 Providing ethical and legal electromyographic biofeedback services means more than knowing and being in compliance with all relevant laws, rules, regulations, ethical principles, and practice guidelines and standards. It also means being knowledgeable about the clinical and research data that exists to support what one does in daily practice and being competent in a wide variety of areas, including equipment and computer operation, proper electrode attachments, normative values, using technology, the limits of confidentiality, and informed consent requirements.

Introduction
The sophistication of electromyographic (EMG) biofeedback has continued to increase as technology has improved, new research is published, and clinical interventions are applied to new areas and as practitioners have become more competent through more and better initial training and continuing education. Still all practitioners need to remain current and aware that ignoring ethical, legal, and professional issues can be the undoing of one’s reputation, income, and livelihood and can result in unnecessary stress. In fact, according to Wise (Meyers, 2006), practitioners under stress who fail to take care of themselves are less likely to be competent than those who do take care of themselves because their ability to help clients is compromised, their judgment may be impaired, and they may well engage in improper behavior such as violating confidentiality or crossing relationship boundaries. Maintaining a balance of work and leisure, maintaining professional contacts, seeking help for personal or professional problems (Meyers, 2006), learning to relax, and engaging in continuing education are all ways to take care of oneself.

Law, Ethical Codes, and Practice Guidelines and Standards
Over time the ethical, legal, and professional issues encountered in daily practice have become more complex as the implications of new technology advances, new or relatively new laws (e.g., The Health Insurance Portability and Accountability Act [HIPAA]), new legal precedents, new research, and new ethical implications are identified, implemented, misunderstood, and misapplied. For example, a practitioner might assume that since HIPAA is a federal law one can avoid problems simply by adhering to its requirements, only to find out later that if a state law or ethical standard has a more stringent requirement than HIPAA, that the more stringent requirement must be met to avoid legal and/or ethical problems.

It is both good practice and prudent for practitioners to be knowledgeable and in compliance with all state and federal laws, rules, and regulations as they apply to the practitioner’s professional activities and simultaneously to be knowledgeable and in compliance with all applicable ethical codes and practice guidelines and standards, including those of one’s discipline, those of all professional associations to which one belongs, those that a court might assume to be relevant because of one’s discipline or areas of practice, and those ethically required as spelled out in a relevant state licensing law and/or certifying agency, such as the Biofeedback Certification Institute of America. For example, I am amazed by the number of biofeedback practitioners with whom I have interacted who are not aware of and therefore, may be out of compliance with the Occupational Safety and Health Administration’s (OSHA) universal precautions on blood-borne pathogens, other bodily fluids, and diseases like AIDS, hepatitis, and tuberculosis (e.g., see Section 1910.1030 at www.osha.gov). The regulations are for the protection of both clients/patients served and for practitioners and their families. According to the universal precautions all human blood and certain bodily fluids are to be treated as if known to be infectious. That open sore on a client or practitioner’s skin, the electrodes used, the abrading of skin all require specific precautions to avoid problems. Do you wash your hands carefully and appropriately between seeing one client and the next? Do you carefully disinfect the equipment you use and the areas around it? Do you wear rubber gloves if there is any probability that you will come in contact with bodily fluids? You should do all of these things, and more, for both yours and the client’s protection.
It is recommended that all practitioners have copies of all relevant state and federal laws, rules, and regulations and all relevant codes of ethics and practice guidelines and standards so they can be referred to as needed. Copies of most such items are now available on the internet or from relevant agencies, e.g., the lab of most any hospital will have copies of OSHA’s universal precautions. AIDS, hepatitis, tuberculosis, and other diseases are an ever-increasing reality, and sooner or later every practitioner is likely to have a client who has one of these diseases/conditions whether known or unknown to him or her. Failure to adhere to the universal precautions could result in a negligence lawsuit if a client believes he or she contracted a disease because of the practitioner’s failure to be in compliance. The articles in this issue of Biofeedback provide some interesting things to think about in terms of being proactive. For example, can you legally use needle electrodes?

**Touch**

Touching a client to attach sensors is a common part of daily practice for most biofeedback practitioners. Touch is a very important issue, yet it is an area that has not been discussed in any detail in either the AAPB (2003) ethical principles or in its practice guidelines and standards (Striefel, 2004). The next version of each of those documents should perhaps include a little more detail on appropriate and inappropriate touch. Care must be taken by practitioners to understand (a) the limits of touch permitted and prohibited by one’s license, the ethical principles of one’s discipline and other associations to which one belongs, by the boundaries of common practice, and by one’s duty of care; and (b) the technical and practical issues of informed consent related to touching a client.

**Limits of Touch**

Having a client/patient disrobe and put on a gown in privacy before some kinds of medical exams is common practice and is one way of showing respect for clients and their right to privacy and decency in so far as that situation allows. All prudent male physicians and nurse practitioners have learned the necessity of having a second person present before conducting an examination of a female’s genitalia or breasts. Most often this second person is a female nurse. Having this second person present can help the patient, consciously or unconsciously, feel reassured that no inappropriate touching or other activities will occur during the examination. The presence of this second person also provides some protection for the practitioner against any accusations of false touching because a witness is present. In addition, the presence of a witness also provides a reminder for the practitioner to conduct the exam within the common standards of care and to control any fantasies or voyeuristic tendencies in relationship to touching the patient.

Laws in many states classify touching another person without permission as assault. A legal website (http://wikipedia.org/wiki/assault) states that “assault is often defined to include not only violence, but any physical contact with another person without their consent. When assault is defined like this, exceptions are provided to cover such things as normal social behavior (e.g., patting someone on the back). The conditions vary from law to law but would generally include a threat, real or implied, or an intentionally caused injury or one resulting from negligence (Pennsylvania Consolidated Statutes, 2006).

For example, some 20 years ago, a male psychologist who was doing biofeedback and stress management training got in trouble with the police and state licensing board for supposedly putting his hand on a female client’s chest while trying to instruct her on abdominal versus chest breathing. The client’s primary language was not English and she was not from the same nationality as the psychologist. Several issues could have contributed to the problem, including but not limited to, fear, cultural differences and misunderstandings, language barriers, questions of appropriate and inappropriate touch (assault?), informed consent issues, and possible failure to adhere to the standards of practice for one’s discipline regarding touching of a client. Was the practitioner naïve, incompetent, not knowledgeable about appropriate and inappropriate touch, or trying to overcome the language barrier with a poorly selected demonstration? The client may well have assumed that the practitioner was trying to get “his kicks” at the cost of her physical, emotional, or psychological well being. There is no way for us to know what really happened without having been there. The case, even today, makes clear the importance of being aware of and adhering very carefully to the various forms of guidance provided for practitioners by laws, ethical principles, practice guidelines and standards, etc.

We do know that it is inappropriate, unethical, and may be illegal for males of most health care professions to touch a female client’s breast area, regardless of whether the client would consent to it. Once, while teaching biofeedback to graduate students, I was discussing the attachment of electrodes for monitoring heart rate and had shown a diagram of the appropriate placement below and outside of the human nipple and the students requested a live demonstration. I made a request for a volunteer and immediately a female student volunteered. It provided a good opportunity to discuss the importance of the volunteer for the demo being a male and why, the appropriate boundaries for touch, not being voyeuristic, the necessity for having a private place.

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where a female could attach the electrodes to herself or have a female assistant help her attach them in privacy, and the importance of informed consent and the educational component that goes with it. And no, I did not use the female student as a volunteer for the demonstration.

It is critically important for practitioners to know and abide by the laws that govern their practice activities. Not only are the laws for one’s own discipline relevant but often the laws for other health care disciplines (e.g., medicine) specify behaviors that are prohibited for individuals not licensed in that discipline. What are the laws that are relevant to you if you do SEMG biofeedback? There are the licensing laws, the abuse and neglect laws on mandatory reporting, the records retention laws, the OSHA regulations, the duty to warn and protect laws, the mental health commitment laws, the civil statutes on items like negligence and on assault, and the laws and rules and regulations on billings and collections. What laws are relevant to what you do? What are the other rules and regulations that apply to what you do? To which codes of ethics and practice guidelines and standards should you adhere besides those of AAPB? Do you have copies of all those items so you can readily access them when needed?

Informed Consent

Clients have a right to make choices concerning professional assessments and treatment, and every right of the client imposes an obligation on the practitioner (see Striefel, 1997 for more on rights and obligations). Client choices require practitioners to go through a careful process of providing clients with meaningful information so that clients can make a truly informed decision. What are the major treatment options other than EMG for the conditions that you treat, and what are the pros and cons of each of the treatment options including no treatment at all? What are the conditions that must be met before you consider EMG a viable option for the client’s problem, besides available research and clinical data? What can members of your discipline do and not do legally? Where do the boundaries for the practice of medicine begin and end in your state of practice?

A client needs to know that for EMG biofeedback to occur, sensors need to be attached to specific areas of the body in specific ways, and if the practitioner is going to attach them he or she will need to have the client’s permission to do so. Where the attachment of the sensors would be inappropriate for the practitioner because of the bodily area involved, the client’s gender, the boundaries of common practice, or for other reasons, the practitioner takes care not to violate the boundaries and provides acceptable options for the client to choose from, e.g., attaching the sensors to him—or herself in the privacy of the bathroom, having a family member or a same gender assistant acceptable to the client help him or her to attach the sensors. Clarifying for the client as needed what is and is not acceptable for members of one’s own discipline is part of the process. The client can be shown diagrams, pictures, and given such other information as may be needed if he or she is going to attach the sensors to him or herself. Clients may also need to be given choices on clothing that they can wear that allows them to maintain their own sense of decency/modesty, but which might make it easier to attach EMG sensors, e.g., a female client might chose to wear a bathing suit or halter under her blouse so she can take off her blouse without feeling exposed while sensors are attached along the spinal muscles. The important thing is for practitioners to think about and to review how they go about doing what they do so that they remain current and do not do something just because that is how they always did it in the past.

Invasive Procedures

Are you legally and/or ethically prohibited from using needle electrodes when doing EMG biofeedback? I read recently that a needle when used to inject a substance is considered an inoculation (common knowledge), but when used to remove something from the body is classified as a surgery. How is the use of needle electrodes classified? Invasive activities are often restricted by law to certain licensed health care practitioners or those operating directly under their supervision, e.g., nurses in training. As a general rule invasive procedures are restricted for use by medical personnel. An invasive procedure is any procedure that breaks the skin. Invasive procedures require at minimum adherence to the universal precautions specified by the OSHA standards.

What do the laws, rules, and regulations in your state allow for members of your discipline in regards to the use of invasive procedures? In years past, attaching EMG sensors required the abrading of the skin (breaking the skin) to get a good contact with low impedance. Today, most if not all EMG sensors can be attached by carefully cleaning the skin without the need for abrading it. Are you using any invasive procedures? Are they legally allowed by the laws of your state, and are they within the standards of common practice for members of your discipline? The article in this issue of Biofeedback by Dr. Gabriel Stella discusses the use of both surface and needle electrodes and should be informative on both topics. Just because a practitioner can legally use invasive procedures does not mean that he or she should do so. He or she must also be competent to do so and have in place all of the mechanisms for abiding by the OSHA regulations concerning bloodborne pathogens.
Competence
Sherman (2000a, 2000b, 2000c) discussed a number of reasons why traditional surface EMG (SEMG) biofeedback had not reached a level of common acceptance (i.e., why it was still not considered a validated intervention). They included the lack of a good data base, practitioners making mistakes in collecting or recording data, and a lack of understanding of what are normal EMG values. Mistakes in setting filters, in collecting data, and in knowing what the normative SEMG values are for different muscle groups used in biofeedback interventions are all indications of practitioner incompetence. Such mistakes/incompetence by practitioners is not good for the advancement of biofeedback or for its reputation with other healthcare providers, and they put the practitioner at risk for negligence lawsuits and ethical complaints. It also raises questions about what EMG interventions, if any, are considered to be validated (no longer experimental) based on the joint task force templates (Moss & Gunkelman, 2002).

Clearly there is a need for more research in the SEMG area and for publications in which various SEMG applications are evaluated using the new templates. Such papers will help practitioners during the informed consent process to be honest while informing clients on the level of support that exists for the EMG intervention that they are proposing for the client’s problem(s). Which SEMG interventions do you consider to be validated (not experimental), and what data can you cite that meets the template requirements to support your claim?

Volume 34, number 3 of Biofeedback included some very interesting discussions about electroencephalographic (EEG) signatures of common disorders treated with neurofeedback and of phenotypic EEG patterns that contribute to multiple disorders treated by neurofeedback practitioners. Are there any EMG signatures for common disorders treated using SEMG? If so, what are they? What are the other physiological parameters of such common disorders, i.e., do they have unique heart rate variability, skin temperatures, or EEG patterns? Are there any common phenotypic distinctions that cross disorder categories?

A competent practitioner knows when, if, how, and which SEMG biofeedback intervention, if any, is appropriate for helping a client with a specific problem (Strieffel, 2004). He or she also knows the clinical and research data that exists to support that choice and the major alternative treatment options and their pros and cons so that he or she has a rationale for the treatment being proposed to the client and the information needed to formulate a reasonable and complete treatment plan should the client give informed consent to proceed with treatment. He or she also understands the muscles of the body and how they function, other relevant physiological parameters, how to correctly operate the equipment used, how to attach the electrodes so that the impedance is within acceptable standards, how to use the computer and other technology responsibly and in ways that protect client confidentiality, the limits of confidentiality themselves, the requirements of meaningful informed consent, and how to interpret the data that is collected so that meaningful decisions can be made. Are you competent in all of the areas in which you provide treatment? Do you need additional training, information, consultation, or supervision to maintain or enhance your competence? What is your plan for getting the support that you need?

Wallace and Shapiro (2006) provided a very interesting theory for achieving mental balance and well-being. The 4 major components seem relevant to both the emotional well-being of practitioners and that of some, if not all, clients. The components include:

1. Conative balance, which refers to intention and volition whereby a goal is established and which thus carries a stronger commitment to action than a desire alone. It provides an incentive for making changes.
2. Attentional balance, which refers to the development of the sustained and voluntary attention needed to achieve optimal performance in any meaningful activity. Such attention is often called mindfulness.
3. Cognitive balance, which refers to engaging the world of experience without the distortions imposed by conceptual assumptions and/or ideas. It means being present with experience in the here and now in a calm manner. It provides a means for being closely in touch with reality.
4. Affective balance, which refers to freedom from excessive emotional apathy, vacillation, or inappropriateness. In simple terms it means to develop emotional regulation skills.

All four of these forms of balance are a part of self-regulation, which is part of what biofeedback practitioners are trying to teach their clients. Readers might find it interesting to compare their own sense of balance in these four areas with what was proposed by Wallace and Shapiro (2006).

References

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