Appendices
Special Considerations in Clinical Practice

A. Self-Report Relaxation Training Form

When we teach the relaxation response, the typical protocol requires the patient to visit the office between one and three times per week. This limited frequency would make it difficult to realize the desired therapeutic effect of a cultivated lower arousal status. Therefore, patients commonly receive relaxation training "homework." This usually consists of asking the patient to employ the relaxation response once or twice a day. In order to provide a useful forum for communications and to improve compliance, it is highly desirable to have patients complete a relaxation training report from each time they practice the relaxation response. They are then asked to return the completed forms to the therapist at the beginning of each office session. The therapist then uses these forms as a means of reviewing patients' progress.

Following this introduction is a sample relaxation report form that may be used for reporting on the progress made in home relaxation training.

G.S. Everly and J.M. Lating, *A Clinical Guide to the Treatment of the Human Stress Response*, DOI 10.1007/978-1-4614-5538-7,

Relaxation Report Form

Name: _____ Time Started _____

Date: _____ Time Finished _____

Beginning SURS* _____ (before the relaxation exercise begins)

Ending SURS _____ (after the relaxation exercise has ended)

Were you able to relax? YES NO (Circle one)
If "No", why not? _____
_____

Did your mind wander? YES NO
If "Yes", what were you distracted by? _____
_____

Did you experience anything unusual? YES NO
If "Yes", what? _____
_____

Is there anything else you would like to report? _____
_____
_____
_____
_____
_____

*The SURS (Subjective Units of Relaxation) indication is a method by which you may indicate your subjective levels of relaxation. A SURS of 10 will be indicative of a dreamlike state of profound relaxation; a SURS of 5 is indicative of how you believe the "average" person feels on an "average" day; and a SURS of 1 is indicative of a panic attack. Choose any number between 1 and 10, inclusive, to indicate your beginning and ending SURS levels.

B. Physically Passive Neuromuscular Relaxation

Earlier in this text, we stated that "neuromuscular relaxation" is the term usually reserved for isotonic and isometric contractions of the striated musculature designed to teach the client to relax. The entire discussion on neuromuscular relaxation has addressed that type of physically active procedure. By far the greater part of the literature has been generated on this active form of neuromuscular relaxation—hence our emphasis on reviewing that form. There does exist, however, what may be considered a physically passive form of neuromuscular relaxation. Here, we address that form of relaxation.

Physically passive neuromuscular relaxation fundamentally consists of having the patient focus sensory awareness on a series of individual striated muscle groups and then relax those muscles through a process of direct concentration. In the passive neuromuscular relaxation procedure described here, there is no actual muscular contraction initiated as part of the relaxation cycle—hence "passive" neuromuscular relaxation.

The physically passive neuromuscular relaxation procedure may be considered a form of mental imagery and directed sensory awareness. Mental imagery as a therapeutic intervention has a long and effective history for a wide range of clinical problems (see Leuner, 1969; Sheehan, 1972). When applied to the reduction of muscle tension, the basic mechanism involved in passive neuromuscular relaxation appears to be useful in tension reduction. In a review of investigations into the role of neuromuscular relaxation in general tension reduction, Borkovec et al. (1978) conclude: "Apparently, frequent attempts to relax while focusing on internal sensations are sufficient to promote tension reduction" (p. 527). In our own clinical experience, we have found passive neuromuscular relaxation to be quite effective in reducing subjective as well as electromyographically measured muscle tension.

There do appear to be several distinct advantages and disadvantages when comparing passive neuromuscular relaxation with a physically active form of neuromuscular relaxation. Passive neuromuscular relaxation has the advantage of having no potential limitations based on physical handicaps, as compared with neuromuscular relaxation that involves actual muscle tensing. Another advantage is the fact that the patient can execute a passive protocol without distracting others or drawing attention to him-or herself. Such is obviously not the case with a protocol that involves actual muscle contraction. A final advantage is that a passive protocol generally takes much less time to complete (usually half the time). The major disadvantage in using a passive form of neuromuscular relaxation is that, like meditation or other forms of mental images, it leaves the patient more vulnerable to distracting thoughts. This may be a significant drawback when using a passive protocol with obsessive-type patients or those who have a tendency to get bored easily.

Let us now examine one sample passive protocol (written as if being spoken directly to the patient). The "preparation for implementation" phase will be funda-

mentally the same as for the physically active form of neuromuscular relaxation, except for few alterations (refer to Chap. 12). In Step 1 of the preparation for implementation (precautions), the precautions are the same as those described for general relaxation. However, the special precautions for meditation prevail here, as opposed to those for the physically active neuromuscular relaxation. The physically passive component here dictates this alteration. Steps 2 through 4 may remain the same. Steps 5 through 8 may be omitted because of their reference to the actual tensing of muscles. The patient is instructed to breathe normally, in a relaxed manner.

Background Information

It has long been known that muscle tension can lead to stress and anxiety—thus, if you can learn to reduce excessive muscle tension, you will reduce excessive stress and anxiety.

What you are about to do is relax the major muscle groups in your body. You can do this by simply focusing your attention on each set of muscles that I describe. Research has shown that with *patience* and *practice*, you can learn to achieve a deeply relaxed state by simply concentrating on relaxing any of the various muscle groups in your body.

First, you should find a quiet place, without interruptions or glaring lights and a comfortable chair or bed to support your weight. Feel free to loosen restrictive clothing and remove glasses and contact lens if you desire.

Actual Instructions

OK, let's begin. I'd like you to close your eyes and get as comfortable as you can. Let the chair or bed support all your weight. Remember, your job is to concentrate on allowing the muscles that I describe to relax completely.

Chest and Stomach

I'd like you to begin by taking a deep breath. Ready? Begin… (*pause 3 s*) and now exhale as you feel the tension leave your chest and stomach. Let's do that one more time. Ready? Begin… (*pause 3 s*) and now relax and exhale as the tension continues to leave and your chest and stomach are relaxed.

Head

I'd like you to focus your attention on the muscles in your head. Now begin to feel those muscles relax as a warm wave of relaxation begins to descend from the top of your head. Concentrate on the muscles in your forehead. Now begin to allow those muscles to become heavy and relaxed. Concentrate as your forehead becomes heavy and relaxed (*pause 10 s*). Now switch your focus to the muscles in your eyes and

cheeks and begin to allow them to become heavy and relaxed. Concentrate as your eyes and cheeks become heavy and relaxed (*pause 10 s*). Now switch your focus to the muscles in your mouth and jaw. Allow those muscles to become heavy and relaxed. Concentrate as your mouth and jaw become heavy and relaxed (*pause 10 s*).

Neck

Now you can begin to feel that wave of relaxation descend into the muscles of your neck. Your head will remain relaxed as you now shift your attention to your neck muscles. Allow your neck muscles to become heavy and relaxed. Concentrate as your neck becomes heavy and relaxed (*pause 10 s*).

Shoulders

Now you can begin to feel that wave of relaxation descend into your shoulder muscles. Your head and neck muscles will remain relaxed as you now shift your attention to your shoulder muscles. Allow your shoulder muscles to become heavy and relaxed. Concentrate as your shoulders become heavy and relaxed (*pause 10 s*).

Arms

Now you can begin to feel that wave of relaxation descend into your arms. Your head, your neck, and your shoulders will remain relaxed as you now shift your attention to the muscles in both your arms. Allow both your arms to become heavy and relaxed. Concentrate as your arms become heavy and relaxed (*pause 10 s*).

Hands

Now you can begin to feel that wave of relaxation descend into your hands. Your head, your neck, your shoulders, and your arms will remain relaxed as you now shift your attention to the muscles in both your hands. Allow both your hands to become heavy and relaxed. Concentrate as your hands become heavy and relaxed (*pause 10 s*).

Thighs

Now you can begin to feel that wave of relaxation descend into your thighs. Your head, your neck, your shoulders, your arms, and your hands will remain relaxed as you now shift your attention to the muscles in both your thighs. Allow both your thighs to become heavy and relaxed. Concentrate as your thighs become heavy and relaxed (*pause 10 s*).

Calves

Now you can begin to feel that wave of relaxation descend into your calves. Your head, your neck, your shoulders, your arms, your hands, and your thighs will remain relaxed as you now shift your attention to the muscles in both your calves. Allow both your calves to become heavy and relaxed. Concentrate as your calves become heavy and relaxed (*pause 10 s*).

Feet

Now you can begin to feel that wave of relaxation finally descend into your feet. The entire rest of your body will remain relaxed as you now shift your attention to the muscles in both your feet. Allow both your feet to become heavy and relaxed. Concentrate as your feet become heavy and relaxed (*pause 10 s*).

Closure

All the major muscles in your body are now relaxed. To help you remain relaxed, simply repeat to yourself each time you exhale, "I am relaxed." Take the next few minutes and continue to relax as you repeat to yourself, "I am relaxed"… "I am relaxed" (*pause about 5 min*).

Reawaken

Now I want to bring your attention back to yourself and the world around you. I shall count from 1 to 10. With each count, you will feel your mind become more and more awake, and your body become more and more responsive and refreshed. When I reach 10, open your eyes, and you will feel the *best* you've felt all day—you will feel alert, refreshed, full of energy, and eager to resume your activities. Let's begin: 1–2 You are beginning to feel more alert, 3–4–5 you are more and more awake, 6–7 now begin to stretch your hands and feet, 8– now begin to stretch your arms and legs, 9–10 open your eyes, *now*! You feel alert, awake, your mind is clear and your body refreshed.

On concluding the initial passive neuromuscular procedure, inform the patient that he or she can use this procedure to relax once or, preferably, twice a day—before lunch and before dinner. Other times can also be useful as well, particularly as an aid for sleeping.

In summary, Appendix B has presented the clinician with a physically passive alternative form of neuromuscular relaxation, not as a prescription, but as an example of how such a protocol might be created. This option is designed simply to expand the clinician's arsenal of stress-reduction interventions to meet the idiosyncratic needs of individual patients. The ultimate assessment of clinical suitability remains with the clinician and should be made on an individual, case-by-case basis.

C. Vascular Headaches and Vasoactive Substances

Many vascular headaches, including the classical migraine, can be induced by vasoactive stimuli. These stimuli interact with what may be a biogenic predisposition for vascular spasticity so as to set the stage for a vascular headache. More specifically, vasoactive stimuli are factors that have the ability to stimulate the sympathetic neural constituency of thusly innervated blood vessels. Through what may be either a vasospastic or a singular vascular rebound phenomenon, these stimuli are believed to have the capability to induce a vascular headache syndrome, including the classical migraine syndrome.

The primary vasoactive substances include the following:

1. Tyramine (a pressor amine)
2. Monosodium glutamate
3. Sodium nitrate
4. Histamine
5. Bright light that creates glare
6. Changes in barometric pressure, especially rapid declines
7. Strenuous physical exercise
8. Loud noise
9. Some sympathomimetics. (Despite the fact that sympathomimetic pharmaceuticals are prescribed to treat vascular headaches, the initial ingestion of some "hidden" or naturally occurring sympathomimetics may be sufficient to induce a vasospasm.)

Foods that are relatively high in vasopressor action include the following:

1. Liver
2. Most cheeses
3. Caviar
4. Sausages
5. Coffee (depending upon quantity)
6. Tea (depending upon quantity)
7. Chocolate (depending upon quantity)
8. Marinated herring
9. Hot dogs (if containing nitrates)
10. Chianti and other red wines
11. Many foods that contain brewer's yeast
12. Fava beans
13. Many fermented or overripened foods

These lists are provided as general information for the practicing clinician. They should not be used to prescribe medication or to alter the dietary regimen of patients. Rather, the information contained herein is designed to serve as a general guide to assist in formulating diagnostic and/or treatment impressions for appropriate medical and nutritional consultation.

D. The Etiology of Panic Attacks: Nonpsychological Factors

Panic attacks represent a very specific form of pathological stress response. Shader (1984) has suggested prevalence in the United States to be 2.0–4.7%. Any clinician who treats stress- and anxiety-related disorders will invariably be confronted with patients presenting some form of panic disorder and its predictable pattern of subsequent behavioral avoidance.

Panic attacks are characterized by paroxymal episodes of ANS hyperfunction usually combined with cognitive–affective symptoms that include dissociation, depersonalization, a generalized morbid fear, fear of dying, fear of losing control, and/or intense emotional manifestation. Proprioception is often interrupted, thus leaving the patient neuromuscularly unstable. Panic attacks typically may last but several minutes, although some attacks could last more than an hour, depending upon etiology.

Although it is widely known that panic attacks can be initiated by psychological factors, it is less widely known that panic attacks are sometimes secondary to variant medical/physiological conditions. Before treating a patient with panic-like symptomatology via psychotherapeutic or psychopharmacological interventions, the clinician should first attempt to determine to what degree medical or physiological factors serve as the etiological basis for the attacks.

Listed below are the most common primary medical/physiological factors that may give rise to secondary panic attacks; clinicians should be sensitive to these factors when constructing a medical history for the patient with some form of panic syndrome.

Acute hypoglycemia may serve as a panicogenic stimulus. It is well-established that the arcuate and ventromedial hypothalamic nuclei contain receptors responsible for the neurological monitoring of glucose. Buckley (1985) has argued that acute hypoglycemic inhibition of the hypothalamic glucoreceptor mechanisms prevents the release of the neurotransmitter beta endorphin and its inhibitory effect upon the panic-related neural networks of the locus ceruleus. When this inhibitory effect is removed, the locus ceruleus becomes far more likely to be massively depolarized. If such depolarization were to occur, a noradrenergically mediated panic attack would most likely result.

1. It has been suggested that some women will suffer panic-like symptoms at the point in their menstrual cycle when progesterone reaches its zenith. This point is usually within 7 days of the onset of menses. This conclusion is based upon the hypothesis that, for some, high levels of progesterone can act as a panicogenic substance (see Carr & Sheehan, 1984).
2. Vigorous anaerobic exercise is believed to be able to induce panic in those patients biologically inclined to suffer from panic disorders. One of the by-products of anaerobic exercise is lactic acid. Pitts and McClure (1967) found that some individuals manifest a biogenic hypersensitivity to lactate (a relative to

lactic acid) and this hypersensitivity is manifested in the form of panic attacks. Thus, factors that lead to a rise in lactic acid may be associated with panic.

3. According to Gorman, Liebowitz, and Klein (1984), there exist several medical disorders that either mimic or induce panic attacks. They include:

   (a) Hyperthyroidism
   (b) Hypothyroidism
   (c) Mitral valve prolapse
   (d) Cardiac arrhythmias
   (e) Pheochromocytoma
   (f) Drug or alcohol withdrawal
   (g) Coronary insufficiency
   (h) Amphetamine overdose
   (i) Caffeine overdose

In summary, the assessment of any medical or physiological factors known to serve in the primary etiology of the panic syndrome seems a reasonable course of action prior to treating a patient with a history of panic-like symptoms.

E. How Do You Cope with Stress?

A Self-Report Checklist Designed for Health Education Purposes

DIRECTIONS: There are many ways to cope with the stress in your life. Some coping techniques are more effective than others. The purpose of this checklist is to help you, the reader, assess how effectively you cope with the stress in your life. Upon completing this checklist, you will have identified many of the ways you choose to cope with stress, while at the same time, through a point system, ascertaining the relative desirability of the coping techniques that you now employ. This is a health education survey, not a clinical assessment instrument. Its sole purpose is to inform you of how you cope with the stress in your life.

In order to complete the checklist, simply follow the instructions given for each of the items listed below. When you have completed all of the 14 items, place your total score in the space provided.

____ 1. Give yourself 10 points if you feel that you have a supportive family.
____ 2. Give yourself 10 points if you actively pursue a hobby.
____ 3. Give yourself 10 points if you belong to some social or activity group that meets at least once a month (other than your family).
____ 4. Give yourself 15points if you are within 5 pounds of your "ideal" body-weight, considering your height and bone structure.
____ 5. Give yourself 15 points if you practice some form of "deep relaxation" at least three times a week. Deep relaxation exercises include meditation, imagery, yoga, etc.
____ 6. Give yourself 5 points for each time you exercise 30 min or longer during the course of an average week.
____ 7. Give yourself 5 points for each nutritionally balanced and wholesome meal you consume during the course of an average day.
____ 8. Give yourself 5 points for each time you do something that you really enjoy, "just for yourself," during the course of an average week.
____ 9. Give yourself 10 points if you have some place in your home that you can go to in order to relax and/or be by yourself.
____ 10. Give yourself 10 points if you practice time-management techniques in your daily life.
____ 11. Subtract 10 points for each pack of cigarettes you smoke during the course of an average day.
____ 12. Subtract 5 points for each evening during the course of an average week that you take any form of medication or chemical substance (including alcohol) to help you sleep.
____ 13. Subtract 10 points for each day during the course of an average week that you consume any form of medication or chemical substance (including alcohol) to reduce your anxiety or just calm you down.

____ 14. Subtract 5 points for each evening during the course of an average week that you bring work home; work that was meant to be done at your place of employment.
____ Total Score

Now that you've calculated your score, consider that the higher your score, the greater your health-promoting coping practices. A "perfect" score would be around 115. Scores in the 50–60 range are probably adequate to cope with most common sources of stress.

Also keep in mind that items 1–10 represent adaptive, health-promoting coping strategies, and items 11–14 represent maladaptive, health-eroding coping strategies. These maladaptive strategies are self-sustaining because they do provide at least some temporary relief from stress. In the long run, however, their utilization serves to erode one's health. Ideally, health-promoting coping strategies (items 1–10) are the best to integrate into your lifestyle and will ultimately prove to be an effective preventive program against excessive stress.

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G.S. Everly and J.M. Lating, *A Clinical Guide to the Treatment of the Human Stress Response*, DOI 10.1007/978-1-4614-5538-7,

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