drug delivery systems, electrical and magnetic neurostimulation can usher in a new wave of care for the chronically ill," explains Dr. James P. Smith, principal author of Kalorama's recently released study, *Electrical and Magnetic Nerve Stimulation: Applications, Technologies and Market Potential*.

Dr. Smith also predicts that "medical insurance will recognize a long-term savings for electronic treatment of chronic and debilitating conditions."

As scientists and physicians continue to discover new applications for electrotherapy, recognition of its success as a treatment has grown. "As practitioners find new uses for electrotherapy treatment, awareness of [its] benefits continues to increase throughout the medical community," according to Keith Geolat, manager of sales and marketing for Uni-Patch, a division of Tyco Healthcare.

"Electrotherapy continues to gain acceptance as an effective treatment for pain control, muscle re-education and wound and incision healing," says Geolat, "and orthopedic surgeons are utilizing electrotherapy treatments more than ever to help speed patient recovery. The need for electrotherapy treatment is constant and, for the most part, unchanging."

Experts point to strong, even booming growth in the electromedical market. At Koalaty Products, for example, President Jeff Lenoir reports that "total sales volume to dealers has more than tripled in the last year. The driving force behind any business is profitability," says Lenoir, "and the electrotherapy devices available today are just a better value."

Overseas competition undermines this value, however, according to manufacturers. The pressure that offshore competitors put on the electromedical market is not only driving prices down for consumers but is also flooding the market with cheap, unreliable products. "Offshore manufacturers continue to put pricing pressure on the market," says Geolat. "However, what many distributors don't realize is that [cheap] products typically result in more expensive treatments when you factor in shorter product life, quality issues and lengthy delivery times."

### **Pressure from Imports**

The impact of imports has been notable, says Reiss, causing some manufacturers to ask, "Are [these imported products] here for the long-term or for the short-term?"

Problems regularly arise with cheap imports, he notes. The products fall apart or don't fulfill their promises, and the provider is often the one forced to troubleshoot. "And providers can't just replace [an import] with a new one," explains Reiss, because the same low-quality product is likely to break down again.

Instead, he says, providers need to educate patients on the logic of purchasing a more reliable electromedical device even though it may be more expensive. "[Some products] may be a few dollars higher, but at the same time [people are] getting the reassurance that it's a better product."

Overseas competition has driven prices down. "In the past two years I think the prices have been ridiculously low," says Reiss. "It's definitely ruining the market, and it just decreases reimbursement all the way around."

That imports contribute to the already challenging reimbursement situation has electromedical manufacturers frustrated, and they explain how reimbursement troubles can interrupt an otherwise steady marketplace. "Changing [reimbursement] schedules can throw a wrench in a smooth-running manufacturing facility," says Geolat.

Many manufacturers lament the sluggishness with which Medicare acknowledges new technologies. "You never have enough research to prove your product and your technology [to Medicare]," says Kirsch. "Our technology is 23 years old, and insurance companies still call it experimental."

But manufacturers remain confident, explaining that, despite reimbursement challenges, growing demand and acceptance of the technology should push market growth in the years to come. "You have these thorns in your back, but at the same time, you deal with it," says Reiss.

In other words, the upside to the electromedical market outweighs the down. Concludes Lenoir, "Reimbursement will always be a challenge, but the electrotherapy business is still the best game in town."

### **Patient Education Can Stimulate Sales**

The key to selling electromedical products is "a high level of contact" with the customer, according to Keith Geolat, manager of sales and marketing for Uni-Patch, a division of Tyco Healthcare. This includes "good training on the use of the product with the patient and working hard to get good patient compliance with the treatment protocol," he says. "The better the patient understands the product and the treatment, the more likely he will have success with it and continue to use electrotherapy."

The key to making sales in this market is "education, education, education," agrees Gary Smith, president of Medical Science Products. "We've made changes to make sure the product stays fresh, but it's a function of patient education," he says. "The instructions are straightforward, but it helps if the caregiver can reinforce those instructions by fitting the patient correctly the first time."

Manufacturers are always thinking of three things, according to Jeff Lenoir, president of Koalaty Products. "It always comes back to price, quality and our dealers' profitability," he says. If patients are educated on their options and on how to use electrotherapy

devices, the products will continue to sell.

## **An Alternative to Drugs**

Electromedical products compete in “a market that drugs have completely dominated,” says Dr. Daniel Kirsch, chairman of Electromedical Products International. But he adds that as safety concerns over anti-depressants continue to make front-page news in the United States and abroad, concern is growing inside doctors' offices and even in Congress.

The buzz is generating a lot of attention for electrotherapy as a safer alternative. “More and more people are turning to [electromedical] products instead of drugs because drugs are so expensive, number one, and, number two, [because of] how debilitating drugs can be,” says Hans Reiss, president of BioMedical Life Systems.

The mainstream media's coverage of these issues is educating the general population and, in turn, expanding the electromedical industry's patient base, according to manufacturers. Gary Smith, president of Medical Science Products, says, “The consumer base is getting more educated about alternatives to controlling chronic pain — and especially alternatives to pharmaceuticals.”

“Our CES business is just rockin',” says Kirsch, referring to cranial electrotherapy stimulation used for treating anxiety, depression and insomnia. “Our pain business is doing well, too,” he says, and new research studies on conditions such as fibromyalgia show that “[brain stimulation] is the best treatment — the safest and the cheapest over time.”

### **Experts Interviewed:**

Keith Geolat, manager of sales and marketing, Uni-Patch, a division of Tyco Healthcare, Wabasha, Minn.; Dr. Daniel L. Kirsch, founder and chairman, Electromedical Products International, Inc., Mineral Wells, Texas; Jeff Lenoir, president, Koalaty Products, Tampa, Fla.; Hans Reiss, president, BioMedical Life Systems, Vista, Calif.; and Gary Smith, president, Medical Science Products, Canal Fulton, Ohio