Description of Relaxation Methods

In this section, we consider in a little more detail the relaxation methods described earlier.

Progressive Relaxation

The primary aim of the original Jacobsonian PR method was to relax all skeletal muscles as much as possible. Thus, Jacobson's clinical procedure was quite elaborate and intensive, guiding clients through the systematic tension and release of dozens of muscle groups. As noted earlier, Jacobson eventually focused his technique on 15 muscle groups, but PR typically took at least 56 sessions. He explicitly warned clinicians against the use of suggestion during PR sessions, emphasizing objective awareness of physiology over subjective perception; it was for this reason, too, that Jacobson discouraged use of prerecorded relaxation instructions (McGuigan & Lehrer, 2007).

A detailed description of the abbreviated PR method developed by Bernstein and Borkovec appears in their manual titled *New Directions in Progressive Relaxation Training* (Bernstein et al., 2000). APRT is typically conducted over 10 sessions, beginning with systematic tension and release of 16 muscle groups. These muscle groups are eventually combined into seven muscle groups, and then further combined into only four groups. Clients later practice recall and counting procedures to achieve relaxation in a short time outside of the formal practice setting.

APRT begins with the presentation of a rationale and demonstration of how tension is produced in each of the 16 muscle groups. Relaxation training then begins with the first therapist-directed formal practice in the first session. The therapist instructs the client in the systematic tensing and releasing of each of the muscle groups and provides additional statements that guide the client's attention toward associated physical sensations. Clients are asked to practice this procedure at home between sessions. Subsequent therapy sessions include a careful discussion of client's home practice and continued in-session practice of the 16 muscle group procedure. Once the client achieves mastery of the full 16 muscle group procedure, the therapist introduces the briefer 7 muscle group procedure, and eventually, the 4 muscle group, recall, and counting procedures.

APRT Rationale

The primary goals of the first session are to explain the reasoning behind the relaxation training procedures and to provide the client

with first-hand experience of muscle relaxation. The therapist typically engages the client in a discussion of the roles that anxiety and tension play in the client's current difficulties and provides an explanation of how physical tension reduction might ameliorate these difficulties. The therapist next briefly describes the history of PR as well as the current APRT method, presenting relaxation as a skill to be learned with repeated practice. Finally, the therapist explains the value of first tensing before releasing different muscle groups: to reduce muscle tension below current adaptation levels, deliberately creating tension in a muscle group first allows for a momentum when the tension is released. See Bernstein et al. (2000) for a sample rationale script as well as for an outline of these points to be covered in the initial session.

Tensing Instructions

Once all client questions and concerns about APRT have been addressed, the therapist and client work to develop a tensing strategy for each of the 16 muscle groups. For each muscle group, the therapist teaches the client how to produce tension in those muscles and checks with the client to make sure tension can be felt in the target muscles without inadvertently producing tension in other muscle groups. The therapist begins with the client's dominant hand and lower arm, asking the client to produce tension by making a tight fist and checking with the client to assure that he feels this tension in the hand, over the knuckles, and throughout the lower arm. After these muscles are released, the muscles of the upper arm are tensed by pushing the elbow down into the arm of the chair. This movement should produce tension in the biceps of that arm without disturbing the muscles of the hand and lower arm. These procedures are then repeated for the hand and lower arm and for the upper arm on the nondominant side.

The therapist and client next develop tension strategies for the muscles of the face. Of the three designated facial muscle groups, the muscles of the forehead area are tensed first by lifting the eyebrows up as high as the client can such that tension can be felt throughout the forehead and into the scalp region. Second, the muscles in the central part of the face, primarily in the upper part of the cheeks, are tensed by tightly squinting the eyes while wrinkling the nose. These movements should produce tension around the eyes as well as through the upper part of the cheeks. (To help clients feel less self-conscious about making these faces, the therapist usually first demonstrates this face-making and reassures the client that it is simply part of the procedure.) For the third facial muscle

group, the muscles of the lower part of the cheeks and the jaw are tensed by clenching the teeth while pulling the corners of the mouth back in an exaggerated smile. These movements should produce tension through the lower part of the face as well as throughout the jaw muscles.

Next, the muscles of the neck are tensed by pulling the chin downward toward the chest while simultaneously preventing the chin from actually touching the chest. Thus, the muscles in the front of the neck are counterposed against the muscles of the back of the neck, sometimes producing a slight shaking or trembling in these muscles. The next muscle group includes the muscles of the chest, shoulders, and upper back. These muscles are tensed by taking a deep breath and holding it, while pulling the shoulder blades together as if trying to make them touch. Next, the muscles of the abdomen are tensed next, intentionally making the stomach hard, as if the client were preparing for a blow to the stomach.

The muscles of the legs and feet come next. The client produces tension in the dominant upper leg by counterposing the large muscle on the top of the thigh with the two smaller muscles underneath, allowing the top muscle to become quite hard. The client next produces tension in the dominant lower leg by pulling the toes of that foot up toward the head. This movement should produce noticeable tension throughout the calf area. Finally, the muscles of the foot are tensed by pointing the toes, turning the foot inward, while simultaneously curling the toes. The client should be able to feel tightness through the ball of the foot and under the arch, but to avoid painful cramping, the therapist should ensure that the client does not tense the foot muscles too hard and doesn't hold this tension for more than five seconds. These procedures are repeated for the nondominant upper leg, lower leg, and foot. Table 5.1 summarizes each of the muscle groups and tensing strategies described earlier.

If the client experiences difficulty producing tension in any muscle group with these standard instructions, the therapist assists the client in experimenting with alternative movements to produce tension in the desired muscles. For example, clients who are unable to counterpose the muscles of the neck might benefit from pressing the head back into the chair, using the neck muscles to exert pressure against the chair behind them (Bernstein et al., 2000; see pp. 33–34 for additional alternative tensing strategies).

Directing the APRT Formal Practice Procedure

The ideal setting for formal APRT sessions is one that maximizes the client's ability to focus attention on the physical sensations of muscle

Table 5.1 **Tensing Strategies for Each of the 16 Muscle Groups**

Muscle Group	Tensing Instructions
Right (dominant) hand, lower arm	Make a tight fist
Right (dominant) upper arm	Push elbow down against chair
Left (nondominant) hand, lower arm	Make a tight fist
Left (nondominant) upper arm	Push elbow down against chair
Forehead	Lift eyebrows as high as possible
Upper cheeks, nose	Squint eyes while wrinkling nose
Lower face and jaw	Bite hard, pulling back corners of mouth
Neck	Pull chin toward chest, counterposing tension to keep chin from touching chest
Chest, shoulders, upper back	Pull shoulder blades together
Abdomen	Make the abdomen hard as if preparing to be hit in the stomach
Right (dominant) upper leg	Counterpose top muscles against bottom muscles
Right (dominant) calf	Pull toes toward head
Right (dominant) foot	Point and curl toes gently while turning foot inward
Left (nondominant) upper leg	Counterpose top muscles against bottom muscles
Left (nondominant) calf	Pull toes toward head
Left (nondominant) foot	Point and curl toes gently while turning foot inward

tension and relaxation. Closed doors and covered windows in the consulting room will help prevent outside distracting sights and sounds. Dim indirect lighting, such as that from a small lamp is preferable to bright overhead lighting. The client should sit in a chair, or on a couch, that provides full body support, making it possible to be comfortable without the need to create tension in any muscle group in order to maintain position. The client is advised to wear loose and comfortable clothing to these sessions. Finally, any accessories that might create pressure on the body (e.g., glasses, watches, shoes) should be removed before each formal practice session.

Once the client has settled into a comfortable position in the chair, the client is asked to close his or her eyes and keep them closed

throughout the practice session. The therapist then directs the client's attention to the first muscle group (the muscles of the hand and lower arm on the dominant side) and instructs the client to focus all of her attention on these muscles. The therapist then reminds the client how to produce tension in this muscle group and asks the client to tense those muscles, ending with a cue word, such as ''now.'' For example, the therapist might say: ''All right, I'd like you to tense the muscles in the right hand and lower arm by making a tight fist, now.'' (Bernstein et al., 2000, p. 37). After the client has held this tension for 5 to 7 seconds, the therapist instructs the client to release this tension, again ending with ''now'' or any other agreed-upon cue word, such as ''relax.'' The client should relax all muscles at once immediately rather than gradually. During the 5 to 7 seconds of tension, the therapist might direct the client's attention to the sensations of tension further: ''Feel the muscles pull; notice what it's like to feel tension in these muscles as they pull and remain hard and tight'' (Bernstein et al., 2000, p. 37). However, these added instructions should always coincide with, and not exceed, the 5- to 7-second tension period.

After this first tension release cycle, the therapist guides the client's attention to the relaxation sensations just produced. For the next 30 to 40 seconds, the client is asked to observe the sensations of relaxation in the target muscle group as the therapist engages in some relaxation patter designed to direct the client's attention to the physical sensations associated with relaxation. So, the therapist might say something like this: ''Just let all that tension go. Notice the difference between the tension you felt before and the pleasant feelings of relaxation'' (Bernstein et al., 2007, p. 109). See Appendix B of Bernstein et al. (2000) for additional examples of relaxation patter that can be used during this time. Relaxation patter should not include direct suggestions or prescriptive statements.

After 30 to 40 seconds of relaxation, this tension release cycle is repeated for the first muscle group. After the second period of relaxation patter, which is typically a bit longer than the first (that is, 45 to 60 seconds), the therapist determines whether deep relaxation has been achieved in these muscles before moving on to the next muscle group. This determination is made by asking the client to signal by lifting the little finger of the right hand if the muscles of the dominant hand and lower arm feel completely relaxed. If that signal appears, the therapist responds by instructing the client to allow these muscles to continue relaxing and to shift attention to the muscles of the dominant upper arm. If not, the therapist repeats the tension release cycle and offers another 45

to 60 seconds of relaxation patter afterward. If the client fails to signal complete relaxation again, the therapist might choose to attempt another cycle; muscle groups should not be tensed, however, for more than four or five times per session.

Once the client has shifted attention to the second muscle group (the upper arm on the dominant side), the same procedure is followed for two tension release cycles of this muscle group. The client is instructed to focus all attention on the muscles of the dominant side upper arm, and then the therapist reminds the client how tension is produced in these muscles, ending with an instruction to produce tension in this way using the cue word. After 5 to 7 seconds of tension, the therapist instructs the client to release all tension, and 30 to 40 seconds of relaxation patter follow. This cycle is repeated, ending with 45 to 60 seconds of relaxation patter and asking the client to signal whether these muscles are completely relaxed. Beginning with the second muscle group, the therapist can ask the client to signal if the relaxation in those muscles is as deep as that being experienced in the previous muscle group (for example, ''Please signal if the muscles of the right upper arm are as deeply relaxed as the muscles of the right hand and lower arm''). The formal practice session progresses in this fashion through the remaining muscle groups.

In summary, the sequence of events for each tension release cycle is as follows: (1) the client's full attention is focused on the target muscle group, (2) the therapist instructs the client to produce tension in that muscle group, (3) tension is maintained for 5 to 7 seconds (although this duration should be shorter for the muscles of the feet), (4) when cued, the client releases all tension in the muscle group at once, and (5) the client focuses attention on the target muscle group as it relaxes.

After relaxation has been achieved in all 16 muscle groups, the therapist draws the client's attention to the feelings of relaxation in each muscle group in turn and then instructs the client to continue to enjoy these feelings. To determine whether any residual or returning tension is present in any of the muscle groups, the therapist might ask the client to signal if she notices slight tension anywhere in the body. If so, the therapist quietly names each muscle group and asks the client to signal when at the mention of the muscle group(s) where tension remains. That (or these) muscle group(s) is or are then tensed and released again. Once the client signals that complete relaxation has been achieved throughout the body, the client should be allowed to remain in this state of relaxation for another minute or so before the practice session ends. The therapist terminates the session gently, by counting backward from 4 to 1,

instructing the client to move the legs and feet on the count of 4, to move the arms and hands on the count of 3, the head and neck on the count of 2, and to open the eyes on the count of 1. The therapist asks the client about her experiences in the session, and specifically about any difficulty she had in relaxing any of the muscle groups. The therapist and client work together to resolve any such problems, and the therapist reminds the client of the importance of at-home practice during the upcoming week. Clients are asked to practice the APRT procedure twice per day (with at least 3 hours elapsing between practice sessions) for 15 to 20 minutes each time. The therapist should ask the client about when and where she plans to conduct this practice, ensuring that the client selects a setting where she can rest comfortably without outside distractions or time pressure. Although Jacobson discouraged audiotaping this initial therapist-guided practice session for the purpose of home practice, some therapists do so, and provide a copy to the client to help her learn and practice the tension release cycle sequences and timing during the first few home practice sessions. Use of the recorded material can be discontinued once clients are fully familiar with the procedures.

Subsequent APRT Procedures

At subsequent APRT sessions, the therapist carefully assesses the client's progress. Was the client able to practice at home as regularly and frequently as agreed? If so, was the client able to achieve relaxation in each of the muscle groups? Any problems in either of these areas should be carefully discussed and resolved before engaging in another therapist-guided practice session. Typically after about three office sessions, clients notice decreased general tension and satisfaction with progress; many report that it now takes less time to achieve relaxation and that more than two tension release cycles are not needed for any muscle group. At this point, the therapist can conduct the next formal session using 7 rather than 16 muscle groups: (1) dominant hand, forearm, and upper arm, (2) nondominant hand, forearm, and upper arm, (3) all facial muscles, (4) neck, (5) chest, shoulders, upper back, and stomach, (6) dominant upper leg, calf, and foot, and (7) nondominant upper leg, calf, and foot. The client can use the same tension strategies as before to produce tension in these combined groups or, if needed, alternative strategies may be explored to produce optimal tension. The therapist guides the client through formal practice of the seven muscle groups following the same procedures as the original 16 muscle group practice sessions. The client then is encouraged to practice the seven muscle group procedure

twice daily at home. After approximately 2 weeks of practice and evidence of satisfactory client progress, the therapist combines the seven muscle groups to just these four: (1) the hands, forearms, and upper arms on both sides, (2) the face and neck, (3) chest, shoulders, back, and stomach, and (4) both legs and feet. The client continues with home practice of these four muscle groups until he can achieve deep relaxation in all muscle groups within about 10 minutes.

Once the client has attained a mastery of relaxation using tension release cycles of the four muscle groups, it is time for the therapist to introduce recall procedures with these same four muscle groups. During the first recall training session, the therapist guides the client to direct attention to a particular muscle group, but rather than deliberately producing tension in those muscles, the client is instructed to: (1) identify any tension already present and notice associated sensations, and (2) to recall the feelings associated with releasing tension in the target muscle group while letting go of any tension in these muscles. The client then enjoys 30 to 45 seconds of continued relaxation and relaxation patter before being directed to attend to the next muscle group. As with the basic procedures described earlier, the therapist asks the client to signal any residual tension before shifting attention to the next muscle group. If residual tension is noted, the therapist repeats the recall procedure, or if necessary, guides the client through a tension release cycle. As the client masters the recall procedure using four muscle groups, the therapist may choose to end a successful practice session with a counting procedure. Specifically, after the client has signaled deep relaxation throughout the body, the therapist promotes even deeper relaxation by counting slowly from 1 to 10 while encouraging the client to let all the muscle groups become even more relaxed with each count. The therapist times each count so that it coincides with each of the client's exhalations, and adds some relaxation patter between each count. The therapist might say something like: '' . . . Three, just allowing all the muscles to become more and more relaxed. . . . '' After the first counting session is terminated, the client is asked to add the counting procedure to practice sessions at home. Once the counting procedure is well learned, the client can be encouraged to use it on its own, especially in daily life settings or stressful situations in which the use of more formal relaxation procedures is not feasible.

Dealing With Training Problems

A number of problems can arise as clients learn APRT. Despite a therapist's best efforts, muscle cramps might occur. Some clients have difficulty

remaining physically still or remaining silent despite explicit instructions not to move relaxed muscle groups or to talk during formal practice. Other involuntary experiences, such as muscle twitches, spasms or tics, intrusive thoughts, sleep, and excessive coughing or sneezing sometimes occur. The reader is referred to Chapter 9 (pp. 69–88) of Bernstein et al. (2000) for a lengthy discussion of these and other common problems as well as suggested solutions.

Diaphragmatic Breathing

Bernstein et al. (2000) identified slow and paced diaphragmatic breathing (DB) as an alternative relaxation technique to APRT. Clinicians may choose to present DB either alone or in combination with other relaxation techniques, including APRT. Although some variation in procedures can be found in the clinical literature, most DB methods follow the same basic procedures: a rationale comparing the physiology of shallow and rapid chest breathing to the physiology of deep and slow abdominal breathing is presented, the client then experiences intentional abdominal breathing in the consulting room, and then practices this abdominal (diaphragmatic) breathing at home. Once the client has developed mastery with formal practice, the client is encouraged to apply this relaxation skill by shifting to deep stomach breathing whenever he detects unnecessarily shallow chest breathing or when other cues associated with anxiety or stress appear. Additional procedures for clients suffering from frequent panic attacks involve a voluntary hyperventilation exercise that helps these clients compare and contrast the sensations produced by intentional hyperventilation with those of an unexpected panic attack.

DB Rationale

As with APRT, DB procedures begin with presentation of a rationale and discussion of any client questions or concerns (Bernstein et al., 2000; Hazlett-Stevens, 2008). The therapist typically begins by drawing a contrast between the physiology of abdominal breathing and the physiology of chest breathing. The diaphragm is described as the large curved muscle in the abdomen. During abdominal breathing, the diaphragm naturally moves as the abdomen moves, allowing the body to breathe with less exertion by the chest. From a physiological perspective, this is considered the optimal way to breathe. Furthermore, breathing slowly and deeply, using the diaphragm muscle of the abdomen is believed to