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Fear of injury

Susan D. Hargis
Ithaca College

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FEAR OF INJURY

A Project Presented to the Faculty of
the School of Health, Physical
Education, and Recreation
Ithaca College

In Partial Fulfillment of the
Requirements of the Degree
Master of Science

by
Susan D. Hargis
May 1985

Ithaca College
School of Health, Physical Education, and Recreation
Ithaca, New York

CERTIFICATE OF APPROVAL

MASTER OF SCIENCE PROJECT

This is to certify that the Master of Science Project of

Susan D. Hargis

submitted in partial fulfillment of the requirements
for the degree of Master of Science in the School of
Health, Physical Education, and Recreation at Ithaca
College has been approved.

Project Advisor:

Candidate:

Chairman, Graduate
Programs in Physical
Education:

Date:

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DEDICATION

This project is dedicated to Marcia Bauman, whose support, understanding, patience, and encouragement made this project possible.

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Chapter 1

INTRODUCTION

Fear of injury is a subject of little discussion in current sports literature. The paucity of information on this topic leaves those who have high fear of injury and also those who deal with those individuals at a loss. In examining fear of injury, the term fear must first be defined. Fear is defined as an unpleasant emotional state characterized by pain or great distress. Webster (1981) defines fear as "a feeling of anxiety and agitation caused by the presence or nearness of danger, evil, pain, etc."

Fear can be applied to many specific areas. The purpose of this project is to discuss fear as it is related to athletic injury, that is, fear of injury. Fear of injury is a fear which, when all other factors indicate that an athlete is ready to perform a particular skill, keeps the athlete from performing that skill. This fear can be beneficial if it leads to increased arousal, which can enhance performance as long as it is under control (Kauss, 1980). The relationship of arousal to quality of performance is based on the "inverted-U" hypothesis proposed by Yerkes and Dodson in 1908 (Landers, 1980). This hypothesis states that increased levels of arousal will enhance performance up to a certain point, after which further increases in arousal will lead to decrements in quality of performance.

While there is potential for fear of injury to be beneficial by increasing arousal, it is much more likely to be detrimental. Fear is a strong emotion and the arousal from fear of injury may be too difficult to control, leading to performance decrement. Athletes who are highly aroused by their fear of injury may be too distracted by this fear

and actually increase their risk of being injured because of this distraction. In order to understand fear of injury, fear must first be examined and understood.

Acquisition of Fear

Fear is an acquired emotion. According to De Silva and Rachman (1981), there are three pathways for the acquisition of fear. These are (a) direct aversive experience, (b) vicarious acquisition, and (c) information induced fear. In direct aversive experience, an individual acquires fear through a threat stimulus. In fear of injury, an athlete could acquire the fear through a previous injury. Vicarious acquisition involves seeing or hearing of a threat stimulus to another person. In vicarious acquisition of fear of injury, the athlete could acquire the fear from seeing a teammate or other athlete injured. Fear produced by information occurs when an individual hears or learns facts or myths about the future fear object (e. g., the high incidence of knee injuries in football). This information produces a fear state in the individual. In fear of injury an athlete would most likely have heard how dangerous the skill is, or of how another athlete was injured in a similar situation. Once pathways of fear acquisition are understood, it is necessary to examine typical responses to fear.

Responses to Fear

Fear was originally seen as a lump emotion. As one became fearful, all the body systems were thought to respond at the same time and to the same degree. More recently, however, this all-or-none view of fear has been supplanted by a multidimensional approach. The effects of fear can be seen in three body systems--verbal/cognitive, behavior/avoidance, and physiological (Hugdahl, 1981). In a discussion of the

three systems model, Hugdahl defined each system. The verbal/cognitive is without a doubt the most ambiguous and difficult to define of the three components. This component is composed of factors such as self-labeled fear, worry and brooding, changes in mood, and unreality of guilt. Athletes exhibiting fear of injury in the verbal/cognitive realm would likely make remarks to themselves or others stating their fear or expressing a feeling of incompetence in the skill. The behavior/avoidance component is seen in the amount of approach and avoidance behavior exhibited by the fearful athlete. Most individuals with a fear would likely have some degree of avoidance with the fear object. Athletes who exhibit characteristics of this component would be reluctant to perform the skill and might look like they are just wasting time in unnecessary practice.

The third body system is physiological. This is the easiest component to measure objectively, and has been a focus of much of past research because of this fact. This component is demonstrated in heart rate acceleration, increased sweat production, feelings of nausea, and other indicants of physiological discord. In fear of injury, athletes might experience sweaty palms, trembling, heart racing, a need to urinate, or other similar physiological signs. However, ease of measurement of these physiological indicants of fear does not necessarily imply ease of interpretation. Also, measurement of the physiological component involves direct body contact with instruments, thus altering the athlete's environment.

Synchrony and Desynchrony

While most individuals with fear usually exhibit all the body components, the degree to which each is exhibited varies widely among

individuals (Rachman, 1978). One athlete might exhibit physiological indicants of fear, while others may exhibit primarily verbal indicants of their fear. The degree to which components are exhibited dependently or independently of each other is termed "synchrony" or "desynchrony." The relationship among the components in fear has been the focus of much study. Hodgson and Rachman (1974) proposed several hypotheses dealing with the relationships among systems. Two of these hypotheses have been supported by the findings of other researchers. In the first hypothesis, synchrony is dependent on the intensity of the fear situation. Concordance among systems is more evident during strong fear arousal, whereas discordance is more evident when the fear stimulus is relatively mild. In a highly fearful athlete attempting to perform a feared skill, all body system components of fear will likely be at high levels. If the athlete is only slightly nervous about performing the skill (fear is low), then only a slight fear response may be exhibited, and only in one or two of the components, rather than in all three of the body component systems.

Hodgson and Rachman's second hypothesis is that concordance among systems will be more evident under low levels of demand, and discordance will become more evident under high levels of demand. Low levels of demand occur when the fearful individual can escape the fear situation, such as leaving the gym or field and not having to perform the feared activity. High levels of demand occur when the individual must remain in the fear situation and deal with the fear. Most athletes, in order to be successful at their sport, must stay in the sport situation and deal with performing, whether or not they are fearful. This creates high levels of demand for these individuals. In high fear of injury

situations, athletes would probably exhibit all the components of fear of injury, but would have discordance among the systems. This means that they would probably exhibit all the components because of the high intensity of the fear situation (hypothesis #1), but would exhibit component discordance (some components exhibited more than others-- hypothesis #2) because they would likely remain in the fear situation, despite the intensity of their fear (even though they might want to leave, they usually do not). The next step in the fear of injury discussion is to examine how fear of injury can be reduced or accommodated.

Reduction of Fear

In the discussion of fear acquisition, three ways to acquire fear were proposed by De Silva and Rachman (1981). They asserted that fear can be reduced through these same pathways, namely, direct experience, vicarious exposure, and information reduced fear. Their discussion primarily focused on direct experience and information reduced fear. Most fear reduction therapy is based on direct experience with the fear stimulus. This exposure can be real life (in vivo) or imaginal. Imaginal exposure is acceptable as experience, as it involves planned, sustained, and repetitive imaging of the fear situation. According to Maltz (1960); the mind cannot tell real from vividly imagined events. Therefore, imagining the situation can take the place of actual exposure. De Silva and Rachman question the necessity of actual exposure for the reduction of fear; they assert that exposure is not really necessary. Through information about the specific fear and its environment, an individual's fear levels should decrease. In many instances, fear is the result of a lack of knowledge, therefore, greater understanding should decrease fear in a given situation. According to their argument,

fear reduction should occur in a fearful athlete when either direct experience or information is used to reduce the athlete's fear of injury.

In reduction of fear, it appears that the persons involved with the therapy have a significant impact on the success of the fear reduction. In self versus therapist directed fear reduction techniques, it appears that more benefit is derived from the treatment if there is involvement with a therapist. A therapist helps provide direction and also helps maintain motivation. According to O'Brien and Kelley (1980), predominantly therapist-directed therapy is more effective than predominantly self- and exclusively self-directed therapy. O'Brien and Kelley's findings showed that all forms of treatment with therapist involvement (exclusively therapist-directed, predominantly therapist-directed, and predominantly self-directed) were more effective than exclusively self-directed therapy. The findings of O'Brien and Kelley suggest that in attempting to reduce fear of injury in athletes, coaches, sport psychologists, or others should be used to assist in direction of the fear reduction therapy.

There are several methods of dealing with fear of injury. All these methods relate to at least one of the proposed pathways of fear reduction. These methods include flooding/implosion, systematic desensitization, thought stopping, alteration of the physical environment, mastery and coping rehearsal, and confidence raising activities.

Flooding/Implosion

In flooding/implosion techniques of fear reduction, the individual is overloaded by the fear experience. This overload can be real or

imaginal. There is a slight difference between flooding and implosion (Marshall, Gauthier, Christie, Currie, & Gordon, 1977). In flooding, the individual is presented with a very intense experience but without aversive consequences. In implosion, the individual is overloaded with the fear situation and presented with aversive results of that experience under the premise that the aversive consequences are really not as bad as imagined. The premise in both flooding and implosion is that a "real life" situation could not be as bad as the imagined situation. Furthermore, it is proposed that prolonged imagination of the fear stimulus will convince athletes that they have nothing to fear. An example of flooding in reducing fear of injury would be a gymnast visualizing in great detail a feared routine on the balance beam without experiencing serious mishap, whereas in implosion the same gymnast would visualize the feared routine and also visualize herself falling and hitting the beam several times during the routine.

According to Marshall et al. (1977), flooding is very effective in fear reduction. They also asserted that the addition of an early opportunity to test treatment effects by participating in the fear situation (such as performing the feared routine on the balance beam) is essential to maximize treatment benefits.

Systematic Desensitization

In systematic desensitization, a more gradual approach to the reduction of fear is used. Athletes construct a fear hierarchy in which there are gradations of the fear situation from the least fear-evoking to the most fear-evoking aspects of the situation. Athletes then gradually progress through these stages, beginning with the least fear-evoking situation. Athletes might begin with imaging the fear situation,

and gradually increase the fear intensity of the situation until in the final stage they feel comfortable performing in the feared situation. Relaxation is mastered at each stage to the point that the athlete can think of the situation and visualize being in the situation without evoking a fear response. The premise behind this technique is that an individual cannot be relaxed and fearful at the same time. According to Borkovec and Sides (1979), relaxation maximizes imagery vividness, reactivity to imagery, and leads to greater fear reduction.

Various arguments are presented in support of the methods of flooding/implosion and systematic desensitization. According to Lang (1977), flooding is potentially more vivid and may be more intense than systematic desensitization, although it may be less specific in effect than desensitization. There are also differences between flooding and systematic desensitization in the amount of component synchrony in the fear reduction. In differences in fear reduction and component synchrony, Grey, Sartory, and Rachman (1979) showed that high demand treatment (flooding/implosion), where the individual must cope in the situation, produces desynchronous changes in the three fear components (verbal/cognitive, behavior/avoidance, and physiological). Some components might change to a great degree, while others might change very little. Changes are more synchronous in low demand treatment (systematic desensitization), where the experience is more gradual, and time is spent mastering the fear at each level before advancing to the next level. A sample systematic desensitization exercise can be found in the exercise section of this project.

Thought Stopping

Another method of dealing with fear of injury is thought stopping. In thought stopping, athletes must become aware of their automatic thoughts. These thoughts are instantaneous, happen without conscious effort, are almost always believed, and are very difficult to stop. What athletes can do instead of trying to stop their automatic thoughts of fear is to interrupt and change them when they occur. This involves realizing what thoughts are occurring, deciding what thoughts are more appropriate for the situation, and learning to replace the inappropriate thoughts with more appropriate ones. Athletes have cue words that they can utilize when they realize they are having inappropriate thoughts. Athletes say the cue word either silently or out loud, and then replace the original automatic thoughts with the new learned and more appropriate thoughts. In time, the new thoughts, through association, will become natural and replace the old automatic fear thoughts. An example of a thought might be an athlete thinking "I'm going to get hurt." This thought is eventually replaced with a thought similar to "I need to take the risk in order to improve my performance, and there's no reason I should get hurt--I've practiced enough to perform this skill." An example of an actual thought stopping routine can be found in the exercise section of this project.

Altering the Physical Environment

Alteration of the physical environment is another way of dealing with fear of injury. Almost all activities can be modified temporarily in some way, provided the athlete and coach use their imagination. Some ideas for altering the environment when it involves hard objects are foam on the edge of the diving board, wearing a wet suit to break

the impact of the water when performing a difficult dive, or diving or flipping (performing the feared skill) into a pile of loose foam bits. Athletes learning to tend goal in various sports could use softer objects such as nerf balls or tennis balls until they become more proficient and comfortable with the goal-tending skills. When the athlete's fears stem from being injured by other athletes in a sport such as soccer, special padding or temporary rules regulating body contact can be used until the athletes regain their confidence in the sport situation. Performing in the altered environment can help athletes build their confidence levels to the point where their fear diminishes, and they can attempt the skill in a realistic setting. Care must be taken to keep athletes working towards weaning off the altered environment, so that it does not become a crutch and actually inhibit progression.

Mastery and Coping Rehearsal

Mastery and coping rehearsal is yet another method of dealing with fear of injury. Mastery and coping tapes are used to help athletes practice their sport activity through visualization of the sport experience (Rotella, Malone, & Ojala, 1981). The athlete creates a script which is then transferred onto a cassette, so that it can be listened to at any time. In a mastery tape the athlete describes and visualizes the skill performance without flaws. The best performance imaginable is used, and the mastery script acts as a motivational device to create arousal and excitement about the subsequent performance.

The coping tape is somewhat more of a realistic situation. The athlete decides what aspects of the performance, if they went wrong, would create the most anxiety. A script is created in which the total sport environment is envisioned, wherein aspects of the environment

relative to performance are not going as perfectly as planned. Each time something negative occurs, the athlete utilizes a thought stopping procedure and realizes that the situation is not really hopeless. While listening to the coping tape, the athlete rehearses the appropriate coping reaction useful in a situation if and when something goes wrong. Over time these proper reactions become more natural, and the athlete learns to cope with various situations and makes the best of things when events do not happen as planned.

Increasing Self-confidence and Self-efficacy

The final method of dealing with fear of injury discussed in this paper is increasing feelings of self-confidence and self-efficacy. Self-confidence is defined as having trust in oneself and one's powers. Self-confidence is composed of three key components: competence, control, and commitment. Each of these key components is crucial to the maintenance and increase of self-confidence. In competence, athletes must perceive their ability and skill to be good enough to meet the task demands of their sport. With high self-perceptions of skill and ability, athletes expect success in their athletic performance and feel competent, thereby enhancing their self-confidence. Without a feeling of competence, self-confidence is decreased.

Control is another key component of self-confidence. Athletes must perceive that they are in control of situations they encounter. Self-confident athletes must have an internal rather than external locus of control. In internal locus of control, athletes perceive that internal factors such as skill and ability are responsible for the outcome of events. In external locus of control, athletes perceive that external factors such as luck and task difficulty have more

influence over the outcome of events than their skill. To be self-confident, athletes must perceive themselves in control of what occurs in their environment.

The third component of self-confidence is commitment. Without commitment, athletes cannot achieve high levels of performance and cannot be truly self-confident. The three key components to self-confidence are all interrelated and are vital to the maintenance and enhancement of self-confidence. A lack in any of the three components will lead to an overall decrease in the level of self-confidence. Increasing self-confidence involves focusing on the key components and strengthening each of them. Exercises to strengthen specific components of self-confidence can be found in the exercise section.

Self-efficacy is defined as having confidence in one's power to influence the outcome of events. Athletes may be self-confident in their own abilities, and yet not have high levels of self-efficacy. They perceive that they can control their own performance, but not necessarily the overall outcome of the event. A theory of self-efficacy which relates performance to feelings of self-efficacy has been proposed by Bandura (1977). This theory states that psychological procedures achieve changes in behavior by altering the level and strength of self-efficacy. Efficacy expectations are distinguished from outcome expectations. An outcome expectancy is defined as a person's estimate that a given behavior will lead to certain outcomes. An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes. Individuals can believe that certain behaviors will lead to certain outcomes, yet not believe in their own abilities (or self-efficacy) to perform the required

behavior. Perceived self-efficacy will influence the level of performance by enhancing the intensity and persistence of effort. Expectations of personal efficacy will determine whether or not coping behavior will be initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and aversive experiences.

Research by Maddux and Rogers (1983) found that self-efficacy expectancy significantly influenced intentions to adopt a recommended coping behavior. Athletes who do not believe in their ability to perform an activity competently will not perform that activity as well as those who do believe in their ability to be successful in the activity. This self-efficacy also relates to persistence in a task. According to Maddux and Rogers, self-efficacy expectations are the most powerful predictors of behavioral intentions. Athletes will persist longer at a task or learning a skill if they have higher levels of self-efficacy. In order to reduce fear of learning a skill because of fear of being injured, athletes must become confident enough to feel they can master the skill. If they do not have this confidence, or feeling of self-efficacy, they will not persist in the task long enough to learn the skill and reduce the fear of injury.

According to Bandura's theory, expectations of personal efficacy are derived from four principal sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. Performance accomplishments provide the most influential source of information because they are based on experiences of personal mastery. Successes raise mastery expectations, whereas failures lower these expectations. The lowering of expectations from failures is stronger when the failures occur early in the learning process. Once

the individual experiences repeated success in the skill, failures do not have as great an impact on mastery expectations. According to Bandura, Adams, and Beyer (1977), enhanced self-efficacy through performance accomplishments tends to generalize to other situations in which performance was self-debilitated by preoccupation with personal inadequacies. This generalization occurs most predictably in situations similar to the raised self-efficacy situations, although it does occur in non-similar situations. Raising self-efficacy through personal accomplishments can be accomplished by ensuring success experiences. As athletes encounter success while learning a skill, their feelings of self-efficacy will increase. Success can be more readily ensured by learning the skill in steps, and having success at each step, rather than attempting the complete skill before ready.

Another source of efficacy expectations is vicarious experience. Athletes seeing others perform threatening activities without aversive consequences can develop and increase expectations that they too should be able to achieve some improvements in performance if they intensify and persist in their efforts. Because this method of efficacy expectations relies on inferences of social comparison, vicarious experience is a less dependable source of evidence of capabilities than personal accomplishments, and efficacy expectations are consequently weaker and more vulnerable to change. Early failures can adversely affect efficacy expectations derived from vicarious experience.

The third source of efficacy expectations is verbal persuasion. Verbal persuasion is often used in attempts to influence human behavior because of its ease and ready availability. Individuals are persuaded into believing that they can be successful at performances

that have overwhelmed them in the past. Work by Maddux, Sherer, and Rogers (1982) supports this source of efficacy expectations. They found that expectations of outcome and self-efficacy can be successfully manipulated by verbal persuasion, and changes in these expectations can cause changes in behavioral intentions. The three major findings of their study were (a) increasing outcome expectancy caused increases in intentions to perform the behavior, (b) increases in self-efficacy expectancy led towards increasing intentions to perform the desired behavior, and (c) outcome expectancy influences feelings of self-efficacy.

Verbal persuasion is similar to vicarious experience in that efficacy expectations induced from verbal persuasion are weaker than expectations derived from performance accomplishments. Successes can strengthen efficacy expectations, and early failures can again extinguish positive expectations. In raising self-efficacy through verbal persuasion, coaches must be careful to be realistic in their comments, because unrealistic persuasion will lead to mistrust, and may actually inhibit the fear reduction.

The fourth source of efficacy expectations is degree of physiological arousal. Individuals rely partly on their state of physiological arousal in judging their anxiety and vulnerability to stress (Bandura, 1977). When aroused to an agitated state, individuals are likely to consider themselves less competent to perform than when in a less aroused state. Information from physiological arousal can override efficacy expectations derived from other sources. Athletes can initially believe in their skills and competency, but may have their confidence shaken by unexpected indicators of physiological arousal, such as their heart beat racing, a sudden upset stomach, etc. Individuals tend to believe in their feelings of arousal and are not easily swayed, even when given false physiological feedback

from researchers trying to convince them that they are really in a state of physiological tranquility.

No matter which of the four sources of information is used to derive feelings of self-efficacy, athletes must have a strong sense of self-efficacy in order to reduce their fear of injury. Increasing feelings of self-efficacy and self-confidence will result in athletes having increased trust in their ability as well as their power to influence the outcome of events. With increased feelings of self-confidence and self-efficacy athletes should have reduced fear of injury.

In this section we have discussed fear of injury, beginning with defining fear of injury, methods of acquiring fear of injury, responses to fear, as well as methods of reducing fear of injury. In the following section we will discuss some guidelines that have been derived from the findings in this section. These guidelines are important to consider when attempting to reduce fear of injury.

Chapter 2

GUIDELINES

After defining and examining fear of injury, we can extract some principles to help clarify some of the concepts involved in fear of injury.

I. Guideline: Fear of injury is multidimensional. The fear may be exhibited in any combination of the three components: behavior/avoidance, verbal/cognitive, or physiological (Rachman, 1978).

Athletes who have fear of injury may have all three components affected by their fear, but the fear is not necessarily equally strong in all components. As discussed earlier, Hodgson and Rachman (1974) proposed that response synchrony of the three systems is dependent on the intensity of the fear situation. Synchrony of systems response is also dependent on the level of demand. Under low levels of demand (the athlete can leave the fear situation), fear will usually be exhibited in all three systems somewhat equally, whereas under high levels of demand (the athlete must stay in the situation and deal with the fear) discordance will likely be seen among the three body systems.

II. Guideline: Fear of injury might easily be confused with lack of effort or lack of achievement motivation.

In the behavioral/avoidance component defined by Hugdahl (1981), fear is exhibited in amount of approach behavior exhibited by the athlete. Athletes with fear of injury will exhibit avoidance of the feared skill, which may appear to others in the environment that they are just reluctant to perform the skill or that they are overpracticing other skills. This reluctance to perform the feared skill may be interpreted as a lack of effort or achievement motivation.

III. Guideline: Fear of injury can be remedied, although time involved is individual and problem specific.

De Silva and Rachman (1981) proposed three pathways for fear reduction: direct experience, vicarious exposure, and information reduced fear. These three pathways are also those by which fear is acquired. Time involved in reducing fear of injury will depend upon which pathway is used to reduce the fear of injury, and how intense and persistent the fear is.

IV. Guideline: In order to reduce fear of injury, a systematic approach must be used.

Consistent results cannot be obtained in reducing fear of injury from a haphazard approach. In reducing fear of injury, the fear must be defined, then assessed to determine what fear component systems are involved and to what degree they are involved. A commitment must then be made by the athlete to try and reduce the fear, and put a genuine effort into the task. Exercises to reduce the fear are chosen based on the results of the fear assessment. Elimination of any of these steps through a less than systematic approach will lead to a reduced level of success in trying to eliminate the athlete's fear of injury.

V. Guideline: Remediation of fear of injury must be learned in a less stressful environment first (do in practice before competition, etc.).

Grey et al. (1979) showed that high demand treatment, where athletes must stay in the situation and cope with their fear, produces desynchronous changes in the three fear components. In low demand treatment the athlete experiences fear reduction more gradually, which leads to more synchronous changes in fear in the three component systems. Practice provides a less stressful situation (low demand) for the athlete, allowing for gradual and complete mastery of fear of injury before moving into a higher demand situation such as a sports competition.

VI. Guideline: The mind cannot tell real from vividly imagined events.

This concept is very important in reducing fear of injury. One of the three pathways for fear reduction is direct experience. Maltz (1960) proposed that the mind cannot tell real from vividly imagined events. With this premise in mind, the athlete can experience the fear situation through imaging. Several of the exercises in this project use the concept of imaging of the fear situation in order to reduce fear of injury.

VII. Guideline: Athletes must be aware that they have a fear of injury before this fear can be changed.

As earlier discussed in this project (Guideline II), fear of injury may be easily confused with a lack of effort or achievement motivation. While it is more commonly assumed that coaches and other athletes might interpret avoidance of the skill as a lack of effort, the fearful athletes themselves might also interpret their own avoidance as a lack of effort. Through denial of their fears, fearful athletes might not realize that they have a fear of injury until someone else points it out to them. The athletes have to accept the fact that they have fear of injury before any reduction in the fear can be attempted.

VIII. Guideline: If a successful environment is present, fear of injury will be less likely to be a factor in performance.

Bandura (1977) discussed self-efficacy, which is the feeling of having confidence in one's power to influence the outcome of events. In performance accomplishments (one method of deriving expectations of personal efficacy), successes raise expectations of personal mastery, whereas failures tend to lower these expectations. Athletes who have higher expectations of personal mastery believe they are competent in performing the required skills and do not have a strong fear of injury. If a successful environment is present, athletes will have higher feelings of confidence and self-efficacy, thus

making fear of injury much less likely to be a factor in performance.

IX. Guideline: In attempts to alter fear of injury, the athlete must:

(a) desire to reduce the fear, (b) believe improvement will take place, and (c) expect a reduction in the fear.

In changing a behavior, the individuals affected by the behavior must sincerely want to alter the behavior in order for a change to take place. If athletes are not committed to wanting to reduce their fear of injury, nothing the coach or therapist can do to help reduce the fear of injury will have an effect on their fears. Likewise, the athletes must believe in the methods being employed in reducing the fear, and expect these methods to work and reduce their fear in order for a change to occur.

X. Guideline: Behavior is a function of perception, which can be altered.

In fear of injury, athletes do not perceive themselves competent to perform the required skill without getting injured. While the athletes may indeed be competent to perform the skills, their perception is that they are not, and therefore their behaviors tend to follow their perceptions. In order to reduce fear of injury, athletes must experience successes and alter their self-perception to one in which they can see themselves as competent to perform required skills. Through success experiences, mastery expectations will rise (Bandura, 1977), and fear of injury can be reduced.

Chapter 3

ASSESSMENT

In assessment of athletes with fear of injury, it is important to take all three fear of injury components into account. As explained in the synchrony/desynchrony section, athletes with fear of injury will experience a reaction in at least one system, but in which system the reaction occurs and the degree to which the reaction occurs differs widely among individuals.

In order to facilitate assessment of athletes with fear of injury, this section is divided into two main parts: (a) assessment by coaches, psychologists, etc. (observer assessment), and (b) self-assessment. Each main part is subdivided into the three body systems defined by Hugdahl (1981), namely (a) verbal/cognitive, (b) behavior/avoidance, and (c) physiological. Assessment of athletes with fear of injury should be more readily understood as a result of the division.

As coaches, this section should help you to be able to recognize fear of injury in your athletes. In the exercise section following, a table has been developed to help you choose which exercises would be most relevant in your particular situation.

Observer Assessments

Verbal/Cognitive

When assessing fear of injury in athletes in the verbal/cognitive component, coaches might expect to hear certain characteristic statements from athletes. These comments might be similar to or include:

"I'm not ready yet."

"I need to practice this skill more."

"I'm distracted."

"It just doesn't feel right."

"Do I HAVE to do it?"

"I can't see myself doing that."

"I'm afraid I'll get hurt."

"I would rather try that tomorrow."

"I'm too tired to try that now."

Behavior/Avoidance

Coaches may have a difficult time assessing fear of injury in the behavior/avoidance component. Behaviors may be exhibited in two different ways. Athletes may exhibit behaviors that they do not usually exhibit, or they might exhibit behaviors that seem quite normal. Naturally, the coach will notice the out of the ordinary behaviors, whereas the ordinary behaviors may not seem any different than usual. The difference in these ordinary behaviors is that the athlete may perform them to excess. For example, gymnasts commonly perform lead-up skills when learning a new skill. This behavior is normal. This behavior becomes abnormal when the gymnast is ready to perform the new skill, but continues to perform the lead-up skill excessively. In behavior/avoidance in various sports the coach might expect to see some of the following behaviors:

procrastination

doing other skills instead of the feared skill

being late to practice

taking frequent breaks

excess time in lead-ups

excess time at the chalk box

inordinate concern for others and their progress

talking to coach

intensity--working hard at nothing

lack of intensity--not working hard at anything

"administrative details"--pulling up socks, retying shoes, constantly readjusting equipment, etc.

"saving self"--quitting in the middle of the skill, changing type of vault in mid-air, running by the pole vault, opening up in the middle of a dive, etc.

Physiological

While the physiological component may be the easiest component to measure objectively, it is quite difficult to observe. A coach can see indications of some physiological changes, such as increased palm sweating, but physiological indicants such as increased heart rate are more difficult to observe accurately without altering the normal environment. Physiological indicants might be revealed in the verbal/cognitive component as well as observed in the behavior/avoidance component. Figure 1 shows how ideas can affect organs and glands of the body via the autonomic nervous system. Below are some indications a coach might observe of fear of injury in the physiological component:

rubbing palms on clothes (sweaty palms)

highly distracted

extra time at chalk box (sweaty palms)

not processing information (distracted when talking to coach or teammates)

Verbal statements such as the following might be made by the athletes, indicating feelings of physiological discord:

"I feel nauseous."

"I don't feel well."

"My heart is racing."

"I feel jittery."

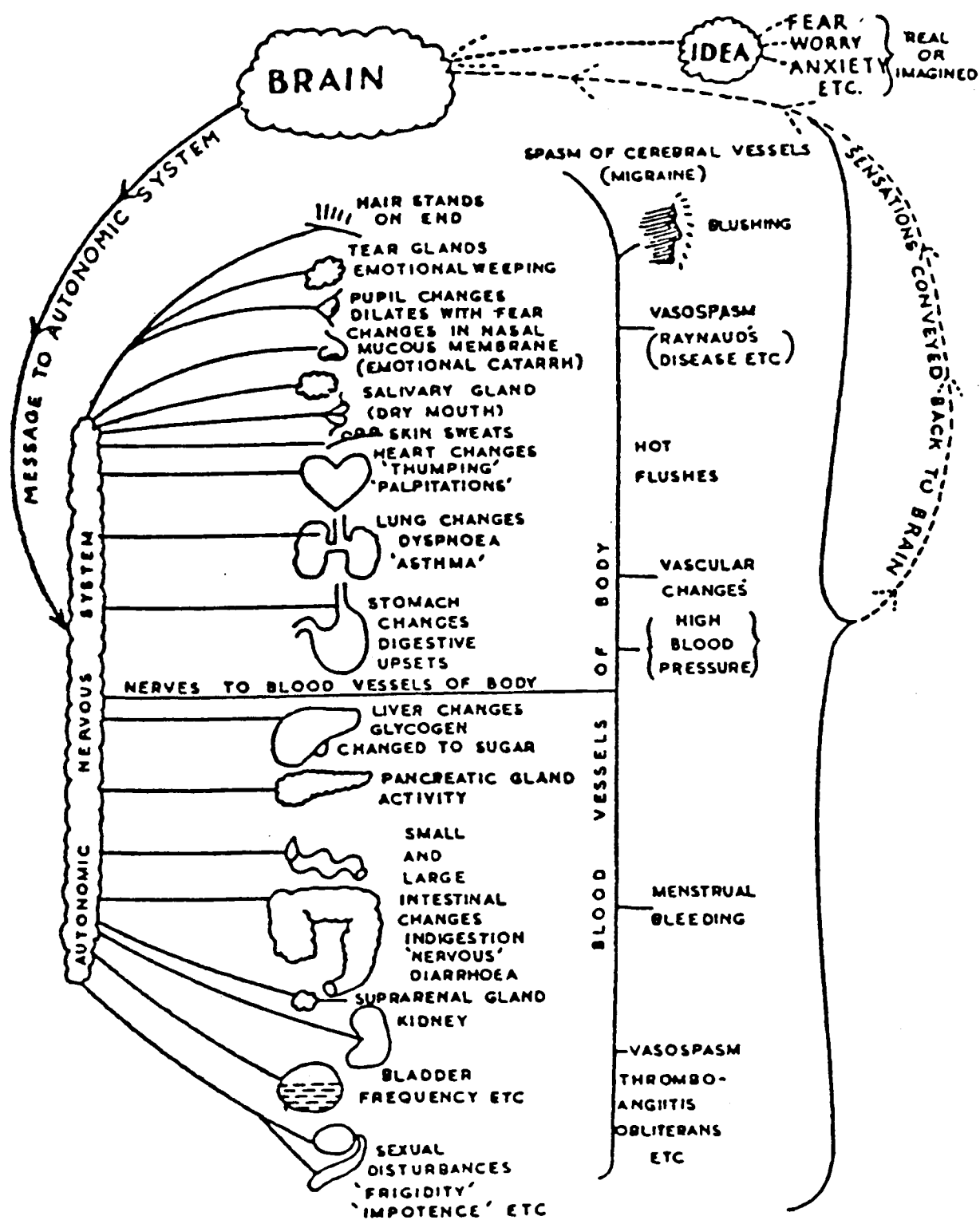


Figure 1. Diagrammatic sketch showing how thoughts can affect organs and glands of the body via the autonomic nervous system.

Self-assessment

A form might be given to all athletes on a team, or individually to athletes who have exhibited fear behavior. This form should include adjectives from each of the component systems, which are indexed on a master sheet. The athletes fill out the form, marking each item they feel characterizes them in this sport experience. Through observing trends in responses in particular systems, the coaches can get a better idea of whether or not athletes are experiencing fear of injury or if their performance problem is due to other non-fear related factors.

This self-assessment form can also allow the coach to see if the athletes recognize their fear of injury, and how their self-perception correlates with the coach's observations. Typical items that might be found on a self-assessment sheet are listed below:

Verbal/Cognitive

I feel calm.

I feel secure.

I feel tranquil.

I feel fearful.

I don't worry about getting hurt.

I am tense.

I feel at ease.

I feel upset.

I feel rested.

I am worried that I might get hurt.

I feel anxious.

I feel comfortable.

I feel self-confident.

I feel nervous.

I often think about getting injured in my sport.

I feel jittery.

I get distracted easily when learning a new skill.

I am relaxed.

I am worried.

I need to practice skills longer than other athletes before I feel comfortable performing them.

I feel over-excited and "rattled."

I lack self-confidence.

I am not afraid to try new skills.

My thoughts are racing.

When I learn a new skill I consider that I might be injured.

When I perform a new skill I worry about getting injured.

When I compete I think about getting hurt.

When I learn a new skill I feel confident in my ability to learn the skill.

I know my level of ability very well.

I start to get nervous when I learn a new skill, even though I know I have enough ability.

I tell my teammates how I feel before I learn a new skill.

When I am in a potentially dangerous situation in my sport I think about being injured.

I am afraid of being hurt.

I am afraid of pain.

Behavior/Avoidance

I enjoy trying new skills.

I take frequent breaks during practice.

I feel like escaping.

I take frequent breaks when I learn a new skill.

I don't feel like coming to practice.

When learning a new skill I find myself wasting time.

I want to avoid trying my new skill.

I am always trying to learn new skills.

I am late to practice without good reason.

I delay practicing my new skills.

I spend much more time on lead-ups than others.

I enjoy coming to practice.

I look forward to practices and competition.

I have to be pushed by my coach to try new skills.

I dread coming to practice.

When I feel pain I hold back from "giving it my all" in my sport.

As soon as I feel pain I back off in my intensity.

Even when I am in some pain, I work my hardest in practice.

Physiological

I feel nauseous during practice.

I feel nauseous during competition.

My palms are always sweaty when I learn a new skill.

My palms always sweat at practice.

My heart races in practice.

My heart races when I think about trying a new skill.

My heart races during competition.

My breathing increases when I try a new skill, even though I'm not tired.

My breathing rate increases during competition.

My mouth often gets dry during practice.

My mouth gets dry when I think about trying a new skill.

My muscles feel weak in competition.

I feel strong when I compete.

I feel tired when I think of learning a new skill.

I often rub my palms on my clothes when I learn a new skill.

Sometimes I feel lightheaded.

I get jittery when I learn a new skill.

My body is always calm when I practice.

My palms never sweat when I learn a new skill.

My heart beat never races in practice or competition.

When I learn a new skill, I can sometimes feel my stomach tighten with tension.

Sometimes I get so scared when I learn a new skill that I feel like throwing up.

Just before competition I notice that my heart beats faster than normal.

When I think of the possibility of being injured in my sport, my heart beats faster than normal.

When I think of being injured I feel sick to my stomach.

The sight of blood makes me nauseous.

In competition I find slight injuries that I did not feel receiving during the competition.

After practice I find slight injuries that I did not feel receiving during practice.

During practice I feel every little pain.

During competition I feel every little pain.

Chapter 4

STRUCTURED EXPERIENCES

The exercises in this section are designed to help athletes cope with their fear of injury. Some exercises are aimed at decreasing fear of injury by increasing confidence and self-efficacy, others are aimed directly at fear reduction, and yet others are directed at developing new ways to react to the fear and cope with it. Exercises dealing with components of self-confidence may appear to be similar because of the overflow between self-confidence components.

It must be stressed that these exercises are helpful in decreasing fear of injury only if athletes are fully committed to them. As stated in the guidelines section, athletes must (a) desire to reduce their fear, (b) believe improvement will take place, and (c) expect a reduction in their fear.

The following table has been developed to help coaches select which exercises would be most beneficial to use in their situation. Please note that several exercises affect more than one component. Coaches should decide what area of fear of injury (component area) needs to be focused on, and consider each exercise dealing with that area to select the exercise that best suits their athletes.

Table 1

Index to Exercises and Specific Areas of Focus

Fear of Injury Components	1	2	3	4	5	6	7	8	9	10	11
Verbal/Cognitive	X	X	X	X	X	X	X				
Behavior/Avoidance							X		X	X	X
Physiological		X		X		X	X	X			
Self-confidence Components											
Competence	X					X	X		X	X	X
Control		X		X	X	X	X	X			X
Commitment	X		X			X	X			X	X

#1 ATTENTION

This exercise is designed to increase competence. It involves some goal setting, and helps athletes focus their attention on specifics needed to improve particular aspects of their game. Affirmations can also be used to help focus athletes' attention. Affirmations involve the athletes creating a personal statement which usually includes very specific self-statements about what they feel about themselves and the sport situation. An affirmation dealing with fear of injury would include statements dealing with the athlete's fear.

Goal setting involves setting specific goals or stages the athletes want to reach. These goals must be realistic and reachable. Goal setting can be done for the athlete's career, the sport season, monthly, weekly, or even daily. Athletes can do goal setting as a team and also as individuals. In fear of injury related to goal setting, goals would involve steps and stages to master in order to reduce the fear of injury.

GOAL SETTING

There are six steps that are vital to the goal setting process:

I. Know yourself

How good an athlete are you?

How great is your fear of injury?

How good do you want to be?

What has caused your fear?

Are you self-disciplined?

Do you want to reduce your fear of injury?

II. Skills required for your sport

What are the skills required for success in your sport?

Do you understand the strategies of your sport?

Do you understand the mental aspects of your sport?

Do you know what activities/positions have the most injuries in your sport?

Do you know what muscle groups are utilized in your sport and how to develop them?

Do you know which muscle groups must be relaxed to perform effectively?

Do you have enough flexibility to perform up to your potential?

III. Self-evaluation

What are your greatest strengths as an athlete in your sport?

What are your greatest weaknesses in your sport?

Do you know how to go about improving them?

How much time are you willing to put into practicing?

Do you intend to practice only the skills you enjoy and are good at?

Is the amount of time you spend on each skill related not only to what needs improvement, but also the skills that mean the most to your success?

Do you work on reducing your fear of injury?

How much time are you willing to put in to reduce your fear of injury?

IV. Define your goals

Define your goals.

Be sure your goals are challenging but realistic.

Be certain that if you put the time and effort planned into them that you will attain them.

Once you attain your goals you will automatically raise your level of aspiration and raise your goals.

Be sure you want to work to reduce your fear of injury.

Decide how much effort you are willing to give to reduce your fear of injury.

V. Plan

Plan how you will meet your goals.

How much time do you have to attain your long term goals?

How can you best use the resources available to you in the time you have to develop?

What will be your plan for attaining your shorter term goal?

How much will you attain each day, week, month, season, year?

Is there anyone who will help in your effort to reduce your fear of injury?

VI. Evaluate your progress

Evaluate your progress.

Are you programming effectively?

Is your improvement on schedule?

Is your fear of injury being reduced?

Are you really working to reduce your fear of injury?

GOAL SETTING EXAMPLE

Pete has a fear of respraining his ankle. He had a serious sprain while playing basketball on the school team last season, requiring him to sit out the remainder of the season. Pete was the leading rebounder, and was injured when he landed on another player's foot coming down from a rebound.

- I. I'm a fairly good player, very afraid of respraining my ankle. I'm always afraid that I'm going to land on someone's foot. I want to be a starter again. My fear is from my previous injury. I want to reduce my fear so I can play well again.
- II. I have to be able to run, jump, cut back and forth--I need good ankles! I have to be confident that I won't get hurt in order to play well again. I know that my position has a relatively high injury rate, so I should probably protect myself by wearing high-tops. I need to strengthen my ankles so I can even land on someone's foot and not get hurt.
- III. I will spend whatever time it takes to reduce my fear of getting injured. I am afraid of respraining my ankle. I am (used to be!) a good rebounder, if I'm not afraid. I don't spend much time trying to reduce my fear--mostly I just don't go up for as many rebounds as I used to. My ankle is not painful and is in good shape, but I guess I should strengthen it more.
- IV. My primary goal this season is to reduce my fear of injury and to be instrumental in helping our team reach the championship. I want to eliminate my fear of getting injured by our first game--that's 8 weeks from now. I'm confident that if I work with the assistant coach every day for an hour after practice I can really reduce my fear. I want my ankle to be super-strong!!

- V. I will work with the assistant coach or on my own every day for 1-2 hours to reduce my fear. I will use physical and mental practice to reduce my fear. I will do rehabilitation and strengthen my ankle daily. I'll get some high-top shoes and wear them! I'll use systematic desensitization or thought stopping to reduce my fear of getting injured--whatever looks more appropriate. I'll also use some of those confidence raising activities. since I know my confidence has been shaky since I sprained my ankle.
- VI. (after 4 weeks) I'm halfway through my goal period to reduce my fear of injury. Our first game is now only a month away. My fear has been decreasing--it's hard to believe! I feel pretty comfortable about rebounding now, though I still have some uneasiness when we scrimmage. I'm fairly sure my fear will be gone by our first game. The coach told me that I've been looking much better, and if I continue to improve I'll have my starting position back! That helps my confidence a lot.

HINTS FOR AFFIRMATION AND SCRIPT WRITING

1. Athletes must value self and those around them.
2. Athletes must trust self.
3. Athletes must perceive that they are in control, and not give up control.
4. Athletes must perceive themselves as competent.
5. Athletes must place demands on the success mechanism.
6. Athletes must commit themselves to some plan of action.
7. Athletes must realize that performance and learning errors are to be used as information, not evaluation. The same applies to coaches' comments.
8. Athletes must not fear failure, nor deny success.
9. Athletes must be emotional and sincere about their affirmations.
10. Athletes must value process as much as product (i.e., products (ends) are only achieved through process (means)).

SAMPLE AFFIRMATION

My commitment to myself and my teammates is that I will constantly give whatever it takes to maximize my success in this sport. This means that I must commit myself to minimizing my fear of injury in this sport. If it takes more effort, I will give that. If it takes more time, I will give that. I feel good about myself because I am in control of my own behavior. I know I can perform my skills without injury. And while situations may not allow me to perceive myself always in the best light, I realize that I am getting closer and closer to the real me--the non-fearful me.

Although I might sometimes choose to change some behavior of my teammates or coach, I realize that the only person I am in charge of is myself and I accept that. I am a winner and I'm going to be more of a winner. I support all my teammates who are winners and vow to infect other teammates who are not already winners. No put-downs, no pressure, just infect them by example.

I will accept willingly the support of my teammates who are helping me to reduce my fear of injury, as they accept my support for help in their weaknesses. Success does not embarrass me. In fact, I intend to milk my personal successes and our team successes to the max, as they help me build my confidence and reduce my fear.

I will recognize my fears that I have and realize that only those who strive see their fear. My recognition of my fear will help point to aspects of my performance to give special attention to. I will concentrate on reducing my fears.

Participation in this sport is extremely important to me as is the association with my teammates and coach. I commit myself to reducing my fear of injury with the knowledge and trust that I am worthy to be a team member, and that I will make a significant contribution to the team.

#2 WHO'S IN CHARGE?

This exercise is designed to increase feelings of control. Thought restructuring is used to help athletes feel that they have an effect on the outcome of situations. In this exercise, athletes must first learn what thoughts they are experiencing, and what thoughts are interfering with their performance. Meichenbaum (1976) suggested a four-stage process for thought restructuring.

Stage 1: Preparing for a stressor

Athletes must "psych" themselves up to meet the challenge. Taking things one step at a time makes the situation much easier to handle. Athletes should expect anxiety and try to view it as positive. They can learn to use anxiety as a cue to begin using coping exercises.

Stage 2: Confronting and handling a stressor

Athletes must realize what they have to do, and develop a plan to deal with it. Thinking about what needs to be done or what can be done about a problem is much more beneficial than worrying about the problem.

Stage 3: Coping with feelings of being overwhelmed

Athletes must keep a focus on the present, and remember what to do at each moment. Expecting fear to rise will help make it more manageable. Athletes can do things to take their minds off the fear (see exercise #5).

Stage 4: Reinforcing self-statements

Reinforcing the fact that the athlete made it through the experience will aid performance next time. Typical self-statements are as follows: "It worked, I was able to do it," "It wasn't as hard as I imagined," "It's getting better each time I use the procedure," "I can control my fear."

A sample thought restructuring routine follows:

SAMPLE THOUGHT RESTRUCTURING ROUTINE

Brian is a gymnast. He has fears of being injured when he performs on the long horse. His coach has suggested that he try a thought restructuring routine to deal with his fear.

In stage 1, Brian knows that he has a fear of performing on the vault. His fear is that he will miss his hand placement and crash into the horse. Brian developed his fear from seeing a teammate get injured performing the vault in the beginning of the season. In thought restructuring, Brian decides the best way to deal with his fear is to practice his run, takeoff, and push-off on the vault. Brian carefully plans exactly where his start point for his run should be, as well as his take-off point and hand placement target. Brian actually tapes a square on the horse to target the exact spot he wants to focus on for hand placement.

By putting his anxiety energy into perfecting his technique, Brian avoids having to worry, and can focus on perfecting his performance. Brian knows that when he is ready to compete his anxiety level will rise, but he will be ready because he has been working on his technique.

In stage 2, Brian is getting ready for the team's exhibition meet for parents weekend. This is the first "competition" of the season. Brian is psyched to try the vault. He knows that he will get nervous before he vaults, but he knows that his anxiety will increase his physiological arousal, which will help his competitive edge. Brian knows that if his anxiety and arousal rise too high, he can use thought stopping techniques he has learned to help control his emotions. He carefully reviews his technique, being able to assure himself how ready he is because of the intense effort he has put into preparation.

In stage 3, Brian has to cope with feelings of being overwhelmed. Five minutes before Brian is to compete, his fears start to rise. He starts to panic, and then remembers what he was told to do if he panicked. He must

focus on the present, and remember each step in his vault. If he takes it one step at a time, he can perform well. Brian practices the thought stopping routine he learned (exercise 4) and remembers that he really is prepared for his vault.

In stage 4, Brian vaults, and is successful, due to his ability to control his fear and keep his mind clear to perform his vault. He is very excited that he performed in competition without crashing. He tells himself that he can loosen up more and get better scores in meets, because he doesn't have to worry about getting hurt. Brian talks to his teammates and his coach, expressing his feelings of confidence and excitement. His teammates and coach are supportive because they know how hard he has worked to master his fear.

#3 COMMITMENT

This exercise is designed to increase commitment by dealing with the athlete's intentions. Athletes can write daily or weekly intentions to focus their attention on what they intend to work on during a particular stage of their sport situation. These intentions are made known to other members of the team, so that a mutual support system is developed, and teammates can help keep each other focused on their intentions. In writing intentions, athletes decide upon a focus phrase for the week, then pick a power word to typify their statement and help remind them of their focus for the week. Athletes then use their power words to help each other stay on target to work on the task they have chosen to focus on for the week.

In fear of injury, intentions will focus on reducing fear. While not necessarily the only focus of intentions, various aspects of reducing the fear should be focused on for a large percentage of the fearful period.

Sample intentions follow:

SAMPLE SWIMMING/DIVING TEAM WEEKLY INTENTIONS

Support your intentions and those of your teammates by reading and affirming them at least twice daily.

AARON will try to lower stroke rate (LESS STROKES).

*GEORGE will not puppy out in any of the sets this week (HANG TIGHT).

*DICK will get up enough guts to throw his back 2½ for 6's in Saturday's meet (SPIN, SKIN, AND WIN)!

JOHN will stay on top of his school work and swimming at the same time (COORDINATION).

CLAIRE will get into shape (HOURGLASS).

*JANE will practice her reverse dive lead-ups three times during practice (CRASH).

JIM will push off the wall to the flags (PELVIC THRUST).

*MIKE will walk to the end of the board and visualize his reverse somersault (RELAX).

TOM will get correct timing and arm bend in fly stroke (TIME WARP).

GARY will work on sprint breaststroke (SPRINT).

ROB will get back into shape this week (WAKE-UP).

DORIS will get healthy (HEALTHY).

*CHUCK will attempt 3 dives from the platform this week (HIGH DIVE).

*SUE will not slow down before the end of the pool so she doesn't hit her head in backstroke (KAMIKAZE).

CAROL will work hard throughout the entire practice (INTENSE PAIN).

*fear of injury related

#4 STOP

This exercise is designed to reduce fear of injury through restructuring thoughts. Thought stopping procedures are utilized to restructure these thoughts. The basis for these procedures and the following thought stopping routine is derived from work done by Cautela and Wisocki (1977).

The concept of trying to control thoughts in order to change behavior is not a new one. Thought stopping differs from other techniques in that other techniques try to increase the probability of a response that is antagonistic to the undesired response. The technique employed here is designed to decrease the occurrence of the undesired thoughts and to replace them with appropriate thoughts when they do occur.

In this exercise the thought stopping technique is explained, including the behavioral analysis, rationale, control of thought stopping, and an example of application of the technique. Guidelines for consideration when using thought stopping follow this exercise. These guidelines should be followed carefully, as Cautela and Wisocki warn that incorrect usage of thought stopping might result in the reinforcement of maladaptive behavior patterns, rather than their elimination.

THOUGHT STOPPING (TS)

Behavioral Analysis

The therapist (can be coach, assistant coaches, trainer, team psychologist, etc.) asks the athlete to list fear of injury thoughts which cannot be controlled. Each item is written as a concrete statement in the athlete's own words. Sally (a diver) will be used as an example.

Sally's thoughts:

"I'm going to hit the board on my reverse dive."

"I'm not going to rotate far enough."

Rationale

The target thoughts are agreed upon, and the therapist and athlete discuss the rationale for eliminating them. The discussion with Sally will likely center upon how her thoughts of hitting the board and not rotating enough are detrimental to her current diving performances. The therapist will point out that her thoughts also will inhibit further progression in learning new dives.

Self-control

The therapist discusses TS with Sally, ensuring that once she knows and understands the TS procedure, it will be helpful to her in controlling other fears that might arise in the future.

Application of Technique

These instructions are given to Sally to demonstrate the TS procedure:

"Sit back, relax, and close your eyes. In a few seconds I'm going to say the word "go." As soon as I say "go," I want you to deliberately think this thought: "I'm going to hit the board on my reverse dive." As soon as you begin the thought with the words "I'm going to," signal me by raising your right hand. Do you understand the instructions? Okay. Lean back. Relax. Ready? "Go.""

As soon as Sally raises her hand, the therapist loudly shouts "STOP," usually producing a startle response. Sally opens her eyes and the therapist asks her about the experience. Sally's typical responses would probably be: "You startled me"; "I got scared"; "You interrupted the thought." If Sally doesn't mention that the thought disappeared, the therapist will question her specifically, and then explain to her that a person cannot think of two things at the same time. A second trial is given during which the therapist waits about 1 second longer before shouting "STOP." As with the first trial, the therapist inquires as to whether or not the thought disappeared (it should).

The therapist now explains to Sally that she needs to learn the TS technique to use on her own. The therapist gives her these instructions:

"I'm going to ask you to close your eyes again, but this time I'm not going to yell stop. Try to imagine, as well as you can, or try to hear yourself yelling stop very loudly. Keep practicing until you get it as loud and as clear as possible. Then open your eyes."

When Sally opens her eyes, the therapist asks if the imagery was loud enough to evoke a jolt. If she says "no," she is asked to practice again until she can. She can even yell out loud a few times, and then try the imagery again. Another method is to imagine the word "STOP" in bright red letters in front of the face.

Sally and the therapist now practice for about 10 minutes, alternating interruptions of the thought until she indicates that she has learned the procedure (about 20 trials). At the end of the session, Sally is instructed to rehearse the procedure at specified times during the day (two or three times daily for 10 to 20 trials per session) and whenever there is any spontaneous occurrence of the thoughts discussed during the analysis phase.

In order to prevent discouragement if the thoughts recur, the therapist tells Sally that repeating the word "STOP" is more beneficial than thinking the fear thought. The therapist also reminds Sally that the target thought will occur less and less frequently, until it completely disappears.

After the initial session, a weekly check is made of the frequency of practice, the specific thought that occurred, and any failures with the procedure. Therapy sessions of 5 to 10 minutes a week are allotted to rehearse the TS procedure. The check-up periods may be increased or decreased, depending on Sally's progress.

GUIDELINES FOR THOUGHT STOPPING

(from Cautela & Wisocki, 1977)

1. Occasionally the question arises if a pleasant or distracting thought should follow the "STOP" image. This is not generally recommended in the initial stages of TS, as remembering to say "STOP" is usually difficult enough without trying to search for another response.
2. Concern is sometimes expressed over whether it will be necessary to use TS for a problem for the rest of the clients' lives. Usually not, although the problem might recur sometime in the future, at which time continued use of TS will result in its elimination.
3. Some clients have concern that thoughts will be submerged only to resurface later or in another way. It must be remembered that TS is not going to eliminate problems, but will eliminate nonconstructive worrying.
4. In conjunction with rehearsal of the TS technique, the therapist should constantly remind the athletes that the thoughts are rubbish and serve no useful purpose. The athletes should consider the thoughts as the elements that are making them fearful.
5. Athletes should be reminded to use the TS procedure both during therapy and also after the therapy has been terminated until the thoughts are no longer a major problem.

#5 STRATEGIES

This exercise is designed to teach athletes various coping strategies. Strategies involve athletes focusing on imagery, or concentrating on a particular focus, either related or unrelated to the fear. These strategies are extrapolated from work by Turk (1981).

1. Imaginative Inattention. The strategy is to ignore the intense stimulation by producing a mental image that is incompatible with the experience of fear. For example, imagining a pleasant day at the beach, etc.

2. Imaginative Transformation of Fear. Interpreting the sensations present as something other than fear, or minimizing those sensations as trivial or unreal.

3. Imaginative Transformation of Context. Picturing a context of scene in which the intense stimulation is different from the actual situation. That is, being aware of the intense stimulation and sensations but imagining them arising out of some other context. An example to clarify this strategy is being aware of the high fear of injury, but imagining that it is occurring in some other situation rather than in your sport, such as while you are sitting in your living room.

4. Focusing Attention on Physical Characteristics of the Environment. An example is that you feel the fear of injury, but try to put it out of your mind by focusing your attention on something such as the little tiny bumps on the surface of the diving board or the pattern of the wall tiles, etc.

5. Mental Distraction. Focusing attention on specific thoughts without producing an image. An example of this strategy might be that you might perform arithmetic problems in your mind to distract you from the fear.

6. Focusing Attention in a Disassociative Manner on the Part of the Body Receiving the Intense Sensations (somatization). Athletes usually have a mental picture of what they think will happen during the routine or sport activity. The athlete can compare sensations in the different parts of the body, including the areas that they are afraid will be injured.

#6 TAPES

Two important methods of dealing with fear of injury are mastery and coping rehearsal. Rotella, Malone, and Ojala (1981) defined these methods. In mastery rehearsal athletes imagine themselves performing perfectly without experiencing stress or anxiety. In coping rehearsal athletes imagine themselves in situations where they experience a temporary loss of control (physical, emotional, or psychological) which is then regained through coping techniques they have learned. Athletes can practice appropriate responses to situations, which will facilitate the recall of these responses during their sport performance.

This exercise involves the use of cassette tapes produced by the athletes from scripts of both mastery and coping situations. Methods for producing mastery and coping scripts follow this page, and are taken from work done by Rotella et al. (1981).

MAKING A MASTERY TAPE

In order to make a mastery tape, athletes must be able to identify their perception of a "perfect performance." Athletes should consider all aspects of their performance. After identifying a perfect performance, the athlete reviews it with the coach or therapist to get feedback on the realism of their concept relative to their abilities and performances.

After discussion and evaluation, athletes write a script of their "perfect performance." In the mastery script, athletes should describe how they feel throughout the performance. They should describe how their entire body feels, including parts of the body such as arms, legs, etc. Information about how objects in the environment look, sound, etc. help to make the mastery tape a more realistic situation. The performance also should be described in technical terms. This terminology should be that normally used by the athletes, thus making the tape more meaningful to them.

Performance length on tape should generally match the actual performance length, although some athletes mentally rehearse their performance in slow motion, in which case the length of the tape is not of primary importance. The mastery tape should include all pre-event preparation, as well as the visualization of the actual performance.

The acoustical aspects of the mastery tape are very important. Many athletes use introductory or background music to enhance their concentration. The type of voice used is also important. Individual preferences will determine the use of a soft, mellow voice versus a loud, boisterous voice. Whatever the choice, the athlete must demonstrate an emotional involvement in what they are saying on the tape in order to maximize the benefits from the tape.

In assisting in the creation of mastery tapes, coaches must remember that each athlete is an individual and will perceive situations differently.

Tapes may vary greatly, although all tapes should include the basic considerations important in creating a useful mastery tape.

EXAMPLE OF A MASTERY SCRIPT

I wake up with the sun shining through my window. I feel good, and I lie in bed for a few minutes feeling the warmth of the sun in my hotel room. Today we play our first ice hockey game in the regional playoffs. I feel excitement flowing through me. I will be the starting goalie in today's game. I have been preparing for this game throughout the season. I know I will do well in this game, and will not have to worry about getting injured. My muscles feel strong, and I know my anticipation is good, so my reflexes are very fast. I get out of bed and stretch, feeling my muscles loosen. I take a steamy shower and dress, feeling very rested and in tune. After dressing, I go downstairs to meet the team for breakfast. Yummy!!! Waffles! My favorite breakfast! They taste great, and I know that they will help us beat our opponents, who hopefully will be eating a greasy breakfast! Everyone at breakfast is excited about the upcoming game. We are filled with anticipation, and we're psyched to win!

I head back to my room to pack my gear for the game. We have plenty of time to let our breakfast settle before the game. I look over my gear as I carefully pack it in my bag. My skates were sharpened the day before we left, so I had a day to practice on them--they did a great job on the sharpening. I had new straps sewed on my pads last week, and I checked before we left to make sure they are holding up--I feel like I have new equipment.

The bus is right on time to take us to the arena--we'll have time for a good warmup, without having to rush anything. We arrive at the arena, and head for the rink to see the ice before we change. I feel very confident today. When we see the ice everyone gets even more psyched. The ice is clear and smooth, and the zamboni is finishing its run so the ice will be hard by the time we get to it. Freshly repainted lines and

circles gleam brightly through the ice. This rink is almost exactly like ours, so it will seem as if we are playing at home. This is a big rink, and our opponents have a smaller version, so they'll have to skate more than they're used to. I feel very confident that we will play well today--everyone is really psyched. We go to the locker room to change, and the air is filled with chatter as we exchange our feelings of excitement. As I change I think about the game. I know we have prepared well, and we are all healthy. This will be a tough game--our opponents are good, no denying that--still, I'm confident we will win. I'm psyched to meet the challenge of playing them--they have one of the best scorers in the country on their team. Even so, I know I'm very good, and one of the best goalies, so this is a good challenge to shut this player down. I'm very quick, and our defense is good--we WILL succeed!!

We leave the locker room, and start our warmup. The ice is cold and hard--this will be a fast game. My skates glide easily over the ice, and my legs feel strong as I skate around the rink. I rough up the ice in front of the goal so I have sure footing. I feel good all over. My teammates take easy shots at the goal, so I can warm up slowly. I easily deflect the shots, and my timing is right on target today--this is how I feel when I have my best games! My teammates take turns shooting from the point, then coming in one-on-one with me--WOW!--I'm doing so well that I even surprise myself!! I'm definitely ready for this game!!

The game is almost ready to start--the other team has finished their warmup, too--they look good, but I know we want this game more than anyone, and it will be very tough to beat us today. I look around the rink--the stands have filled with people, they are all sitting expectantly--I know we'll give them a good game. A group of our friends came to the game, and they've brought a big colorful banner to cheer us on--I feel great!!

The game starts, and the crowd starts to cheer--we seem to have many more fans than our opponents, and we can feel their strong support. We quickly gain control of the puck, and our passes are crisp and clean. I can feel the adrenaline flowing through my system--we take the puck down the ice, and pass in front of the goal--SCORE!!!! WOW--that was fast-- I don't think they thought we would come out as aggressively as we did! Back to center ice--the other team looks frustrated by our quick attack-- I'm sure they'll tighten up now, but the damage is done--our team is super-charged!! We face-off, and our team gets control again. We take the puck down the ice again and shoot, but their goalie deflects the puck and they get control. The puck goes back and forth, and finally they bring the puck up and are ready to shoot--I'm psyched, because I know how good I feel-- they can shoot all day!! Their leading scorer has the puck--he takes a shot--the puck flashes at me--ZAPPO!--I easily deflect it with my pads, and our team gets control again--WOW!--we're really dominating this game! The period ends, and we skate off for a quick break--our team is really psyched, and our coach points out how we can capitalize on the other team's frustration. We know we will come out strong. Everyone congratulates me on my super save--I feel VERY good.

We skate back onto the ice--the game starts again. The puck goes back and forth with no score. The other team shoots repeatedly, but each time I easily deflect their pucks. One of our players was caught roughing and has to sit in the penalty box--the other team has a power play, usually very powerful. I'm confident that I can stop them--it will be a tough challenge. They have the puck, and work it around my goal--they are trying to catch a good angle. I skate from side to side, and I know that they are frustrated because I am very fast. Time on the penalty is running out, and they have

to get a shot off--I know they will have to depend upon their top shooter, so I can concentrate on him. He has the puck--skating very fast now--he comes around the corner of the goal and tries to flip the puck in--ZAPPO!!--AGAIN I am too quick for him, and the puck goes back out. Time is up for our penalty, and we are even again--WOW!!--I stopped them on a power play--I feel so good--nothing can get by me. The second period ends, and we skate off the ice to let the zamboni resurface the ice. Everyone is so psyched--the fans cheer as we pass them on the way to our locker room. A short break and we're back on the ice ready to start the final period. The score is still 1-0 in our favor. The period starts, and the other team looks very frustrated--we will surely win this game! Again the puck goes up and down the ice--we get control again, and score another goal. The other team is getting desperate now, and their shots are coming more frequently--I easily stop them--my body feels very in tune, and I feel as though I could stop anything they have to show me. Their top scorer gets the puck in a break-away, and skates towards me in a one-on-one--come on, I'll stop you!! He shoots, and I stop the puck--I'M INCREDIBLE TODAY!! The buzzer sounds--the game is over!!--our team piles out onto the ice, and we are cheering and jumping--WE WON!!! We shake hands with the other team, and their best player congratulates me on a super game--I feel soooooo good! Our team circles around me and congratulates me--I can hardly believe how well I played myself--This was a great day!

I feel very proud--I have helped our team to win the first game in regionals! We shower and change, reliving each moment of the game. Time for dinner and to celebrate our win--then get ready for our next game--we will NOT be beaten!! I feel very good--my body doesn't seem to have any bruises, and I know I will continue to do well--NATIONALS HERE WE COME!!!

MAKING A COPING TAPE

Coping tapes are different from mastery tapes in that the athletes are not rehearsing a "perfect" performance. The athletes mentally rehearse performing under stressful conditions and their responses to their situation. In coping tapes athletes are provided with mental strategies to rehearse which will prepare them to perform successfully in any situation in which they find themselves. The tapes should include all possible types of problems the athletes might encounter in their competitive environments. The athletes should carefully plan strategies to cope successfully with all the stressful situations, which they can integrate into the tape and thus learn to use when they actually encounter problems or stressful situations. In a coping tape dealing with fear of injury, athletes would include their fears of being injured along with other stressful situations that they might encounter.

Rotella et al. (1981) offer a four-step approach to use when planning coping strategies. Athletes should decide which stressful situations affect their performance, and employ the four-step approach in the creation of their coping tapes. In the four-step approach, athletes should (a) recognize the distraction; (b) think "stop" to themselves; (c) breathe deeply--"let go" of muscle tension; and, (d) use a concentration word to bring them back to concentrating on the task (e.g., "think," or "respond"). The same concentration word or phrase should be used consistently throughout the coping tape. Coping strategies should immediately be employed after the concentration word. Coping strategies are based on positive self-talk which athletes think to themselves. Athletes should create a positive self-statement for all the stressful situations they anticipate.

In making a coping tape, as with a mastery tape, athletes and coaches must realize that each athlete is different and responds differently to stressful situations. Through mastery and coping tapes, athletes can help increase their self-confidence both prior to and during competition. Athletes can have confidence knowing that by planning their coping strategies, they are better prepared to cope with all types of situations that might arise during competition.

EXAMPLE OF A COPING SCRIPT

It is the day before our first ice hockey game in the regional tournament. We're on the bus traveling to Providence, where the tournament will be held. We won't have time to practice, and I'll be stiff from travelling. How can I hope to play well without practicing the day before the game? STOP--LET GO--THINK. We've traveled farther than this before a game, and we've won most of the games even when we haven't been able to practice the day before. Besides, that will give me a day to rest, and I play well after a day off. I'll just go for a short run when we get to the hotel to loosen me up.

Well, the bus trip went quicker than expected, and I don't feel too stiff from the trip--BUT, I went for a short run before dinner, and turned my ankle--now what am I going to do? My ankle is sore, and how will I ever be able to react to all the shots tomorrow with a sore ankle? I'll probably hurt it even more! STOP--LET GO--THINK. My ankle isn't really THAT sore, and if I ice it tonight a couple of times and get it taped tomorrow, I'm sure it will be fine. It'll sure help to get a good night's sleep--but how can I hope to get any sleep on THIS bed? This bed is like sleeping on a very hard rock! It's sure obvious they don't want these mattresses to wear out for a few hundred years or so! STOP--LET GO--THINK. This mattress is hard, but it's no worse than the floor we slept on at Jeff's house before our title game in that tournament at the beginning of the season. And I had a shutout in that game!

Pause...It's morning. I start to stretch and...Oh No! I'm supposed to meet the team for breakfast in 5 minutes! These hotels always screw up the wake up calls! Coach is gonna be really mad if I'm late! I'll have to rush, and there's probably not even any hot water! STOP--LET GO--THINK. I'll have lots of time to shower after breakfast, and I won't have to be

late if I go downstairs now.

Here I am, right on time! Everyone seems to be very quiet this morning--I sure hope they get psyched for the game. How will we ever win with them like Zombies?! We might as well pack and go home now--I'm gonna get blasted out of the rink for sure! STOP--LET GO--THINK. What am I saying! Of course everyone is quiet--they just got up! They probably didn't wake up on time either! Coach is smart--that's why he got us up this early for breakfast--so we'll be wide awake and ready for the game. At least we'll get a good meal to start us off.

Yuk! Everyone in the restaurant has eggs! And they look like they're doing the backstroke in all the grease on the plates! I'll NEVER survive if I have to eat those greasy things! I'll be like a lump of grease in the goal! STOP--LET GO--THINK. Coach always gets us a good meal, and I'm sure that today of all days he didn't screw up. Just as I thought--here come the waitresses with platters of pancakes, muffins, and bagels--energy food! All the carbo's should help us skate well. I should have known coach is too smart for all my worrying.

Well, up to pack my gear for the game--nice hot shower, I'm really feeling good! What is this? WHERE ARE MY SKATES? OH NO!!! I left them to be sharpened the night before we left, and I forgot to pick them up when I was late getting out of class! I might as well hitch-hike home, because when coach finds out I forgot my skates I might not survive to even walk home! He's gonna be livid!!! I'm really a no-good turkey! STOP--LET GO--THINK. Sure I'm a dummy, and coach will be mad, but he's done stuff like that in his career, so he'll understand. What's important is that he'll get over his anger and help me solve this problem. I know they have an ice hockey league here. I know they'll have some goalie skates at the rink--I'll have the manager get me a pair. Of course they'll

be different from mine, but it sure beats skating around in my socks!
At least my ankle feels good this morning.

Wow! Coach just laughed when I told him about my skates--seems he and the assistant had a bet that someone would forget their skates! He probably also saw how embarrassed I was! Now we're waiting for the bus to come and take us to the arena--it's already 20 minutes late! We're going to have to rush there, rush to change, rush through the warmup, rush, rush, rush! I'm sure I won't be able to get ready and warmed up on time! They'll probably have three goals on me before I get fully warmed up! Then we'll never catch up! We'll lose the game, and it'll be all my fault. STOP--LET GO--THINK. Here comes the bus. We'll have to rush a little, but it will get our adrenaline flowing! I've gone out and played without long warmups lots of times, and I've always done fine. Sometimes I complain because the warmups are too long! Coach will probably be able to push the game back 5 or 10 minutes, and I know we'll be ready to meet our opponents--we've been mentally warming up all morning.

Great--we're here! We really flashed through the traffic! A quick check to see the arena, and we're off to change--this rink is huge! And the ice looks soft! It really seems warm in here. We practice on a much smaller rink, and we'll be worn out by the end of the first period! They'll dominate the game, and they'll have lots of opportunity to score on me! STOP--LET GO--THINK. Hey--I remember our opponent's rink is just like ours, so they'll probably be tired too! We've conditioned hard through the whole season, and now it's really going to pay off--WE'LL be the ones in control! Even if they do get shots on goal--that's why I'm here! I'm ready for whatever they have to show!

We change, and go out to warm up. The ice isn't as soft as it looked, so it will be a faster game--good, we can tire them out. I begin my

warmup--my legs feel good, my ankle is okay, even on my borrowed skates! I think everything will be just fine...YEOW!!!--That shot just nailed me right in the upper arm! OW, OW, OW!!! It really stings! Great--I'm hurt and the game hasn't even started! My arm will be sore during the game, and I'm bound to get hit there again--I won't be able to stop any shots from that direction! This is just what I've been afraid of--those stupid desensitization exercises don't help a thing when it gets down to the wire! STOP--LET GO--THINK!! Let's get rational here! If it weren't for those "stupid desensitization exercises," I wouldn't even be on the ice! I've come a long way in reducing my fear of injury this season--sure I'll get some bumps and bruises, but that's to be expected. I know my reflexes are good, and I can block almost everything with my pads. I'll get a pad from the trainer, and I know I don't have to worry about getting hurt today--I'll be great!

The game is ready to start. My arm feels much better now--I know I'll have a nice bruise later. The crowd cheers, and the game begins. The puck goes up and back, without any clear control. I can tell we're still not settled from having to rush around this morning. Uh oh, they have control--I'm ready--Pow! I deflected the shot--great--they're coming back for a second shot--Argh! I can't quite reach it--SCORE. Oh man, why couldn't I reach just a little further! We're still unsettled, and now they're fired up! They're sure to score again, and we'll never catch up! And all because I couldn't reach a little further! We certainly can't win if I let in all their shots! STOP--LET GO--THINK. BE REAL. That was a beautiful goal that they just scored--I can't take that away from them. I guess that's why he's an All-American! I stopped the first shot, and it wasn't so easy--most other goalies wouldn't have gotten it! I can't hope to stop everything, and I always try my hardest. I know I couldn't have reached any farther

even if I was Spiderman! I know we want this game more than they do--we just have to settle down.

Our team looks like they just woke up--we're taking control of the puck, and we're beginning to look very good. Just as I thought, we just had to settle down. The period ends, and we skate off the ice. Everyone looks and sounds more psyched. We're ready for them now.

The second period starts, and one of our players draws a penalty immediately--what a dummy! Now they have a power play, and they're certain to score. I'm really in for it now. I'll be shell-shocked by the time this power play is over. I should just skate to the side and let them score! STOP--LET GO--THINK. Any time there's a power play it gives that team an advantage, but it certainly doesn't guarantee a score. I've had a great record of saving power plays this year, and it will be a challenge to stop this All-American--I think he's a little cocky. I'm an All-American too, and I think he's forgotten it!

They get the puck--and now they're taking shots--Ow! I caught another shot in the arm! I'll be more sore...STOP--LET GO--THINK. Don't get out of control--no time to be sore. Another shot, and another--they skate around the goal and try to shovel the puck in as they go by--I'm fast, and I deflect all the shots--we're even again! I survived the power play without a score! I feel good.

It's the third period now, and we're still behind 0-1. We're running out of time, and we need to score. We have been looking good, but haven't been able to put the puck in the goal. How can we possibly get 2 goals? STOP--LET GO--THINK. We look good, and we're sure to score soon--we have control even now. Alright! We just scored! Now at least we're tied! But that means we'll have to go into overtime! My arm will never last

that long--it's getting more sore all the time. STOP--LET GO--THINK. We still have time left to score, and I'm positive we can score. Great! We just got a power play--one of their players tripped--maybe we can score now! One minute left, and we're tied--we score!! We're ahead, if we can only hold on for 45 seconds--oh no! Hey, we didn't trip that guy! Another power play for them--I'll never survive this one--my arm is really aching--I'll never be able to react in time to their shots! STOP--LET GO--THINK. I've played all game, and I can't give up now--only 30 seconds to go--GET TOUGH!! They get control of the puck, and shoot again and again--I deflect the puck as fast as it comes--just hold on--the buzzer sounds--WE WON!!!

#7 DESENSITIZE

This exercise is designed to teach the athlete systematic desensitization procedures. The rationale for these procedures is discussed in the text of this paper. Systematic desensitization is an effective means of reducing fear of injury. In systematic desensitization, athletes are exposed to aversive stimuli. This exposure is performed over a varying period of time, and athletes are exposed to stimuli from the least anxiety producing to the most anxiety producing situations. Fear reduction is accomplished through pairing of anxiety competing responses (such as relaxation techniques) with graded exposure to aversive stimuli.

Systematic desensitization can be performed in three different ways. Exposure to aversive stimuli can be accomplished through imagery, with the individual visualizing the anxiety producing situation; through in vivo, or actual exposure, with the individual being exposed to anxiety producing situations in real life; or through a mixed approach, with the individual visualizing some situations, and actually experiencing others. In this exercise, we will deal with the use of systematic desensitization through the visualization technique.

The first step in systematic desensitization is formation of a fear hierarchy. A fear hierarchy is a ranked list of aversive stimuli ranging from least to most anxiety producing situations. The fear hierarchy can contain from 5 to 25 items, depending upon how extensive the athlete's fear is. It is very important that the fear hierarchy be personalized for each athlete who is experiencing fear of injury, as individuals are very different. Each athlete must decide what situations cause fear and anxiety, list these situations, and then rank this list from the least anxiety producing to the most anxiety producing. This list is now termed a fear hierarchy. The fear hierarchy should include all aspects in the description of each

situation, such as smell, feel, sound, distance from the feared object or situation, etc. Providing specifics about hierarchy situations makes them more realistic and, therefore, more beneficial in helping to reduce athletes' fears.

After the fear hierarchy is constructed, a fear thermometer should be applied to the hierarchy. A fear thermometer is a method of estimating the amount of anxiety that each situation creates. To apply the fear thermometer to the fear hierarchy, rate each situation on a scale of 0-100, with 0 representing a situation which produces no anxiety, and 100 representing the highest anxiety producing situation possible. After rating each situation, evaluate the fear hierarchy. There should be a maximum gap of 15 points between situations. If gaps of more than 15 points are evident, the athlete must think of more situations to fill that particular gap in fear producing situations. For example, if divers can only think of high anxiety situations, such as flipping and hitting the diving board, then they must think of lesser anxiety producing situations to fill the hierarchy, such as jumping off the board and flipping a dive with a retractable board, etc. It is important to remember that situations must be realistic, but that they can be experienced through imagery. Therefore, some of the situations can be experienced through imagery, and others through actual experience.

In this exercise, directions and a script have been prepared for athletes to transfer onto a cassette. Information for this script has been taken from Fensterheim and Bauer (1977).

Directions for a Systematic Desensitization Imagery Script

Athletes should take their fear hierarchy and list each item/situation on a separate index card. The cards should then be placed in sequence, with the least anxiety producing situation on the top card. Athletes should be familiar with and have practiced the relaxation exercise in exercise #9. When instructed in this script to visualize a pleasant scene, athletes should have one in mind, or use something like imagining the word "calm" spelled out in big letters in front of their face.

The initial part of the systematic desensitization script is an abbreviated version of a full relaxation exercise, and takes about 7 minutes to perform. The entire body is tensed as a unit, rather than in parts as in the full relaxation exercise. Set up the tape recorder so that it is within easy reach.

Desensitization Script

(Fensterheim & Bauer, 1977)

Lie down. Make sure you are comfortable. Be sure your tape recorder is within easy reach. Your arms and legs should be uncrossed and in comfortable positions. Your eyes should be closed. If stray thoughts enter your mind, tell yourself "STOP," and push them away so you can refocus on what you are doing.

Tighten your entire body all at once. Feel the tension build up in your body. Study the tension, feel where it is the tightest, and where the tension is the least. Put your toes together pigeon toed, with your heels slightly apart, and push your toes away from you. Feel it tighten your leg muscles. Tighten your legs, your thighs . . . tighten your buttocks . . . tighten your abdomen. Raise your arms from your shoulders, clench your fists, stiffen your elbows. Feel the tension in your arms. Squeeze your eyes shut . . . clench your teeth . . . feel the tension in your jaw . . . keep your face as tight as possible, arch your neck, point your chin to the ceiling. Hold the tension in your whole body . . . Hold it (about 7 seconds).

Now let that tension explode. Let your arms come back to your sides, put your chin down. Concentrate on the feeling of tension that is leaving your body (about 10 seconds).

Now check out the muscles in your legs and thighs . . . is there any tension? Take it a spot at a time and let it out, let it go (about 5 second pause). Relax the muscles of your abdomen and back . . . let the tension go (5 seconds). Feel the muscles in your fingers and arms . . . let the tension go. Let them feel pleasantly heavy (5 second pause). Relax the muscles of your face and jaw (5 seconds).

Now take a deep breath and hold it. Keep holding it (15-20 second pause). Now slowly let it out . . . (pause) . . . now breathe easily and

comfortably . . . the way you do when you are completely relaxed.

Now picture your pleasant scene. If you can't think of a scene, picture the word calm, C-A-L-M, calm. If your mind wanders, bring back your pleasant scene or the word calm. While you think of your pleasant scene, relax the muscles of your toes . . . let them go . . . relax the muscle of your legs . . . let any tension flow out . . . relax the muscles of your thighs, relax the muscles in your buttocks, let the tension go . . . remember your pleasant scene, the word calm, and relax the muscles of your abdomen . . . let them go . . . the muscles in your stomach . . . relax them, feel the tension go . . . relax your back, let it melt into the mattress, relax your chest . . . breathe easily and comfortably . . . imagine the pleasant scene, the word calm, and relax the muscles in your fingers, relax your hands and forearms . . . let them go . . . the muscles of your upper arms and shoulders . . . let them go . . . feel the tension flow out . . . the muscles between your shoulder blades, relax the muscles in your neck . . . feel your neck relax . . . your head lies limply on the pillow . . . your pleasant scene, the word calm . . . relax the muscles in your forehead and scalp, let them go . . . the muscles between your eyebrows, relax them . . . relax your eyelids, let them feel heavy . . . the muscles around your nose and mouth, the muscles in your jaw . . . relax them . . . let them go . . . your teeth slightly parted and your jaw hanging slack . . . relax the muscles around your mouth, your lips . . . keep imagining the pleasant scene, the word calm, check out your body to see if there is any tension left . . . take that tension a spot at a time . . . let it go . . .

Keep letting go . . . your whole body is calm and relaxed . . . calm and relaxed . . . calm and relaxed . . . calm and relaxed. Now check out your tensions. If you are relaxed, go on with this tape. If you are not

relaxed, start this tape from the beginning or discontinue at this point.

(5 second pause)

When I tell you to do so, turn off the tape machine, read the disturbing scene from the top card of your hierarchy, and then close your eyes and imagine that scene. At the very first sign of increasing tension, start the tape recorder again. Now do the scene (5 second pause).

Stop. Push that scene away. Take a deep breath through your mouth and hold it . . . hold it . . . hold it . . . Now comfortably let it out (10 second pause). Breathe easily and comfortably the way you do when you are in a deep sleep. Now imagine your pleasant scene from the relaxation exercise, or see the word calm . . . relax the muscles in your toes, let them go . . . the muscles in your legs . . . let them go . . . your thighs . . . let them go . . . keep imagining your pleasant scene, the word calm, and let your whole body get calm and relaxed, calm and relaxed . . . if you are not completely calm and relaxed now, turn off the tape recorder and just keep relaxing.

Again, you are going to read and imagine the scene on your card. Remember to turn the machine on at the first sign of tension. Go ahead (5 second pause). Stop. Switch off the scene . . . Take a deep breath through your mouth and hold it . . . hold it . . . hold it . . . Now like a big sigh, explosively let it out . . . breathe easily and comfortably . . . now focus on your pleasant scene or the word calm, relax your thighs . . . let them go. Relax the muscles in your buttocks . . . let them go . . . the muscles in your back . . . let them go. All the tension gone . . . calm and relaxed, calm and relaxed . . . calm and relaxed.

If you are relaxed now, turn off the machine and imagine your disturbing scene. Go ahead (5 second pause). Stop that scene, get it out of your mind . . . take a deep breath and hold it . . . hold it . . . hold it . . .

Now comfortably let it out. Breathe easily and comfortably, the way you do in a deep sleep . . . and zero in on your pleasant scene or the word calm. Think calm . . . Now relax the muscles of your abdomen . . . let them go . . . the muscles of your stomach . . . let them go . . . the tension flowing out . . . let your back melt into the mattress . . . relaxed . . . pleasant scene or calm . . . calm and relaxed . . . calm and relaxed . . . calm and relaxed. If you are relaxed now be sure you know which scene you will do now. Turn off the machine and do it. Go ahead (5 second pause). Stop that scene. Take a deep breath . . . in . . . and . . . out . . . breathe easily and comfortably. Imagine your pleasant scene, the word calm . . . relax the muscles in your finger, let them go . . . pleasant scene or calm . . . calm and relaxed . . . calm and relaxed . . . calm and relaxed . . .

Imagine your disturbing scene again. Remember to turn on the machine at the first sign of tension. Go ahead (5 second pause). Stop. Switch the scene in your mind. Take a deep breath and hold it . . . hold it. Now slowly let it out. Breathe easily and comfortably . . . imagine your pleasant scene or the word calm. Now relax the muscles of your shoulder blades . . . let them go . . . the muscles of your neck . . . your head lying limply on the pillow . . . pleasant scene or calm . . . calm and relaxed . . . calm and relaxed.

Check out that you are relaxed. Now again the scene you are working on. Go ahead (5 second pause). Stop that scene. Take a deep breath . . . in . . . and out . . . in . . . and out. Breathe easily and comfortably . . . imagine your pleasant scene or calm . . . relax the muscles in your forehead . . . let them go . . . the muscles between your eyebrows . . . your eyelids . . . relax them . . . let them feel heavy . . . pleasant scene or calm . . . calm and relaxed . . . calm and relaxed.

Be sure you are relaxed and alert. your scene again. Go ahead (5 second pause). Stop. Switch off that scene. A deep breath in and out, in and hold it . . . hold it . . . hold it . . . Now like a big sigh, let it out . . . breathe easily and comfortably. Imagine your pleasant scene or calm, and relax the muscles of your jaw . . . let it go . . . teeth slightly parted, jaw hanging slack . . . the muscles around your chin and mouth . . . relax them . . . pleasant scene or calm . . . calm and relaxed . . . calm and relaxed.

One last time--imagine your scene. Go ahead (5 second pause). Stop. A deep breath in and hold it. Now slowly let it out . . . breathe easily and comfortably the way you do in a deep sleep . . . if you feel tension anywhere, let it out. Imagine your pleasant scene or calm . . . feel for tension anywhere . . . take it a spot at a time and let it go . . . let it go . . . let your whole body feel calm and relaxed . . . calm and relaxed . . . calm and relaxed.

Now I will count from three to one. At the count of one, you'll open your eyes and sit up. You will be wide awake and alert, and relaxed. Three . . . two . . . one . . .

#8 RELAX

This exercise is designed to teach athletes how to modulate their level of physiological arousal. Through imagery, athletes can "get into" their experience and recreate their fear of injury. After they recreate the fear, relaxation techniques are utilized to reduce the level of physiological arousal. A "contract-relax" method of relaxation follows. Athletes can transfer this script onto a cassette, making sure to use a slow, calm voice. Soft music can be added to the cassette to aid in relaxation.

GENERAL RELAXATION INSTRUCTIONS

Begin by getting as comfortable as possible. Lie down or recline in a comfortable position. Visualize a pleasant scene in your mind, such as lying on the beach on a warm, sunny day. Feel the warm sand supporting your body. Feel the grittiness of the sand under your fingers. Feel the gentle wind blow across your body, gently caressing your skin. Concentrate on your right arm. Make a fist with your right hand, and tighten your arm--squeeze it as hard as you can--hold it. Feel the tension in your arm, feel the tension in all the muscles in your arm--hold it. Now relax. Feel the tension flow down your arm, flow down and out your hands and fingers. Feel how heavy and relaxed your arm is--it feels like you could not lift it--it is so heavy and relaxed. Now tighten your arm again--feel the tension in your arm, all the way up through your shoulder. Hold that tension--concentrate on how it feels. Now relax. Feel the tension flow out of your arm. Feel the tension flow down through your shoulder, down through your forearm, and down and out through your hand and fingers. Breathe deeply and slowly. Now concentrate on your left arm. Make a fist with your left hand--feel the tension all through your arm. Squeeze as hard as you can--tighter. Feel the muscles start to ache--now relax. Feel the tension flow down your arm. Feel your arm relax as the tension slips down from your shoulder, down your arm, and down and out through your hand and fingers. Your arm feels relaxed. Now make a fist again--tighten up your whole arm. Feel the tension in your arm--all the way up through your shoulder. Hold that tension--now relax. Feel the tension flowing down your arm and out through your hand. Feel how relaxed and heavy your arms feel. Both your arms feel very relaxed. Concentrate on your arms--search out for any remaining spots of tension and concentrate on relaxing them--relax. Breathe deeply and slowly. Both of your arms

are very, very relaxed.

Now concentrate on your right leg. Tighten your right leg. Feel the tension in your leg--all the way from your toes up through your calf--up through your knee--up through your thigh--feel that tension. Hold that tension. Now relax. Feel your leg relax. Feel the tension flow down through your right leg--feel it flow down and out through your right foot. Your leg feels very relaxed. Tighten your right leg again--feel the tension in your leg--feel the tension all through your leg--now relax. Feel the tension flow down through your thigh, down through your knee, down through your calf, and down and out through your toes. Feel how relaxed your leg feels. Now tighten your left leg. Feel the tension in your left leg. Feel the tension flow through your leg--feel your muscles ache with the tightness of the tension--squeeze all the muscles as tightly as possible. Relax. Feel the tension flow down and out through your left leg. Feel all the muscles in your left leg relax. Tighten your left leg again. Feel the tension, feel the tightness in your left leg. Hold the tension in your leg. Now relax. Feel the tension flow down through your thigh, down through your knee, down through your calf, and down and out through your toes. Your left leg feels very relaxed. Feel how relaxed your legs feel. Feel how relaxed your arms feel. Your arms and legs feel very relaxed and heavy. All the tension is gone from your arms and legs. Breathe slowly and deeply. Your arms and legs feel very heavy.

Now concentrate on your lower back. Tighten your lower back as tight as you can--squeeze your buttocks together as tightly as possible--feel the tension in your lower back--hold it. Now relax. Feel the tension flow down through your back and buttocks. Feel the tension leave your back.

Now tighten your lower back again. Hold the tension in the muscles of your lower back. Squeeze your buttocks together. Feel your back ache with the tightness--hold that tightness and tension. Now relax. Feel the tension flow out of your lower back. Feel the tension release, and the muscles start to loosen. Your lower back feels relaxed. Your arms and legs feel relaxed. Now concentrate on your upper back and shoulders. Scrunch your shoulders up around your ears. Feel the tension in your upper back and in your shoulders. Hold that tension--relax. Feel the tension flow down through your back and out--your back is relaxed. Tighten your upper back and shoulders again. Feel the tension in your upper back and shoulders. Scrunch your shoulders up and feel the tightness--hold that tension. Now relax. Feel the tension flow through your upper back and shoulders. Feel how relaxed your upper back and shoulders feel. Your whole back feels very relaxed.

Concentrate on your face. Scrunch up all the muscles in your face--feel the tension in your facial muscles. Your face is all scrunched up. Hold the tightness in your face--now relax. Feel the tension flow out of the muscles in your face. Your face feels relaxed. Now tighten up your face again--scrunch up your eyebrows, purse your lips, and feel the tightness throughout your entire face. Hold that tightness. Now relax. Feel the tightness flow out of your face, your facial muscles are relaxing. Your face feels very relaxed. Your neck and shoulders feel very relaxed. Your upper and lower back feel very relaxed. Your legs feel very relaxed, your arms feel very relaxed. Feel the tension flow out of your body--your whole body feels very relaxed and heavy. Feel for any tension left in your body--concentrate on releasing that tension. Your body is very relaxed. Breathe slowly and deeply.

Stay where you are for a while and enjoy the feeling of your entire

body being relaxed. After you enjoy the feeling of relaxation for a while, slowly get up and return to your activities. You feel very relaxed and refreshed.

#9 SUCCESS

This exercise is designed to increase competence. Success experiences are ensured through lead-ups and other progressive experiences. In diving, for example, many divers fear reverse dives. In "success," the diver would begin by jumping off the board. The diver would obviously experience success at that level of the skill. The diver would then progress to "fanny busters," which involve jumping off the side of the pool and forming a v-seat. Divers can perform this lead-up until they are comfortable, and experience success at this stage. After "fanny busters," divers can progress to the board and perform "football punts," where they run to the end of the board and pretend they are punting a football as they reach the end of the board. This lead-up helps in learning body rotation. Divers can experience success at this skill, and gain confidence that they will not hit the diving board when performing a reverse dive. When the athletes are comfortable at this stage, they can progress to an actual reverse dive.

#10 APPROACH

This exercise is designed to increase approach behavior. Approach behavior to the feared activity is rewarded in this exercise. Rewards can be related or non-related to the activity. An activity related reward might be if a fearful diver performs a certain stage of the feared dive, he/she is exempt from one set of toe raises during strengthening. A non-activity related reward might be if the fearful diver performs a certain stage of the feared dive, he/she might get a predetermined number of chips, which add up towards a coupon for an ice cream sundae or other goodie!

Use of group support is very beneficial. The coach can talk to the team as a whole and invoke support and insight from teammates. Others on the team can help in rewarding attempts and in keeping the individual athlete "on track" and not spending time on avoidance behavior. In this exercise, athletes will master lead-ups and use slow progressions towards performing the feared skill.

#11 TAKE A RISK

This exercise is designed to increase components of self-confidence and modify the behavior/avoidance component of fear of injury. One day each week during the season, the athletes add a small new component to their routine or activity. This is designed to add a new dimension and a very small risk into the activity. The added component can be related or unrelated to the sports performance in competition, but merely adds another item to master. The component can be as simple as adding a twist to a dive, a handclap, or other simple skills. The point is to add a small enough skill to be easily mastered. This introduces a small risk, enabling the athlete to add a risk, master the risk, and build feelings of competence, control, commitment, and increase approach behavior to taking risks.

DO'S AND DON'TS

DO'S

- DO end each practice with a successful experience.
- DO reward attempts towards a defined goal (reducing fear of injury).
- DO encourage athletes to share their feelings as well as performance.
- DO utilize the support of teammates.
- DO learn well or overlearn (slightly) lead-ups to the feared activity.
- DO try to create a successful and supportive environment.
- DO encourage athletes to master new skills.
- DO be specific with praise and rewards.
- DO be consistent with praise and rewards.
- DO give more positive than negative feedback.
- DO encourage athletes to use failures as information, not evaluation.
- DO set goals (by next week, I will attempt a cartwheel on the beam).

DON'T

- DON'T confuse fear of injury with a lack of effort or achievement.
- DON'T reward time wasted stalling on already well-learned lead-ups and skills.
- DON'T be sarcastic or ridicule athletes.
- DON'T ignore the problem and have the athlete quit rather than conquer their fear--in that situation both the athlete and the team lose.
- DON'T force athletes to perform skills they are not yet competent to perform.
- DON'T let the athlete avoid working towards reducing their fear of injury.
- DON'T point out bad examples unless you have a remedy for them.
- DON'T address errors unless they are constant errors.

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