

Biofeedback Society of California 27th Annual Convention
 San Diego, California — November 2-4, 2001
 See insert for seminars and registration

*Advanced Technologies Prove Useful in
 Mental Health Applications*

Brenda K. Wiederhold, Ph.D., MBA, BCIA
Mark D. Wiederhold, M.D., Ph.D., FACP

*Brenda and Mark Wiederhold
 will present a panel entitled
Virtual Reality at the BSC
 27th Annual Convention,
 Sunday, November 4, 10 am.*



patient overpractices and gains a sense of mastery. The results of several clinical controlled studies completed over the past seven years show virtual reality exposure therapy is an effective and useful tool for the treatment of a variety of mental health disorders. Several groups have performed controlled clinical trials for claustrophobia, fear of heights, fear of flying, and fear of public speaking, with all groups outcomes being the same: virtual reality exposure is more effective than imaginal exposure (visualization) for specific phobias and appears equally effective to *in vivo* (real-life) exposure. Most patients require eight to twelve sessions of therapy which includes an intake session, and sessions focusing on breathing retraining and cognitive coping techniques before beginning virtual reality (VR) exposure. Most groups agree that VR is best used as an adjunct to traditional cognitive-behavioral therapy, and not as a replacement of those techniques. Other phobias be-

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Beginning in 1994, psychologists began experimenting with a new technology called "virtual reality" to treat specific phobias, such as fear of heights. Virtual reality is a three-dimensional computer simulation which places the user in a computer generated world where audio, visual, vestibular, olfactory, and vibratory stimuli can be presented systematically to the patient in controlled stages. As the patient becomes desensitized to anxiety-provoking stimuli, the scenes can be made more challenging, so that the

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Thought Technology

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PRESIDENT'S COLUMN

I hope that everyone has been able to take a week or two off from your various duties and clinical practices for summer vacation. It is so essential to be able to restore and replenish our energies. I have always embraced conceptually the European model of taking a full month off in the summer. I plan to begin practicing the European model (hopefully guilt free) next summer for three weeks and then gradually expand it into four and, even, five weeks as time marches on, and I get grey (er). This summer I have been booked solid clinically and stretched myself further with coaching my son's Little League team and the All Stars. I have also been guiding the good ship "BSC", and working on setting up a great fall convention. It has truly been a great, exciting year. I have really enjoyed all of these activities despite often sprinting from one thing to the next.

This is my last column as President of BSC, and I want to thank all those who have helped me this year, particularly those that have served on the Board and (even more particularly) those who have really embraced their opportunity to serve BSC. I think that we have contributed to an energetic revitalization of the Society. Thank you all!

On a very sad note, the California biofeedback community in June lost a family member quite prematurely. For all those who knew Dennis Ettare, I am sure that you share shock and pain at learning of his losing his battle with Leukemia. Dennis loved the tool of biofeedback and contributed so much to advancing its application in repetitive strain injury in the industrial sector. He served as President of BSC in 1992.

The Good Ship "BSC"

As we continue to sail down the coast to San Diego, everything continues to look good for fair weather and a spectacular convention at the Red Lion Hanalei in Mission Valley. Your presence is a must to help renew friendships, gain valuable CEUs and stimulate your neurons. I have been working hard to make this year's event rich in new and stimulating material. There will be expanded opportunities for significantly enhancing your clinical skills, acumen and awareness. The program will be less stressful and frenetic from my viewpoint and offer increased opportunities

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FROM THE EDITOR

Hello out there. Still no letter to the editor. I was really hoping that someone would take on Doug Matheson's perspective. But, hey, maybe he is right on. Preaching to the choir. I pray for the day that one brave soul out there will take up their pen and write to me. Share their thoughts. I am certainly open to the concept.

This issue contains the information about the conference. Should be a great one. I will let Bill Barton extol the conference. But we hope to see you there this November. Given the new three times a year schedule of the newsletter, this will be the last issue until the new year. May you enjoy the prosperity that the rest of the year will bring to you.

Jeffrey R. Cram, Ph.D.

From the President

Continued from page 3

for socializing and connecting with new and old friends. I have even allowed for times to eat and exercise! This may seem a bit radical, but we will soon see how everyone likes it.

The Pre-Conference all-day workshops are a first and are a great opportunity to learn at an incredible price. For the first time ever, BSC's Board of Directors meeting will take place Thursday evening and thus will allow some fifteen of us (including new board elects) to attend Friday's workshops,

was cancelled. I thank Sarah LaBarbera for her efforts in setting the event up and Dick Gevirtz and Jack Johnstone for waiting in the wings to present. Perhaps there was not enough lead-time to make this happen.

Flotsam and Jetsam

EEG biofeedback continues to capture the public's imagination. Symphony of the Brain has contributed to the crescendo of demand for EEG services. It is a bit ironic that one of us long time biofeedbackers and EEG aficionados did not fill this need ahead of Mr. Robins. For those of us who have been in

anniversary of the America's Cup off the Isle of Wight in England. I will be racing on a refurbished 62' gaff rigged sloop from the 1920s called "Marilee." I am really excited.

Distant Horizon

In order to bring the ticket cost down for the **Past President's Party**, I sent out an appeal for donations from past BSC presidents and loyal friends. I am really touched by the great response that I have gotten to date. The contributions mean that the party will happen. Now it is up to each of you to sign up early and join the fun! The round-trip bus ride to the San Diego Zoo, the entry fee to the Zoo, the "Night Prowl Walking Tour," buffet dinner with premium wines all work out to an \$80 cost. Thanks to the generous donations of friends who join me in my desire to breathe fun and life back in to BSC, the ticket cost is a mere \$46. If our response for attending is great, I will add a second bus. Don't hesitate, get on board!

I want to thank the following individuals for their generosity in donating to this event: Bill Coby, Don Nadler, Eveline Ginzburg, Maureen McKenna, William Rickles, Pam Erhardt, and Naras Bhat. These are all past presidents who have responded so far! In addition, the following friends have also stepped up: Steve Wall of BRI, Steve Stern of STENS, Larry Klein of Thought Technology, and Joe Kamiya. I also want to thank David Jacobs for housing the Chardonnay and Pinot Noir for this event in his wine cellar. Your gifts have warmed my heart and given me a big, positive boost that we are family! Thank you all. So, sign up early and get on board the Good Ship BSC.

I want to thank Yair Lurie who has been on the bow of our ship and working the web site development diligently. Finally, I especially want to thank Jeff Cram for being a strong right hand man for me this year and for his excellent efforts as editor. It is nice to be guiding our ship with someone that loves biofeedback as much as I do. Your new "captain" will be Naras Bhat who grabs the helm officially at the conclusion of our board meeting in San Diego.

William Barton, PhD

EEG biofeedback continues to capture the public's imagination.

instead of a four hour board meeting.

As you may know, we will take the 2002 event to an even more "organic" setting. We have booked Asilomar in the Monterey area. We will be right on the ocean. This will, of course, allow the Good Ship "BSC" to anchor peacefully in Monterey Bay.

Under the Transom

Katee Wynea, our Regional Meeting Chair, was successful in putting on an all-day regional workshop in San Francisco on June 9th at the UCSF Medical Center Laurel Heights Campus. The program was well attended and a real bargain thanks to our generous speakers.

Jay Gunkelman, one of the nation's leading experts in EEG and QEEG, was clear succinct and comprehensive. Ira Rosenberg came on in the afternoon and also did an excellent and high-energy presentation that everyone was completely engrossed with. The regional workshop was a big success, and I hope that BSC and the leadership that follows can keep this going for years ahead. It is wonderful to connect with colleagues and friends, and learn something valuable at the same time. Our Southern California workshop in San Diego, regrettably, did not draw enough sign-ups to make it a go, and

the field for thirty years or so, the new wave of popularity is not unfamiliar.

Other good news came in July that House Bill 1676 passed the Texas legislature prohibiting insurance companies from excluding coverage for cognitive therapy, biofeedback, and neurofeedback as a medical necessity for brain injury survivors. With our Brain, Breath, and Brawn theme for this year's convention, I am happy that we will have a balanced representation of neurofeedback and opportunities for significant skill building.

If you haven't explored one of our advertiser's products as of yet, I strongly urge you to do so. Lead-Lok has two products that I have been using regularly for the past decade: the disposable EMG electrodes model F 1010 are tenacious and reliable and a bargain; for children and where less adhesion is tolerable or desirable, I use the A-10s. The company will send you samples.

I have tried to incorporate some art in this year's brochure but at this writing I am not sure whether it is in. If it is, feel free to check out the artist's web site www.delmasart.com. Cinde Lou Delmas is a very close friend, talented artist, and I thank her for her donation.

On a personal note, as you receive this I will be participating in the 150th

Medicare's Brave New World of Incontinence Treatments

Kegel's Perineometer Will Not Be Reimbursed, But Failure at Kegel Exercises is Now Required

John D. Perry, PhD, Chair, AAPB Task Force on Incontinence¹

Effective July 1, 2001, The Health Care Financing Administration has created a Brave New World of Incontinence Treatment Regulations.

The new rules, which were intended to enshrine only rock-solid evidence-based-medicine, have resulted in the creation and institutionalization of a hybrid therapeutic system that seems designed to serve the needs of major instrument manufacturers and professional guilds, rather than Medicare's patient population.

Heading the list of irregularities is the fact that none of the public testimony during April or June 2000 even mentioned the new system, and it has not only not been proven, it has never been the object of even a single empiri-



Two restrictions — one partly expected, the other totally out of the blue — were announced. The first: as anticipated, coverage for electrical stimulation will be only allowed after failure at

tional" treatment, it doesn't make much sense to require a test that virtually every patient will fail. Even organizations, such as the National Association for Continence, that actively promote PME admit it takes 4 to 6 months to achieve significant results. No one is going to get significant improvement in 4 weeks. So what is the purpose of the rule? We aren't told. [Note: there is no corresponding four-week waiting period for drugs or surgery.]

And as Diane Smith said in response, "I've never met a patient who hasn't failed PME alone!" (Obvious, if they had succeeded, they wouldn't be coming to her clinic.)

The second restriction is that "stim" is only reimbursable when patients use an inserted vaginal or anal electrode — not when using surface patch electrodes! This restriction might otherwise be a welcome event, since this author invented and endorses an inserted vaginal/anal electrode that can be used for both EMG and stim, and personally stands to reap substantial financial rewards under the new regulation. But our personal joy is tempered by professional concern and skepticism.

Finally on July 1, 2001 — more than 14 months after the public hearings — Medicare began offering reimbursement for biofeedback used in treating urinary incontinence. The new regulations include the same infamous "Four Week Failure" clause (with no more clarity than under the stim rules).

And there were two new surprises. First, unlike stim, inserted vaginal or anal sensors are NOT required for biofeedback. This is the reverse of clinical experience, which shows that inserted sensors provide more accurate signals

The exclusion of home biofeedback is especially bothersome because it is the use of daily home training that has produced the best clinical outcomes, according to both government and private research.

cal study. Such is the fate of "evidence-based-medicine" — which has subsequently been abandoned by HCFA anyway. (Note 1)

The new regulatory morass came in two easy steps. On April 1, 2001 (not a joke), HCFA changed the status of external "electrical stimulation" from "absolutely NOT covered" to "nationally covered" under certain minimal restrictions. Electrical stimulation systems utilize portable device for daily at-home "therapy"; there is no such thing as a "clinical" stim unit (although some clinical EMG units contain relays to trigger external stim devices.)

verbal-instruction-only pelvic muscle exercise (PME), commonly (but incorrectly) known as "Kegel Exercises."

But in a strange twist, HCFA has suddenly demanded an "ordered" program of four weeks effort to control urinary leakage. It is not stated whether the four weeks must be "prospective" or can be "retrospective." Regional rules may clarify this — or further confuse the issue.

The "Four Weeks Failure" clause was not anticipated and its source remains an enigma. While it is a tradition for federal regulations to insist that a patient "fail" some sort of "conven-

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Bio Research Ad

In Memory of Dennis Ettare, M.A.

Don Nadler

Our good friend and colleague Dennis Ettare passed away on June 24, 2001 after battling acute leukemia for many months. Dennis was a powerful voice in the field of biofeedback, promoting concepts of structured protocols, an operant conditioning paradigm and the importance for muscle training in neck and back pain and repetitive strain injuries. His influence spanned the biofeedback and medical communities. His Muscle Learning Therapy (MLT) has been very successful in the treatment of pain and has served as a guide for many other sEMG training protocols.



Ettare et al in the *Journal of Occupational Rehabilitation*; and “A Test of Two Training Interventions to Prevent Work Related Musculoskeletal Disorders of the upper Extremity” which is currently in submission.

Dennis stimulated us with his creative mind, and he challenged us with his dogged determination to utilize a training approach based on operant conditioning principles of repetition and reinforcement. His ideas and plans were always grand and I know that given the time, many more of them would have come to fruition. It is left to us to build upon the foundation he has provided.

Many of his colleagues knew Dennis as a teacher and a friend. Dennis was also an especially effective therapist. He was sensitive to patients’ needs and feelings, and he helped them develop hope and confidence. At the same time, he never let up on his training demands so that his patients gained the skills that they needed to manage their pain.

Finally, Dennis excelled as a father to Ryan and a husband with Violetta. He was dedicated to his family.

Dennis was trained in physiology at the University of Florence School of Medicine in Italy, and had a master’s degree in clinical psychology. He researched and practiced biofeedback for over twenty-five years and was a past president of the Biofeedback Society of California. His publications include a chapter entitled “Muscle Learning Therapy – A Treatment Protocol” in *Clinical EMG for Surface Recordings, Volume 2*, edited by Jeffrey R Cram, Ph.D.; “Muscle Learning Therapy – Efficacy of a Biofeedback Based Protocol in Treating Work-Related Upper Extremity Disorders,” Nord,

News from Washington State

Graham J. Patrick, PhD, ARNP, BCIAP

This promises to be an exciting year for those of us who live and work in the Pacific Northwest. We have survived our own version of the recent ambiguous national elections and, though not related, a local 6.8 earthquake. Other exciting news from the Pacific Northwest includes a recent medical class action suit brought against Regence Blue Shield. The company has traditionally sought to deny payment of services for alternative care. As a result of this landmark settlement, up to 800,000 subscribers who paid out-of-pocket to visit alternative and complementary providers will be reimbursed under a \$30.4 million dollar settlement. Though the settlement money may not directly affect any biofeedback providers, this is really great news in other ways for biofeedback and other kind on nontraditional providers. Regence Blue Shield had chosen to ignore a little-publicized 1996 Washington state law that required every health insurer to cover every category of state-licensed health care at the same levels that traditional medical coverage provides. I would surmise that other insurers will also become more motivated to provide such coverage.

The Biofeedback Society of Washington held elections during the past winter. Our new board consists of myself as president-elect, Jaci Nicolai as secretary, and Lynn Courage as treasurer.

Advanced Technologies

Continued from page 1

ing treated clinically with virtual reality include generalized social phobia, fear of driving, and panic with agoraphobia.

A second group of disorders, eating disorders, are proving a successful second target for virtual reality exposure. Most who suffer from eating disorders develop body image distortion

and a sense of mastery occurs. As Rachman determined in the 1970s, a person must become both objectively (physiologically) and subjectively (using subjective units of distress (SUDS) with 0 = no anxiety and 100 = maximum anxiety) aroused during exposure in order for desensitization to occur. This is necessary in order to change the fear structure stored in the brain, and allows full emotional processing to occur as Foa confirmed.

A third area that has shown great

tive and negative, so that patients can practice social skills under the supervision of the therapist, with the therapist able to determine what skills might need further improved in role play exercises. Videoconferencing also allows the patient to practice social interactions in a manner that seems less overwhelming than face-to-face interactions. In the case of agoraphobia, therapy can begin over the Internet prior to the patient being able to leave his or her home and drive to the therapist's office. Prior to this, the patient had to choose a therapist near their home.

We are beginning to explore the use of autonomous, interactive robots during the therapy session. Many commercially available toys have computer chips and infrared sensors more powerful than the first computer which landed on the moon. One robotic toy responds to its user's emotions and can "learn" words. When used in therapy, this robot may elicit emotions not evoked by traditional toys or sand tray therapy. We are only beginning to appreciate all the potential uses of this new technology.

At our Center, we are using new technologies to further enhance clinical services and research, and are training graduate students in psychology to incorporate these tools into their therapeutic protocols. The key will remain to use these tools as an adjunct to traditional therapies and not as a replacement of these therapies. Caution must be used when applying these technologies with vulnerable populations, and, as always the clinical need must drive the technology. Technology should not be used for technologies sake but instead to solve a clinical need. With the advent of these technologies, however, we hope to be able to serve a wider majority of the population at need.

References are available upon request.

For more information, contact:
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<http://www.vrphobia.com>

Health psychologists can help patients undergoing painful medical procedures to deal with them more effectively by placing them in virtual worlds during these procedures.

and dissatisfaction. In the past, paper and pencil tests (akin to imaginal exposure for phobias) or mirrored rooms (akin to *in vivo* exposure) have been used to treat this aspect of the eating disorders. Again, virtual reality provides a welcome middle ground. Used in combination with cognitive-behavioral therapy, obesity, binge-eating disorder, anorexia, and bulimia have all been treated successfully in controlled trials using VR in Europe. The patient's actual body can be digitized into the virtual world and other three-dimensional bodies contained in the world can be manipulated to represent the patient's "ideal" body and "perceived" body, and these can then be compared to the actual body. Environmental cues concerning food and eating activities are also presented to the patient.

Many groups are realizing the necessity of adding an objective measurement of treatment success in VR. Physiological monitoring tools include heart rate variability, respiration rate, skin resistance, skin temperature, and brain wave activity. As the patient learns to calm physiological responses to phobic stimuli, self-efficacy increases

strides in VR is in the area of pain management. Health psychologists can help patients undergoing painful medical procedures to deal with them more effectively by placing them in virtual worlds during these procedures. Controlled trials have used VR for women with breast cancer and children with cancer during chemotherapy treatments. This has resulted in a reduction in such side effects as nausea. In addition, during wound care for children who have suffered burns, a recent study showed VR to be a more effective distractor than playing Nintendo. This resulted in significant reductions in pain perception, physical discomfort and morphine usage.

Several researchers are beginning to explore providing virtual reality over the Internet. As bandwidth capabilities continue to increase, this is becoming a real possibility. In addition, Internet-based worlds and videoconferencing are both being used to treat social phobia and agoraphobia. In the case of social phobia, Internet-based worlds which utilize real-time audio provide immediate feedback and reinforcement, both posi-

Stens



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THE MIND-BODY CONNECTION

Tender Point or Trigger Point — What Is the Difference?

Marjorie K. Toomim, Ph.D.



It has taken many years for mainstream medicine to accept fibromyalgia as a legitimate disorder. Now, it is being over-diagnosed and often confused with myofascial pain syndrome. This is especially true when the pain is primarily myofascial but other co-existing general medical conditions lead to the diagnosis of fibromyalgia. And often people have both fibromyalgia and myofascial pain syndrome simultaneously.

Fibromyalgia was officially defined by the Copenhagen Declaration in 1992 (in Starlanyl & Copeland, 1996) as "A painful, but not articular [not present in the joints] condition predominantly involving muscles, as the most common cause of chronic, widespread musculoskeletal pain. The World Health Organization added the following symptoms: "...the presence of unexplained widespread pain or aching, persistent fatigue, generalized morning stiffness, non-refreshing sleep, and multiple TENDER POINTS. Most patients with these symptoms have 11 or more tender points. But a variable proportion of otherwise typical patients may have less than 11 tender points at the time of examination." In addition, the Copenhagen Declaration states that fibromyalgia syndrome is a "part of a wider syndrome encompassing headaches, irritable bladder, dysmenorrhea, cold sensitivity, Raynaud's phenomenon, restless legs, atypical patterns of numbness and tingling, exercise intolerance and complaints of weakness."

Tender points hurt where pressed, but they do not refer pain elsewhere. To be fibromyalgia, tender points must be present in all four quadrants of the body (upper right and left, lower right and left). Because they occur in pairs,

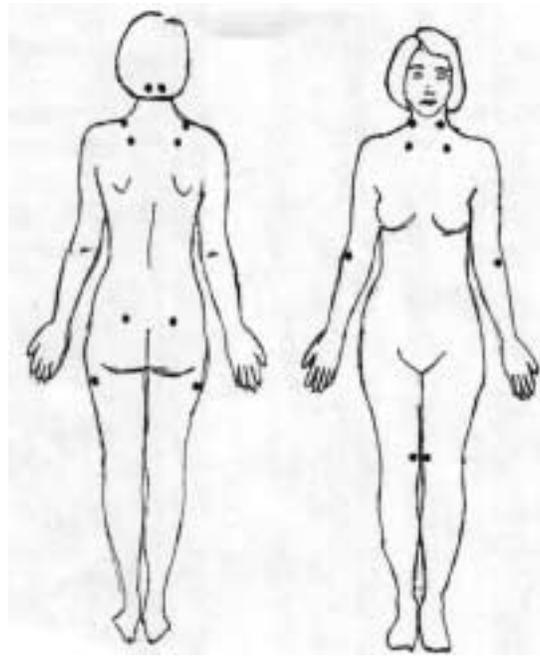


Figure 1. Location of fibromyalgia tender points (from D. Starlanyl & M. E. Copeland, *Fibromyalgia and Chronic Myofascial Pain Syndrome: A survival Manual*, 1996).

pain is usually distributed equally on both sides of the body. Figure 1 shows the location of fibromyalgia-related tender points.

Tender point pain is usually described as deep, aching, radiating, gnawing shooting or burning and is felt deep within muscles, ligaments or tendons. Often the patient experiences joint pain, though this is usually associated with rheumatoid arthritis and other disorders. Patients usually complain of body aching with stiffness upon awakening. Aching may lessen during the day and increase again at night. Pain often increases with activity, cold, dampness, anxiety and stress. Muscle spasms and cramping may disturb sleep. Pain sensitivity throughout the body is amplified in fibromyalgia.

While no one really knows why

fibromyalgia causes an amplification of pain, Harold Slavkin (2001) suggests substance P, an inflammatory mediator; decreased serotonin in cerebral spinal fluid; excitatory amino acids; and opiates and endorphins may be involved.

According to Travell and Simons (1983, the TRIGGER POINTS characteristic of Myofascial Pain Syndrome are, "A focus of hyperirritability in a tissue that, when compressed, is locally tender and, if sufficiently hypersensitive, gives rise to referred pain and tenderness, and sometimes to referred autonomic phenomena and distortion of proprioception." Trigger points occur in ropey, "taught bands" and refer pain in predictable patterns to specific regions of the body, often distant from the trigger point itself.

The trigger points characteristic of myofascial pain syndrome often are in just a few locations throughout the body, often occur only on one side, and are usually not accompanied by generalized fatigue, muscle aching, and the many other symptoms we find in fibromyalgia patients. Myofascial pain may keep people awake because of the body's pressure on trigger points when lying down, but the debilitating alpha/delta sleep pattern of fibromyalgia is not usually present. According to Starlanyl & Copeland (1996), trigger point pain is usually described as steady, dull, deep and aching. If a nerve is trapped, the pain can be burning, sharp, and lighting-like.

According to Starlanyl and Copeland (1996), tender points often become

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Tender Point or Trigger Point

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trigger points. The two conditions then coexist. The pain of tender points causes the muscles around the pain sites to tighten, guarding the hurt areas. Muscles in a state of sustained tension are constantly active. Thus they require more nutrition and oxygen and produce more waste than muscles at rest. When wastes accumulate, local nerve endings become irritated. Tightened muscles constrict, squeezing blood and lymph vessels and compressing nerves. As muscles remain tight and contracted for long periods of time, theropy "taut bands" characteristic of trigger points develop and trigger points are formed. The emotional stress of fibromyalgia also contributes to the creation of trigger points. Stretch receptors in muscles and connective tissue

are involved in trigger point pain.

It is very common for fibromyalgia and myofascial pain syndrome to coexist. I have been very successful in relieving the pain referred from trigger points with a process which involves using sEMG instruments to guide the very slow stretching of chronically tense muscles, strengthening their often weak counterbalancing muscles, teaching people to use their bodies correctly in activities of daily living and working, deep relaxation, and stress management (Toomim, Ph.D. (1999).

Mueller, Donaldson, Nelson and Layman (2001) report successful treatment of fibromyalgia syndrome with EEG-driven stimulation (EDS), followed by "very modest amounts of physically oriented therapies." Here, EDS seemed to be the prime initiator of therapeutic efficacy.

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Holistic Psychology

Music Therapy

Jeffrey R. Cram, Ph.D.

This column is just a very brief comment upon the adjunctive use of music in the psychotherapy setting. For years, I have been very interested in the use of music in therapeutic endeavors. My guess is that it was the “holotropic” breath workshop (based on the work of Grof) which I took many years back that stimulated this interest. Here, I found myself doing a lot of heavy breathing to music.

Given the catalyst of the breath, the music seemed to go right into my soul, and give it a good shake or two. For me, I experienced variations of bliss. For others in the room doing the same thing, it brought about cathartic releases of trapped negative emotions.

And then a few years back, I encountered a fellow by the name of William Collinge, who was offering an evocative breath workshop at an ISSSEEM conference. I registered for it because of my keen interest in breath. I was truly impressed with how he could orchestrate an emotional cleansing in a group setting using a combination of breath and music. Later that year, I took his audiotape program, and offered it around the United States as workshops on evocative breath. Some of you at BSC may have, in fact, taken the workshop I offered on this a few years back. At any rate, in each of these evocative breath workshops, I would say that 10-20% of the participants would have a very deep and cleansing experience. They would come up to me after the workshop and tell me how they were finally able to let go of something.

Two years ago, I believe, BSC hosted a speaker by the name of Chris Alsten, Ph.D., who presented on what he called 3-D music for Sleep Enhancement Fatigue Reduction Training. He had a grant from the Feds to study the effects of this music program on pilots. The empirical basis of how music minimized the disturbance to the sleep cycle of pilots who were shifting time zones was pretty amazing. Having traveled extensively and know well the effects of time zone shifts, it is pretty amazing how music can



simply tickle the second cranial nerve, and enter right into the midbrain to sooth the savage beast.

Such a simple thing. Music. How often do you use it in your practice with your clients. For me, it is now an every day event. I have begun to play the Jeffery Thompson, Ph.D brainwave tapes to my neurofeedback patients. And you know, if I want to assist someone to achieve

more Beta Activity, when I add his beta symphony music to the background of the room, I seem to be more successful. I will frequently put on his alpha or theta music CD on as I teach a patient Autogenics. It truly deepens their response to my training. Do you work with sleep disorders? Then consider his delta sleep CD. I how now loaned or encouraged a half dozen patients to buy this Delta Sleep Program. I then couple the treatment with some breath retaining in the office and send them off to see if breath and music at the hour of sleep can improve the quality of their sleep. With the addition of music, my success rates with sleep disorders has really improved. By the second or third week, all these patients have returned to a normalized sleep pattern. And their use of Ambien or Sonata have totally disappeared. It turns out that music and breath are better for them than any medication that they can take.

Since my computer system is a multi-media device, and has a very nice sound system, playing music to my patients is a breeze. I can even play the music concurrently with my Windows™ oriented biofeedback software. I continue to build my repertoire of music to use with my patients. Perhaps one day there will be a music repertoire for psychotherapists that will guide them in the selection of sounds. For now, all I can suggest is to let your music selection be guided by your intuition.

Medicare and Incontinence

Continued from page 5

for EMG, but stimulation works just as well with patch electrodes as it does with inserted ones. This is because fatty peritoneal tissue attenuates EMG signals, but a stim device can be “turned up” to compensate.

KEGEL Left Out of Plan

The second surprise was the exclusion of home biofeedback trainers from coverage. The regulators chose to follow the Kathy Burgio “office-only” biofeedback model. Burgio’s NIH clinic had used a full sized polygraph, for which (at the time of the hearings) there is no readily available home trainer.

Ironically, Arnold Kegel’s original 1948 perineometer, the device which started this whole revolution a half century ago, and which was designed for

road. HCFA drew no distinction between \$400 home practice devices and \$12,000 portable computerized systems – *neither* will be reimbursed when used in the home.

This rule is especially insulting to famous nurses Diane Smith and Diane Newman, who pioneered the treatment of homebound seniors in a New Jersey state research project in the late 1980s under a grant from the Robert Wood Johnson Foundation⁴. According to the new regulations, all incontinence biofeedback must be done in an office, hospital or similar “facility.” (Strangely, there were no such restrictions placed on stim.)

The net effect of these two sets of rules is that biofeedback is “OK” in the office, and electrical stimulation is “OK” at home. This has created a new model of clinical practice that has never been the subject of formal research by experimenters. Yet it is destined, for the time being, to become the new national standard of practice.

cal stimulation in a single visit. The patient will then take the stim unit home for daily treatment – rental or purchase paid for by Medicare.

Ironically, the requirement for inserted stim sensors means that sensors will also be available for EMG biofeedback, providing better results than surface electrodes. Although it is possible to do stim without objective measurements, the additional reimbursement for biofeedback in the clinic will prompt clinicians to actually evaluate pelvic muscle condition on a weekly basis – something that should be done anyway. In the past the extra cost of inserted sensors was a barrier to biofeedback, but now it is a requirement for reimbursement.

The Future Of Biofeedback

It is rumored that the new regulations will come up for review in three years, which should be sufficient time for biofeedback clinicians to collect comparative data about relative efficacy of biofeedback versus stim home devices. Hopefully the increased coverage will create a larger pool of data from multiple sites.

As a matter of clinical expediency, biofeedback therapists should point out to their Medicare patients who can afford it that they can rent an EMG home trainer for less than the cost of their present (non-reimbursed) adult incontinence products. Those who can afford it will do so, and the rest will continue to get inferior medical care under Medicare.

Note 1. In April 2000 an elaborate framework of scientific panels reviewing “evidence-based-medicine” (EBM) research by outside assessment organizations was created and used to review biofeedback and (external) electrical stimulation in the treatment of urinary incontinence. But HCFA received substantial criticism on the new procedure, and a few weeks later it was abandoned when “implanted electrical stimulators” were reviewed with no pretense of “EBM.” The Medtronic “InterStim” device was quickly and quietly approved on the basis of a single research study prepared and funded by the manufacturer.

Those who can afford it will do so, and the rest will continue to get inferior medical care under Medicare.

daily home practice, will *not* be covered under the new Medicare plan, which does not pay for any biofeedback device used in the home.

The exclusion of home biofeedback is especially bothersome because it is the use of daily home training that has produced the best clinical outcomes, according to both government² and private³ research.

Worse yet, not only are at-home biofeedback instruments *not* covered, but physicians (and nurses, physical therapists, and biofeedback specialists) will *not* be allowed to charge for visiting invalid patients at home.

This is not only unjust treatment of Medicare’s most serious patients, but also ironic, since in the past decade manufacturers have worked hard to perfect miniature portable “labs” based on laptop computers to provide all the power of office-level technology on the

The new plan is similar to the “New York Blue Cross” plan; last year that group began to cover biofeedback at clinical visits, but *only* when electrical stimulation units were also prescribed for daily home practice. There has never been any research based on the NYBC treatment plan, but that won’t stop it from becoming the new national norm.

One Assumption Required

For the NYBC plan to become national practice requires only one very believable assumption — that practitioners will, as they always have — bill Medicare for as many HCPCS codes and modalities as they possibly can get away with in a single office visit. Thus the most lucrative clinical pattern will be to provide and charge the patient for BOTH office biofeedback AND electri-

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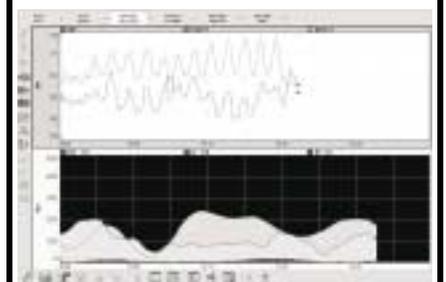
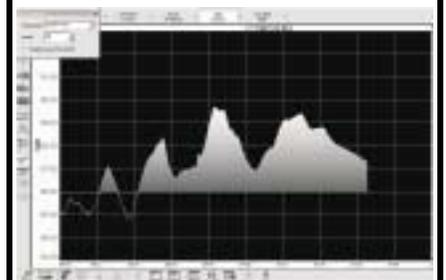
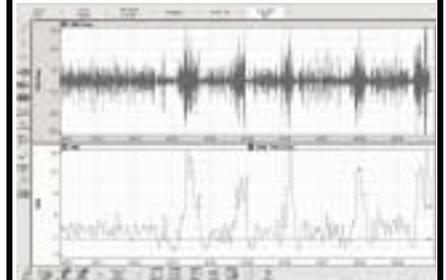
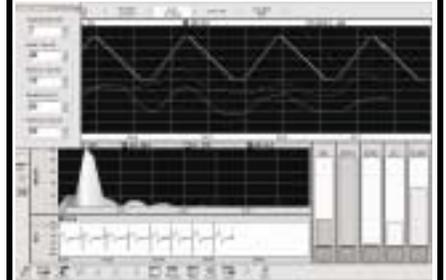
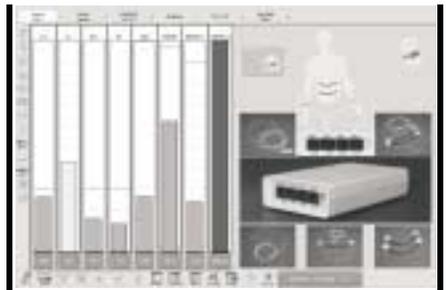
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A MATTER OF BREATH

Real Life Symptom Thresholds

Ira Rosenberg, MA

We pay so much attention to the onset of symptoms and are so relieved to see them gone that we are generally out of touch with the way in which they resolve. Yet successful self-intervention strategies depend on our recognizing the specific steps or stages by which our symptoms resolve. They don't vanish at once. Angina pain has its own course. Irregular heartbeats don't resolve instantaneously. Each person has his or her own pathway to relief. Usually there's a build down in each episode, marked by 1) decreasing frequency and intensity of symptoms, 2) noticeable relaxation in another body function, 3) an idiosyncratic curve of relief, 4) an overall emotional "felt shift."

Similarly, over time, with successful self-regulation, a person experiences 1) shorter, less frequent episodes of symptoms, 2) fewer and more specific circumstances that provoke symptoms. The better a client can map the path of symptom resolution within each episode and between episodes, the



advance of the next expected symptom in a rising symptom curve. To make an intervention before the symptom appears requires us to be attentive to /precursory signs or symptoms,/ sometimes in another modality. Among my clients, symptoms preceding serious arrhythmias have included fatigue, headache behind the eyes, acid reflux, persistent cold hands, edema in

body/mind junction — precisely because it is the one life-essential body function that slips easily between voluntary and autonomic control — but don't stop there. Go from breath to sensory awareness, from there to organ targeted sensory awareness, from there to the intention to control the dysfunction and from there to the gesture, phrase or image to which that intention to control has been anchored during office visits and daily practice at home.

These maneuvers are very idiosyncratic. In clients with risk of atrial fibrillation I've seen vigorous exercise, fast walking and general physical activation work to resolve the arrhythmia — perhaps because cardiosomatic coupling, with rhythmic breathing provides a strong signal path to the heart rate variability, overriding the chaotic conduction pathways. But I've also seen relaxation work, anchored to images of well-being, perhaps because the relaxation-imagery complex reduces sympathetic efferents to the heart muscle that could disrupt atrial conduction either directly or through retrograde conduction through the ventricles.

Functional cardiac disorders and even anxiety, caught early enough by attention to precursory symptoms respond to on-the-wing interventions developed by the client for his own needs with the guidance of a biofeedback clinician.

To briefly summarize: the intervention strategy uses a mix of the following elements:

1. Recognition of precursory symptoms and signs which may or may not be in the same body system, but do indicate that "trouble is coming unless I do something soon."
2. Breathing, muscle relaxation and other quick strategies as a quick way into the body/mind junction where the client contacts and tries to normalize the impending dysfunction with an already rehearsed,

The better a client can map the path of symptom resolution within each episode and between episodes, the better he or she can induce the stages.

better he or she can induce the stages. This means being able to go to the next step in the build-down by knowing what the next step will be.

Movement along the path of resolution in functional cardiac disorders, especially irregular heartbeats and angina pain, is greatly helped by on-the-wing interventions. These interventions are made, if possible, in advance of symptoms — or at least in

the feet, muscle tension, tics, movement from horizontal to vertical body orientation and many others.

The interventions are particular to each client, responsive to the precursory symptom, but selected from a repertoire of skills that always includes breath control and usually begins with it. Since the respiration almost always influences cardiac function through the RSA it makes an ideal first way into the

practiced and “over-learned” self-regulation maneuver.

3. To override the wayward heart rate variability, relaxation or activation, exercise, valsalva manoeuvres, circular breathing or the intentional production of RSA patterns monitored at the radial pulse may help.

Threshold Strategy

Functional cardiac symptoms are by nature episodic. They come and go. Many factors, some physiological, some behavioral, some psycho-social converge to produce the symptoms. You can help your client learn to know the conditions in which symptoms are likely to appear.

Let's say that whenever a certain person experiences all five of the following symptoms they experience arrhythmias: 1) cold, 2) fatigue, 3) relationship stress, 4) breath holding, 5) compulsive eating. With two symptoms they never get the arrhythmia.

With each additional symptom they get closer to the threshold of dysfunction. When clients gain the self observation skills to know their symptom onset curves AND to keep in mind the symptom threshold model, they have a good strategy to work with.

When above the threshold, symptoms appear. When below they're gone. But how far below is below? Most of your clients will be in the “above the threshold” condition when you meet them. The key training achievement, then, is in passing through the symptom threshold to the resolution of symptoms for that episode at that time.

Since most functional cardiac disorders appear quickly and resolve slowly, clients with these problems usually bounce around the symptom threshold for a long time during the biofeedback training process. Firmly, definitively passing through the symptom threshold marks one of the principle stages of training. And usually it

has to be acquired many times over — and this process of over-learning is important for inducing change. But symptom relief is common. The more important goal is staying below the symptom threshold. Since your client is training now in the absence of symptoms, and hopefully attaining a variety of states of well-being, and since people are generally much more attentive to ill-being than to well-being, awareness of well-being itself becomes a goal and induces appreciation of life.

My clients, however, especially if recently relieved of symptoms, don't know if they're an inch or a mile below the threshold. If one inch, a small stressor, a little fatigue or anxiety can trigger the symptoms. If a mile, they've got lots of wiggle room to deal with stressors before a bad combination of factors will make them symptomatic again. With good training, their on-the-wing interventions and home practices will keep that from happening.

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HARDBALL WITH DOUG MATHESON

Douglas W. Matheson Ph.D., University of the Pacific

Judging from the lack of email I received concerning my last column, some of you either agreed with my comments, or you neither care nor are very concerned about empirical evidence in a clinical practice. That is to be expected. If the patient or client gets “better,” we often don’t care why, and certainly in a clinical practice, that is the bottom line. The shotgun approach to healing is seldom called to task, unless it doesn’t work. All too often in both medical arts and behavioral “science,” we don’t know why people get better. If people do get better, most clinicians would like to think that they have had some role in the improvement. U.C. Santa Barbara’s Larry Beutler (2000) posits that while most clinicians generally value scientific validity, most clinical practices are not strongly supported by experimental evidence. Clinical practices are supported by hunch, personal experience or by faith in some particular outcome. Beutler calls for a standard by which scientifically tested treatments might bring scientific credibility to a discipline. His solution involves a combination of existing literature and cross validation research. If you go to the Web page referenced below, you will also see comments on this article providing differences of opinion. Wouldn’t it be nice if people who work with behavior could emulate the chemist who knows pretty well that if we mix two parts hydrogen and one part oxygen we have a very high probability of getting water? Behavior *is* more complex than a simple chemistry exercise. People don’t behave one behavior at a time. A student may be sitting quietly appearing to be paying attention to my lecture, but in reality the student might be thinking about something else entirely. What levels are that student’s blood pressure, heart rate, muscle tension, and brain waves under different regions of the skull, doing at that moment? Behavior is very complex and accounting for all possible variables



operating at a single moment in time is nearly impossible to comprehend. So, because we are trying to make a buck and don’t want to turn off our clients with time consuming data gathering, we do the best we can, which is reasonable.

If clinicians had to wait for empirical data to support everything they do, many clients would fail to get better and their quality of life might suffer. What a dilemma! We want to do the right thing for the people paying the freight, but in the end, sometimes we are not quite sure why we are doing it. I remember as an undergraduate, when I was asked to evaluate Freud’s dynamic approach (I know that statement dates me). At first, I knew with time, I could explain almost any behavior with Freud’s ideas. Only after a discussion of these issues with my professor did I realize that it explained everything, but really explained nothing. That’s when I began to think about data collection, hypothesis testing, error, effect size and power. Boy, did my head hurt. So what *can* we do?

A task force to study the issue of empirical support in biofeedback, neurofeedback and the like has been formed. The task force currently has about 15 members. The charge is something like this:

1. The task force is a joint, collaborative effort of AAPB (Association for Applied Psychophysiology and

Biofeedback) and SNR (Society for Neuronal Regulation). AAPB president Don Moss appointed Ted La Vaque, Ph.D. (WI) and SNR president Jay Gunkelman appointed Cory Hammond, Ph.D. (UT) as co-chairs to work with members appointed from their respective organizations to develop a Template for Developing Guidelines, much as APA did in 1995. The purpose of the template is to provide a mutually agreed upon set of definitions and guidelines to be used by other committees and individuals concerned with levels of “efficacy”.

2. Review available methodology for research on biofeedback and applied psychophysiological interventions.
3. Review the APA standards for empirically validated treatments and consider their appropriateness for biofeedback and applied psychophysiology. Consider adopting a modified version of these standards, or our own standards.
4. Establish a standard with graded levels for empirically validated treatments: something like Best Validated, Well Validated, Some Validation, Experimental, and Discredited.
5. An extension of the task force activity would be to commission new White Papers that are shorter, more concise, but include a rating of specific biofeedback applications as to current level of validation for each disorder and each treatment protocol. That will take longer, but is the ultimate fruit this effort should produce. The Task Force would establish the standards, but would not produce the White Papers.

The task force is a start. Maybe we can get past this thing about “My stuff is great, but yours is uncontrolled

crap." Maybe we can put some teeth into our methods, get more grant money, and become less dependent on other disciplines that don't really know what we are doing. This is not an "us against them situation." It is an honest attempt to stand on our own feet and have some science behind what we do.

Beutler, L. (2000) Empirically based decision making in clinical practice. *Prevention and Treatment*, 3, Article 27. Posted September 1, 2000. Retrived July 16, 2001 from <http://journals.apa.org/prevention/volume3/pre0030027a.html>

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