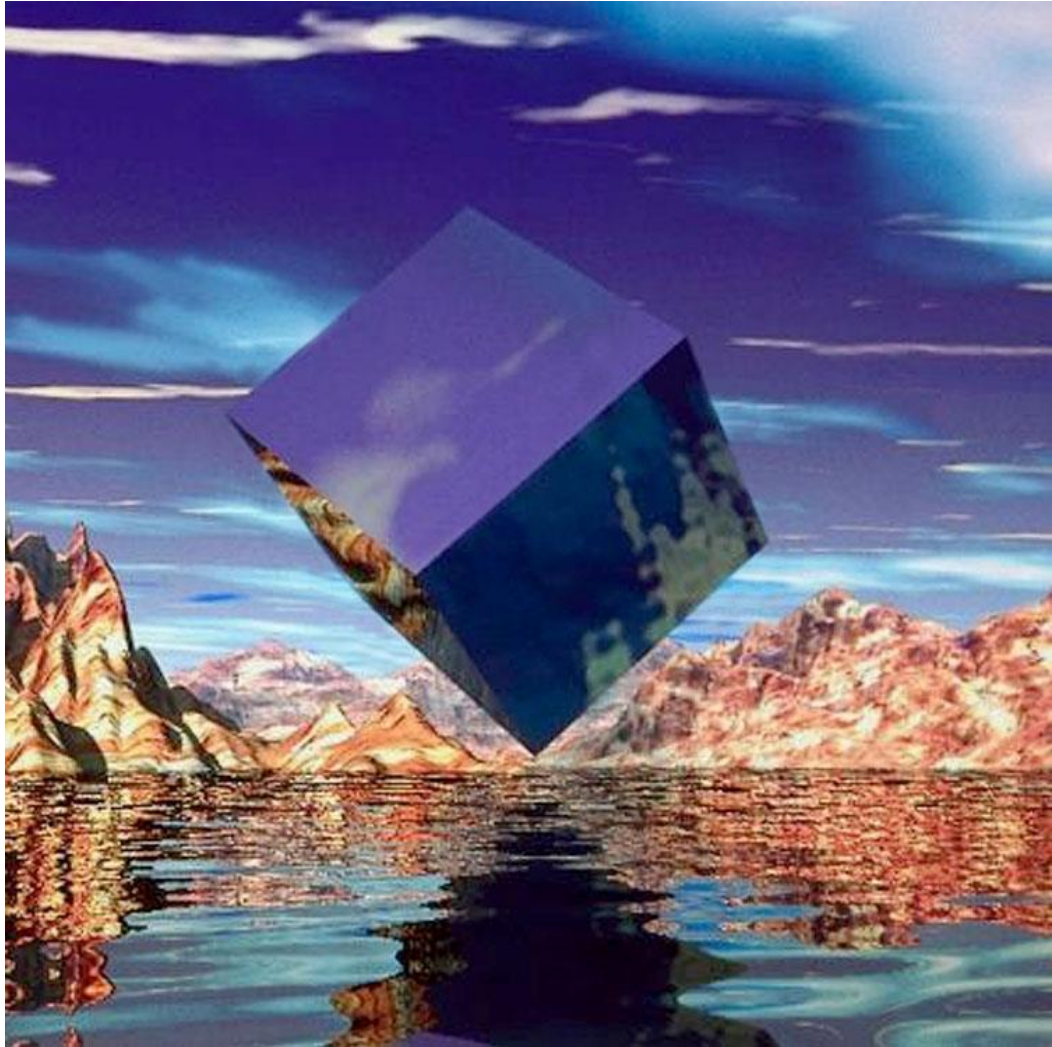


MENTAL SPORTS TRAINING: A PRACTICAL GUIDE TO ATHLETIC PERFORMANCE ENGINEERING



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MENTAL SPORTS TRAINING

**A PRACTICAL GUIDE TO ATHLETIC PERFORMANCE
ENGINEERING THROUGH PSYCHOPHYSICAL SELF-REGULATION**

**SPORTS PSYCHOLOGY
PSYCHOEDUCATIONAL SERIES VOLUME 1**

BY

POLYMATHESE

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“We can act as *if* there were a God; feel as *if* we were free; consider Nature as *if* she were full of special designs; lay plans as *if* we were to be immortal; and we find then that these words do make a genuine difference in our moral life.”

- **William James**

The Varieties of Religious Experience: A Study in Human Nature (1902)
Lecture III: *The Reality of the Unseen*

“Most people live, whether physically, intellectually or morally, in a very restricted circle of their potential being. They *make use of* a very small portion of their possible consciousness, and of their soul's resources in general, much like a man who, out of his whole bodily organism, should get into a habit of using and moving only his little finger. Great emergencies and crises show us how much greater our vital resources are than we had supposed.”

- **William James**

The Letters of William James (1920)
Letter to W. Lutoslawski (May 6, 1906)

“First, you know, a new theory is attacked as absurd; then it is admitted to be true, but obvious and insignificant; finally it is seen to be so important that its adversaries claim that they themselves discovered it. “

- **William James**

Pragmatism: A New Name for Some Old Ways of Thinking (1907)
Lecture VI: *Pragmatism's Conception of Truth*

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Chapter 1: Overview of the Mental Sports Training Program

Historical background

This program is specifically designed to help you learn the psychophysical skills that will enable you to enhance your athletic performance. The techniques have been carefully chosen based on 240 years of clinical and experimental research by thousands of doctors, nurses, psychologists, psychiatrists, students, and research scientists.

The program combines elements from sports psychology, cognitive-behavioral psychology, eastern and western meditation techniques, and the latest research in neuroscience and stress management.¹⁻⁴

Although the research underlying the program is extensive, the program itself has been created to be practical, easy to understand, and easy to apply.

Comprehensive Timeline of the Training Program

This program is organized to introduce you to each instructional element in a specific, structured sequence for a period of two weeks. After the two week initial training period, you will be able to design your own daily program from the instructional elements that you find most useful, most effective, or most appealing. Following is a comprehensive timeline of the training sequence and the objectives for each training element.

<u>Day</u>	<u>Activity</u>	<u>Estimated Time Required</u>
Day 1	1. Read Chapter 2 of the manual, <u>Introduction to Psychoeducation and Self-Regulation</u> , to become familiar with the primary concepts which underlie the practice of Mental Sports Training.	10 minutes
	2. Complete the <u>Handwriting Exercise</u> in Chapter 3 of the manual .	15 minutes
Day 2	1. Read Chapter 5, Sections 1-11: <u>Eye Relaxation Exercises</u> . This is the Abbreviated Eye Relaxation Exercise Routine, which you can use as needed	15 minutes

	throughout the day.	
	2. Watch Video, Read Introduction and Chapter 1: <u>Eye Relaxation Exercises</u> . Perform the Eye Relaxation Exercises [ERE] as you watch the video, pausing the video as necessary. This is the Complete Eye Relaxation Exercise Routine. You can use it when time permits, although I recommend performing it once a day in the morning before work or in the evening before sleep.	30 minutes
Day 3	1. Perform your Eye Relaxation Exercise Routine [Complete or Abbreviated] in the morning and as desired throughout the day.	2 – 15 minutes
	2. Read Chapter 5, Sections 12 and 13: <u>Very Abbreviated Progressive Muscular Relaxation and Focused Neuromuscular Relaxation</u> .	10 minutes
	3. Watch Video and Read Chapter 2: <u>Very Abbreviated Progressive Muscular Relaxation [VAPMR]</u> . Perform VAPMR as you watch the Video, pausing the Video as necessary.	30 minutes
Day 4	1. Perform your Eye Relaxation Exercise Routine [Complete or Abbreviated] in the morning and as desired throughout the day.	2 – 15 minutes
	2. Listen to the Audio CD, Track 2, <u>Focused Neuromuscular Relaxation-Warmth [FNMR-W]</u> . This is a variation of FNMR which focuses on feelings of warmth in your muscles to trigger and deepen your state of relaxation.	15 minutes
Day 5	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once or twice during the day.	2 – 15 minutes
	2. Listen to Audio CD, Track 3, <u>Focused Neuromuscular Relaxation-Breathing [FNMR-B]</u> . This is a variation on FNMR which focuses on your breathing to trigger and deepen your state of relaxation.	15 minutes
Day 6	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once or twice during the day.	2 – 15 minutes
	2. Read Chapter 4: <u>Basic Neuroscience – Altered States of Consciousness</u> and Chapter 7: <u>Psychophysical State Management</u> . Chapter 4 introduces you to the theory behind hypnotic trances and Chapter 7 describes the five psychophysical state	20 minutes

	management exercises that are included with this program.	
	3. Listen to the Audio CD, Track 5: <u>Learning to Ride</u> . This is a trancework program for coordinating conscious and unconscious processes and learning to trust your unconscious deep structures. Please refer to Chapter 7 for more information on this exercise.	15 minutes
Day 7	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once or twice during the day.	2 – 15 minutes
	2. Read Chapter 8: <u>Affirmations</u> and follow the instructions for creating your own Affirmations.	15 minutes
	3. Listen to Audio CD Track 6: <u>Invisible Barrier</u> . This is a trancework program for overcoming mental and emotional obstacles. Please refer to Chapter 7 for more information on this exercise.	15 – 20 minutes
Day 8	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once or twice during the day.	2 – 15 minutes
	2. Perform your Daily Affirmations exercise at least once.	2 minutes
	3. Listen to Audio CD Track 7: <u>Self Hypnosis Training</u> . This is a trancework program which will train you to enter into an alpha state at will. Please refer to Chapter 7 for more information on this exercise.	15 – 20 minutes
Day 9	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once or twice during the day.	2 – 15 minutes
	2. Perform your Daily Affirmations exercise at least once.	2 minutes
	3. Read Chapter 9: <u>Self-Regulation Through Humor</u> . Begin collecting ideas and materials for your Training with Humor project – find videos of your favorite comedies. You may watch these whenever you want, and especially during any physical recovery period, when the comedies will help you to recover more rapidly.	15 – 20 minutes
Day 10	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once during the day, and select Learning to Ride, Invisible Barriers, or Self-Hypnosis Training to listen to once in the evening.	2 – 20 minutes
	2. Perform your Daily Affirmations exercise at least	2 minutes

	once.	
	3. Read the first 3 sections of Chapter 6: <u>Guided Imagery and Visualization Exercises</u> , and then perform Exercise 1: <u>Visualizing a Simple Geometric Shape</u> and Exercise 2: <u>Visualizing Simple Geometric Shapes and Colors</u> . Exercise 2 has audio instructions on track 4 of the Audio CD.	30 minutes
Day 11	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once during the day, and select Learning to Ride, Invisible Barriers, or Self-Hypnosis Training to listen to once in the evening.	2 – 20 minutes
	2. Perform your Daily Affirmations exercise at least once.	2 minutes
	3. Read the fourth and fifth sections of Chapter 6: <u>Guided Imagery and Visualization Exercises</u> , and then perform Exercise 3: <u>Visualizing Three Dimensional Objects</u> and Exercise 4: <u>Visualizing Your Present Body</u> .	30 minutes
Day 12	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once during the day, and select Learning to Ride, Invisible Barriers, or Self-Hypnosis Training to listen to once in the evening.	2 – 20 minutes
	2. Perform your Daily Affirmations exercise at least once.	2 minutes
	3. Read the fourth and fifth sections of Chapter 6: <u>Guided Imagery and Visualization Exercises</u> , and then perform Exercise 3: <u>Visualizing Three Dimensional Objects</u> and Exercise 4: <u>Visualizing Your Perfect Body, Sub-Sections 1-2: Present Body and Perfect Body Exercises</u> .	30 minutes
Day 13	1. Perform ERE-A, ERE-C, VAPMR, FNMR-W, or FNMR-B once during the day, and select Learning to Ride, Invisible Barriers, or Self-Hypnosis Training to listen to once in the evening.	2 – 20 minutes
	2. Perform your Daily Affirmations exercise at least once.	2 minutes
	3. Finish reading Chapter 6: <u>Guided Imagery and Visualization Exercises</u> , and then perform Exercise 4: <u>Visualizing Your Perfect Body, Sub-Section 3: <u>Visualizing Your Healthy Body</u></u> .	15 – 20 minutes

Day 14 and beyond	1. Use any of the techniques that you have learned and begin designing your own daily, weekly, or monthly routine. You will be guided by your intuitions about which techniques to use.	Variable
	2. Listen to Audio CD Track 7: <u>Basic Pain Management</u> as often as you need to. It will help you learn how to reduce and even eliminate sensations of pain and discomfort for various periods of time.	20 minutes

Chapter 2: Introduction to Psychoeducation and Self-Regulation

Objectives for this chapter

When you have completed studying this section, you will be able to define and to describe the following terms:

- psychotherapy
- psychophysical education
- self-regulation
- psychophysical state management

You will also have a basic understanding of how these procedures, practices, and tools will assist you in learning how to manage and to control your state from moment to moment, and help you to prepare for your surgical procedure.

What is psychotherapy?

‘Psychotherapy’ is a term composed of two Greek words: ‘psyche’ and ‘therapeia.’ Psyche was the Greek goddess of the soul, and the word ‘psyche’ meant “mind, breath, and animation, or living force.” ‘Therapeia’ meant ‘healing, taking care of, or tending.’ Psychotherapy, therefore, is the science and practice of taking care of the soul or, in modern terms, taking care of the mind. ⁵

Psychotherapy at the beginning of the 20th century was limited to psychoanalysis. In the 100 years since then, however, the number of different psychotherapeutic techniques and methods has expanded to about 300. ⁶

This program will train you in several simple, effective techniques for becoming more aware of your own abilities, capacities, and skills in general, and then combine those skills, abilities, and capacities to provide you with a simple, effective method of managing your internal states and experiences.

What is psychoeducation?

Education, in general, is the process of teaching and learning to create a permanent change in understanding and behavior.

Psychoeducation is the process of teaching and learning more about the way the human mind functions. Psychoeducation can provide instruction in theory (such as how the mind is structured), method (such as how to proceed with an analysis of the causes of a distressing behavior or mood), or technique (such as how to use a rubber band for simple aversive conditioning to break a habit).

Physical education is the process of teaching and learning more about the way the human body functions. Physical education encompasses knowledge from anatomy and biochemistry to techniques of lifting weights, stretching, or relaxing the muscles.

Psychophysical education is a combination of psycho- and physical education. All psychotherapeutic systems rely on psychophysical education to achieve much of their healing results.

What is self-regulation?

'Self-regulation' in general refers to the ability of intelligent cybernetic systems to deliberately modify their operating state using feedback pathways to control internal processes and responses. A home thermostat is a simple example of the process of self-regulation. The thermostat senses the ambient temperature in the house and, when the temperature deviates from a specified range, this information is fed back into the operating program of the thermostat and initiates a cooling or heating cycle.

Human beings, of course, are infinitely more complex than any man-made cybernetic system. However, the process of deliberate feedback to initiate internal operating changes is essentially the same.

There are five types of self-regulation programs that you will learn in this course:

1. Self-regulation through neuromuscular relaxation, where you will learn how to modify your internal state by relaxing your muscles and your nervous system.
2. Self-regulation through visualization and guided imagery, where you will learn how to modify your behaviors by using your imagination and your ability to visualize objects, relationships, and processes.
3. Self-regulation through psychophysical state management, where you will learn how to recognize and modify your psychophysical state based on your brain-wave patterns and breathing rhythms.

4. Self-regulation through speech, where you will learn how to modify your behaviors through speech in the form of self-talk and affirmations.
5. Self-regulation through humor, where you will learn how to modify your emotional state through humor.

What is psychophysical state management?

The term 'psychophysical state management' refers to a set of structured procedures and techniques for altering one's awareness, altering one's brain-wave patterns, and altering one's psycho-physiological state. The result of these techniques is an altered psycho-physiological state which has traditionally been called a trance state. Trance states are characterized by a feeling of relaxed, comfortable well-being, an enhanced ability to imagine and to visualize, and an increase in the ability of the person to change his or her ways of thinking, feeling, and responding.

Although trance states are often portrayed as mystical or mysterious, they are natural phenomena, and trance states occur continuously throughout the day. For example, if you are reading a favorite novel or watching a favorite movie, you will be transported by your imagination into the fictional world of the novel or film, and you will lose touch with normal, everyday 'reality.' Likewise, if you are thinking about the rest of your day while stopped at a stoplight, you may also lose track of the 'real' world around you, and not notice when the light changes green. These are all simple, everyday trance states. Psychophysical state management training is the means by which we become aware of the trance states that occur naturally and the techniques to utilize these trance states for our own benefit.

Chapter 3: A Demonstration of Unconscious Processes

Objectives for this chapter

When you have completed studying this section, you will be able to define and describe the following terms:

1. Conscious Mind (Surface Structure Experience)
2. Unconscious Mind (Deep Structure Architecture)

A Simple Handwriting Demonstration

One of the most powerful psychological distinctions that we can make is the functional distinction between our conscious minds and our unconscious minds. Functionally, consciousness is everything that we are aware of right this moment. Everything of which we are presently unaware is, by definition, unconscious.

For example, you may be sitting in a place where there are sounds in the background as you read these words. If you were focused on the words, you may have been momentarily unaware of those sounds (until you were reminded of them just now...!). Likewise, you may have been unaware of the sensation of the paper on your fingertips, or the pressure of your weight pressing upon your lower back as you sit in the chair, or recline on the sofa. These sensations are in the realm of your Unconscious Mind during the time before (and after) you bring them into conscious awareness.

The operation of your Unconscious Mind [and its deep structures] can be demonstrated elegantly and simply.⁷ Please follow these steps:

1. Get a piece of writing paper and a pencil or pen – use whichever writing instrument you normally use to sign your signature on checks, bills, and letters.
2. At the top of the paper, sign your name as you normally sign it. Your actions will be easy, smooth, and rapid, and the signature will be characteristic of the way you write. You will use your dominant hand to make this signature – your right hand if you are right-handed, your left hand if you are left-handed.

3. Now, just below the first signature, write your name like you did when you were a child learning cursive writing for the first time (usually second or third grade). Take your time and form all the letters as carefully as you can. Use your dominant hand for this signature, too.
4. For the third signature in this series, switch hands. If your dominant hand is your right hand, use your left hand, and *vice versa* for lefthanders. Take your time with this signature – pretend you really are learning how to write your name for the first time!
5. Finally, just below the third signature, use your non-dominant hand and write your signature as fast as you can. Try to write it as fast as you do with your dominant hand (like signature #1).
6. The following chart will explain the results of this demonstration:

Signature Sample	Conscious or Unconscious	Competency Level
1: Dominant hand, normal signature	Unconscious: free-flowing, no deliberation, rapid, unaware of the movements of the hand, wrist, fingers.	Unconscious competence – high level competence requiring no conscious direction or deliberation.
2. Dominant hand, careful signature	Conscious: deliberate, slow, careful. You are fully aware of each movement.	Conscious competence – next level competence directed by conscious mind.
3. Non-dominant hand, careful signature	Conscious: deliberate, slow, extremely careful – you are even more fully aware of the movements and sensations in your non-dominant hand.	Conscious incompetence – the conscious mind doesn't know how to perform this task yet, so it is slow going and awkward. Practice would make it easier.
4. Non-dominant hand, rapid signature	Unconscious: free-flowing, but sloppy, little awareness of the sensations in the hand except for a feeling of awkwardness.	Unconscious incompetence – not even the unconscious mind has developed the skills to perform this task yet. Practice for a few weeks would lead to unconscious competence and all signatures would be very good

Your Unconscious Mind is the repository of all of your learning, habits, and skills. You walk, talk, eat, drive, read, listen, catch a baseball, play racquetball, shoot baskets, thread needles, and play cards without ever having to think about the complex movements and thoughts that are required to perform these activities. Your Unconscious Mind is one of the great resources available to you for living more comfortably and managing stress.

Chapter 4: Basic Neuroscience: Altered States of Consciousness

Objectives for this chapter

When you have completed studying this section, you will be able to define and to describe the following terms:

- Central nervous system (CNS)
- Electroencephalogram (EEG)
- Brain wave patterns (Gamma, Beta, Alpha, Theta, Delta)
- Synchronization
- Desynchronization
- Altered state
- Trance state
- Mirror Neurons
- Brodmann's Cytoarchitectural Map of the Brain
- Behavioral Engineering

You will also be introduced to some of the history of modern neuroscience.

Theoretical Neuroscience: The EEG and Brain Wave Patterns

The structure of living beings can be analyzed and described in various ways depending upon the objectives of the analysis and the analytic techniques that are employed. Anatomically, reptiles, birds, and mammals (including human beings) possess two separate but interdependent structures, which have classically been denoted by the rather broad terms 'body' and 'nervous system.'

The body is composed of the skeleton, the muscles, the ligaments, the organs, the blood, the lymphatic fluid, and so on. The central nervous system (CNS) is composed of the brain, the spinal cord, and the peripheral nerves that reach to all parts of the body.

Our understanding of the way in which the CNS functions was advanced considerably during the 18th century. Luigi Galvani (1737-1798) an Italian physician, anatomist, and biologist introduced the possibility that information in the CNS was electrically transmitted.⁸ Around 1870, two German physicians, Gustav Fritsch and Eduard

Hitzig, demonstrated that Galvani was correct by experimenting on Prussian soldiers who had suffered severe head injuries on the battlefield. Fritsch and Hitzig were able to induce movement in the muscles of the soldiers by electrically stimulating exposed areas of the brain which we now call the motor cortex.⁹

This rather gruesome demonstration was enough to prove that Galvani's conjecture was probably true, but it wasn't until 1926 that Lord E.D. Adrian actually measured the nature of the electrical impulses within nerve fibers. Following Lord Adrian's discoveries, a device called an electroencephalograph (EEG) was constructed which could measure the global electrical activity in the brain using several electrodes that were placed around the circumference of the skull of the experimental subjects.¹⁰

In 1929, using a prototype EEG machine, Hans Berger, a German psychiatrist, catalogued the brain waves that were recorded by the EEG. He noted that when people were resting with their eyes closed their brain waves went up and down in long, slow, steady waves, with a frequency of about 10 cycles per second. When they opened their eyes and focused on the world at large their brain waves became shorter and faster with a frequency of about 25 cycles per second. Dr. Berger called the slow wave rhythm the **alpha rhythm**, and he called the faster wave rhythm the **beta rhythm**. In addition to the difference in frequency and amplitude, Dr. Berger also noticed that the beta rhythm exhibited a rougher, spikier appearance on the EEG graph. This phenomenon is called **desynchronization**, and it indicates that the millions of neurons which are producing the beta rhythm are firing more independently of one another than they are when they are in an alpha state. Desynchronization indicates that the CNS is processing large amounts of information.¹¹

Currently we recognize five brain wave patterns (refer to Table 4.1 – Simplified Brain Wave State Diagram):¹²

1. **Delta rhythm:** The slowest rhythm of the brain, with a frequency between 0.5 and 3.0 hertz (cycles per second, abbreviated as Hz). Delta rhythms accompany the slow wave sleep cycles when the body is repairing itself and the subject is in deep sleep. Cybernetic regulation of the organism is controlled by the basal ganglia of the brain and is outside the direct control of the subject.

2. **Theta rhythm:** The next slowest rhythm of the brain, with a frequency between 4 and 7 Hz. Theta rhythms are present during REM sleep (Rapid Eye Movement), and indicate that the subject is dreaming. Theta rhythms are also present in deep meditation states. Cybernetic regulation of the organism is controlled by the hippocampus and is outside the direct control of the subject.
3. **Alpha rhythm:** This rhythm is the primary rhythm of the brain, and indicates that the subject is resting comfortably while still being aware of the environment. Alpha rhythms have a frequency from 8 to 12 Hz. Alpha rhythms accompany relaxation, meditation, guided visualization, and hypnosis. Cybernetic regulation of the organism is controlled by imagery and visualization, and can be placed under the direct control of the subject.
4. **Beta rhythm:** This rhythm (13-30 Hz) indicates that the subject is wide awake and processing information from the environment. It is characteristic of the subject's 'normal' waking state. Cybernetic regulation of the organism is controlled by speech, and can be placed under the direct control of the subject.
5. **Gamma rhythm:** This rhythm was researched recently (circa 1990), and indicates that the subject is engaged in high-level creative thinking. Some studies suggest that certain 40+ Hz frequencies allow the brain to bind the flow of information in widespread areas of the brain. Subjectively, this process is experienced as a feeling of psychological and perceptual coherence. Cybernetic regulation of the organism is controlled by the interaction of the nervous system and the environment. Because this state results in ego transcendence, the subject is unable to assert direct control over the organism. However, because the processing speed of the nervous system is greatly enhanced due to the synchronization effect, direct control by the subject is unnecessary, and the organism responds to

environmental stimuli in a natural, organic, efficient, and ecological manner.

Applied Neuroscience: What Is an Altered State?

Now that we know about the different brain wave patterns we can begin to construct a useful, measurable definition of an 'altered state.' Classically, science has recognized only two distinct 'states' of consciousness: waking and sleeping. Now we can recognize and describe at least five distinct 'states' of consciousness, each state corresponding with one of the brain wave rhythms as measured by the EEG. An '**altered state**,' therefore, is *a change in the electrical properties of the CNS, as measured by a device such as an EEG, and reflected by a change in the underlying electrical rhythms of the brain.*

Applying this definition to our everyday experience it becomes clear that we move from one state of consciousness to another continuously throughout the day. Here is a map of a typical day's activities and the corresponding brain wave states:

1. 6:00 am - Arise: Move into a low beta state as you wake up and start moving around.
2. 7:00 am – Traffic jam: Move into a high beta state (agitation and anger).
3. 8:00 am – Work: Mid-range beta state (60-80 on Figure 1.1) as you answer emails, meet colleagues, discuss projects, etc.
4. 2:00 pm - Concentrating on creative elements of a project: Gamma state.
5. 4:00 pm – Disagreement with colleague: High beta state.
6. 6:00 pm – Play your best game of racquetball [basketball, football, billiards, soccer, etc.] ever. You are calm, focused, energized, and feel like every move you make is almost mystical: Gamma state.
7. 10:00 pm – Sleep:
 - First move from a beta state down into a high alpha state where you feel more relaxed, but are still aware of your environment. This is called a 'hypnagogic state.'
 - Next move into a theta state and begin the first dream cycle of the evening.

- Move from theta into delta after about 90 minutes or so.
 - Move back into theta for another dream cycle.
 - Repeat the oscillation from theta-delta-theta throughout the night.
 - As morning approaches, move from theta into alpha. You may become aware of your environment just before you wake up. This is called a 'hypnopompic state.'
8. 7:00 am – Arise and repeat the basic cycles.

Hypnosis, guided visualization, meditation, chanting, mantra, mudra, and other forms of mental or spiritual exercise all have as a primary goal the creation, extension, and direction of an alpha or gamma state. And remember that the easiest way to alter your state, as Dr. Berger discovered, is simply to CLOSE YOUR EYES! This automatically generates an alpha state.

[illegible]

			Feelings	neural functions. All CNS neurons are firing at the same rate with the same rhythm.				
	40	Increased 'Suggestibility'	Passive Awareness					
	35	Passive Awareness	Numb, Quiet					
	30	Total Sensory Withdrawal	Deep Relaxation					
	25	Low Alpha State	Complete Passivity					
Theta Θ (4-7 cps)	20	Drowsiness	Unaware	De- synchronization as various functional subunits go offline. Hippocampus very active – PGO spikes.	Ego Passive	Limbic Feedback Regulation Through Dreaming		
	15	Beginning Unconsciousness	Unaware					
	10	Unconsciousness	Unconscious					
Delta Δ (.05-3.0 cps)	5	Deep Sleep State	Deep Sleep State	Non- synchronization as neocortex rests during slow- wave sleep cycle.	Ego Inactive	Neuro- Somatic Feedback - Hormonal Regulation		
	0	Baseline	Baseline					

Table 4.1 - Simplified Brain Wave State Diagram

Chapter 5: Self-Regulation Through Relaxation

Objectives for this chapter

When you have completed studying this section, you will be able to define and describe the following terms:

1. Eye Relaxation Techniques
2. Tension
3. Relaxation
4. Very Abbreviated Progressive Muscular Relaxation
5. Focused Neuro-Muscular Relaxation

In addition, you will learn several powerful methods of relaxing at will.

Eye Relaxation Exercises

Overview – What You Will Learn In This Module

This module will train you to relax and strengthen your eyes as the first step in total relaxation. You will learn a little bit about bio-electrical energy and the meridians through which it travels. You will also learn the 6-step eye relaxation exercise routine.

Section 1 – Trigger-Point Massage Therapy

Trigger-points are small areas of muscle that have become tightly contracted, diminishing the blood and oxygen flow to the muscles and creating areas of sensitivity and pain that may be near the trigger-point or geographically distant. Trigger-points can create areas of pain and sensitivity distant from their location due to reflected and refracted pain mechanisms. The Eye Relaxation Exercises massage the trigger-point areas around the eyes in order to relieve the tension in and around the trigger-point areas.^{13,14}

Section 2 – Brief History of the Acupressure and Palming Eye Exercises

This set of Eye Relaxation Exercises utilizes acupressure to stimulate the trigger-points and bring blood, nutrients, oxygen, and bio-energy to the eyes. The first four Eye Relaxation Exercises that you will be learning were developed during the 1940's and

instituted in 1949 to combat an increase in visual disturbances, primarily myopia (nearsightedness), that the Chinese people were experiencing. The Chinese medical community created a simple, four-step program that could be practiced in about 5-10 minutes. The incidence of visual disturbances was reduced by a significant margin in the first year following its introduction, and that trend still continues.¹⁵ A longer, more complete, video version of these exercises is included on the DVD, Chapter 1.

Section 3 – Benefits From These Exercises

It is important to begin our relaxation routines with the eyes because, even though the muscles in the eyes are very small, they require the same amount of bio-energy to operate as the large muscles in our thighs (the quadriceps and hamstrings). This is because the eyes are unique among the organs of our body; they are direct extensions of the brain, and the visual data is delivered directly to the visual cortex of the brain without any mediation by other nervous system or brain functions. Since the eyes are connected directly to the brain, they require an enormous amount of bio-energy to function. By relaxing the eyes first, we will therefore make it easier for us to relax the rest of the nervous system and the larger muscle groups of the body. In addition to these global and systemic benefits, the eyes themselves will benefit from these exercises. You may discover that your eyes feel more youthful, that your vision improves, and that any feelings of eyestrain and photophobia that you may experience are reduced rapidly, and ultimately eliminated.

Section 4 – Basic Anatomy of the Face (Figure 5.1)

The first four exercises will be performed on five specific acupressure points which relate directly to named points on the skull.¹⁶ These five skeletal points are:

1. The Supraorbital Foramina

- The supraorbital foramina are located just under the tip of the eyebrows just above the nasal side of the eyes. The term ‘supraorbital foramina’ is composed of three parts:

1. ‘Supra’ means ‘above.’

2. 'Orbital' refers to the orbit of the eye, also called the 'eye socket.'
3. 'Foramina' (pronounced "fore-ram'-in-nuh") refers to openings or short passages in the bone structure. 'Foramina' is plural; the singular form of the term is 'foramen' (pronounced "fore-ay'-mun").

2. The Nasal Bone

- The nasal bone is located at the bridge of the nose, right between the eyes.

3. The Infraorbital Foramina

- The Infraorbital foramina are located about an inch to the left and right of the nostrils.
- 'Infra' means 'below.'

4. The Supraorbital Ridge

- The supraorbital ridge is located at the top of the eye socket. The eyebrows rest directly on the supraorbital ridges.

5. The Infraorbital Ridge

- The infraorbital ridge is located immediately underneath the eye.

Section 5 – General Instructions for Performing the Acupressure Eye Exercises

While performing these exercises, there are five general rules to follow:

1. Keep your eyes closed during the exercises.
2. Make sure your hands are clean. Short fingernails work best for these exercises, but if you have long fingernails be careful while performing the exercises.
3. Massage the area lightly and slowly. The trigger-point is a little larger than the eraser on a #2 pencil, so the pressure should be tightly focused and the movements should be contained to the smallest possible area.
4. As you apply light, slow pressure to the trigger-point, you may notice a feeling of discomfort or a mild ache. This is good! That means that you

are stimulating the trigger-point and its associated muscles, bringing more bio-energy, blood, nutrients, and oxygen to the face and the eyes. You will discover that the feeling of discomfort diminishes as you practice the exercises from day to day.

5. Perform the exercises at least twice a day, once in the morning, and once in the evening. It is easiest to perform the exercises with your elbows resting on a table, although you can perform them anywhere. I like to do the exercises while I am waiting for my car to warm up, or before watching a movie or TV show. You can practice the exercises as often as you like, although you should be guided by the feelings and sensations of the trigger-points – if the discomfort increases, then scale back the number of repetitions and practice sessions until you feel more comfortable.

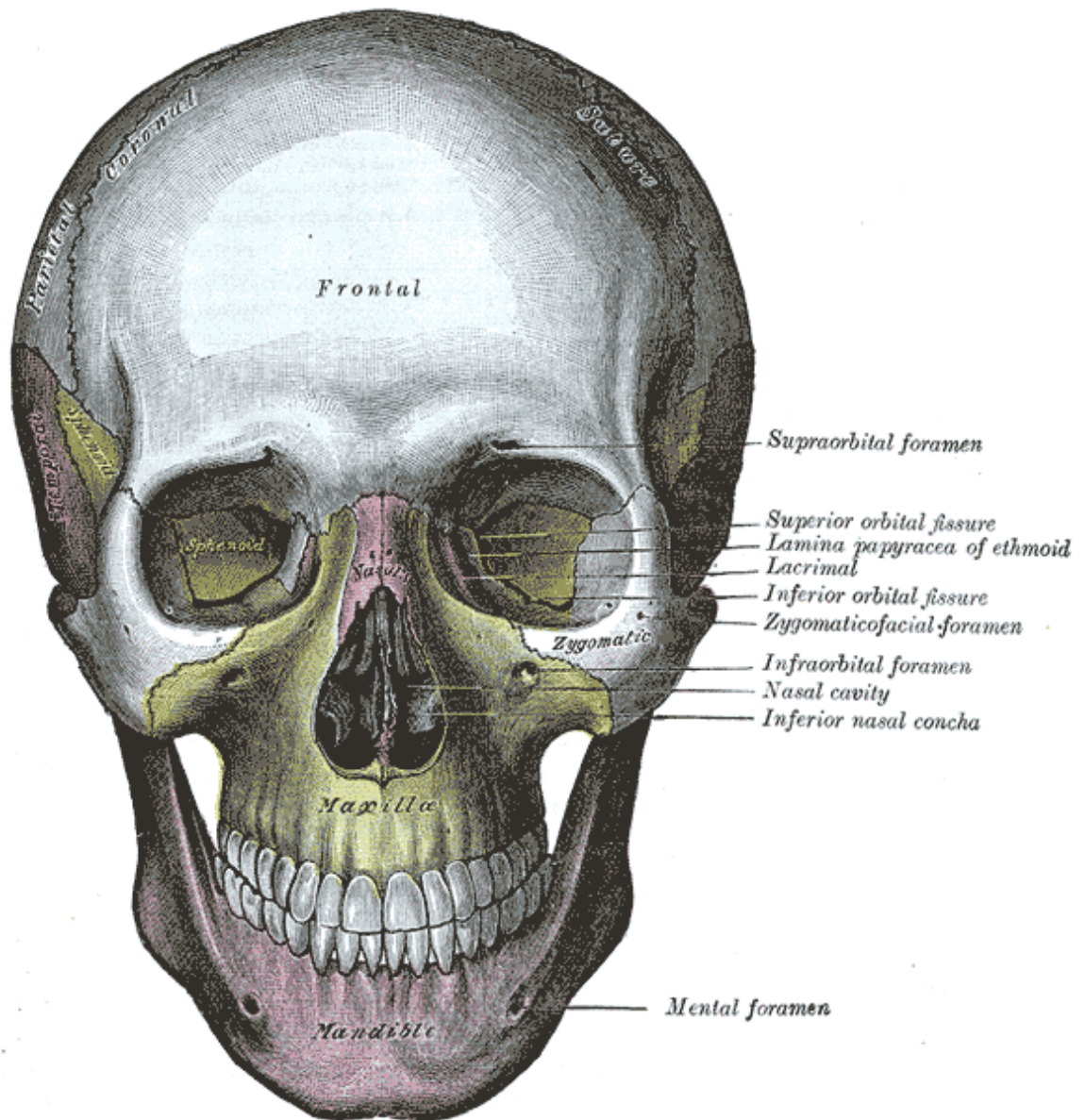


Figure 5.1 – The Skull From The Front
(20th US Online Edition of Gray's Anatomy – Reproduced from Wikipedia – The Free Encyclopedia)
www.wikipedia.org

Section 6 – Exercise 1: Stimulating the Supraorbital Foramina (Figures 5.2 – 5.44)

This exercise is composed of three steps:

1. Locate the right supraorbital foramen by placing your right thumb on the spot just below the inside of your right eyebrow. (Figure 5.2)
2. Locate the left supraorbital foramen by placing your left thumb on the spot just below the inside of your left eyebrow. (Figure 5.3)
3. Use your thumbs to massage the areas using small, circular movements. Allow your fingers to curl upward and relax against your forehead. (Figure 5.4)



Figure 5.2
Locate the Right Supraorbital Foramen just below the right eyebrow



Figure 5.3
Locate the Left Supraorbital Foramen just below the left eyebrow



Figure 5.4
Massage both foramina gently using small circular movements

Section 7 – Exercise 2: Stimulating the Nasal Bone (Figure 5.5)

Use your thumb and index finger to massage the nasal bone, using small up-and-down movements. (Figure 5.5)



Figure 5.5

Using your thumb and index finger massage the nasal bone using small up-and-down movements

Section 8 – Exercise 3: Stimulating the Infraorbital Foramina (Figures 5.6 – 5.8)

This exercise is composed of three steps:

1. Hold your index and second fingers together with your thumb depressing the ring and pinky fingers toward you palm, just like the Cub Scout Salute. (Figure 5.6)
2. Place your second fingers next to the bottom of your nose. Your index fingers will automatically line up with the infraorbital foramina on both sides of your face. (Figure 5.7)
3. Using your index finger, massage the acupressure point using small circular movements. Your thumbs will be located under your chin, and your other fingers will be gently curled downward. (Figure 5.8)



Figure 5.6
Preliminary position of the hands and fingers to locate the Infraorbital Foramina



Figure 5.7
Placement of the fingers to locate the Infraorbital Foramina



Figure 5.8
Use small circular movements to massage the Infraorbital Foramina

Section 9 – Exercise 4: Stimulating Supraorbital/Infraorbital Ridges (Figures 5.9 – 5.13)

This exercise is composed of six steps:

1. Hold your hands in front of you with your index fingers pointed straight out, your thumb pointed straight up, and your other fingers curled tightly against your palm, as if you were using your hand as an imaginary pistol. (Figure 5.9)
2. Bend your index finger inward at the second joint so your index fingers make 'hooks.' (Figure 5.10)
3. Place your thumbs on your temples, and your index fingers on your eyebrows just above the bridge of your nose. (Figure 5.11)
4. Massage the supraorbital ridges by moving your index finger from the inside of the ridge (above the supraorbital foramen) to the outside of the ridge. (Figure 5.12)
5. Massage the infraorbital ridge by moving your index finger from the inside to the outside. (Figure 5.13)
6. Alternate between upper and lower ridges, massaging the upper ridge first, then the lower ridge, then the upper, lower, etc.



Figure 5.9
Preliminary position of the hands and fingers for the Supra- and Infraorbital Ridges



Figure 5.10
Place the thumbs against the temples and the index fingers on the eyebrows



Figure 5.11
Massage outward along the supraorbital ridge. You can press forcefully.



Figure 5.12
Starting point for massaging the Infraorbital Ridges



Figure 5.13
Move outward along the infraorbital ridges, pressing as forcefully as you like.

Section 10 – Exercise 5: Generating Bio-Energy (Figures 5.14 – 5.17)

This exercise is composed of three steps:

1. Place your hands together, and vigorously rub them together. Press hard! The objective is to create an intense feeling of heat from the friction of the movement. (Figures 5.14 – 5.15)
2. After your hands are warm (or even hot), move them apart, about the distance they would be if you were holding a basketball between them. (Figure 5.16)
3. Slowly bring them together until you feel the heat being transmitted from palm to palm. You can usually feel this when your palms are about 2 or 3 inches apart. You may also notice a feeling of vibration or pulsation – this vibration is your bio-energy. (Figure 5.17)



Figure 5.14
Preliminary position of the hands - press the palms together forcefully



Figure 5.15
Begin rubbing the hands together - remember to press forcefully and to rub rapidly to generate friction



Figure 5.16
After the hands are warm, pull them apart as if you were holding a basketball



Figure 5.17
Slowly move your hands together until you can feel the heat and the vibration in both palms

Section 11 – Exercise 6: Palming (Figure 5.18)

This exercise is composed of five steps:

1. Generate some bio-energy and heat by rubbing your palms together briskly, as in Exercise 5. (Figures 5.14 – 5.15 supra)
2. Close your eyes, place your elbows on a table (or keep them close to your chest), and place your palms over your eyes. (Figure 5.18)
3. Maintain this position for 1 or 2 minutes. Notice the feelings of warmth and vibration being conducted from your palms into your eyes.
4. Allow your eyes to focus on the horizon in the darkness created by placing your palms over your eyes.
5. Your eyes should be relaxed and comfortable during the entire exercise. If they are moving around, or continually trying to focus, it just means they are stressed, and you should practice palming and the other exercises more often and for longer periods of time. After you have practiced these exercises for a few days, you will notice your eyes beginning to relax during palming.



Figure 5.18

Place your palms over your eyes – press very lightly so no pressure is applied to the eyes.
Focus directly ahead into the blackness where the horizon would be located.

Section 12: Very Abbreviated Progressive Muscular Relaxation Exercise

Very Abbreviated Progressive Muscular Relaxation is a relaxation technique derived from the Progressive Muscular Relaxation program developed by Dr. Edmund Jacobson in the 1920's,¹⁷ as well as yoga relaxation programs that date back 3,000 years.^{18,19} The method is very simple. Follow these steps:

1. Recline, sit in a chair with your feet on the floor, or stand comfortably with your hands resting at your sides.
2. Slowly contract the muscles in your toes and feet and hold them in a tense state for 5 to 7 seconds.
3. Slowly release the contraction, and allow the muscles to relax.
4. Repeat this sequence (hold tense for 5 – 7 seconds, then let go slowly) for the following eight muscle groups in the following sequence:
 - a. Toes and feet
 - b. Calves
 - c. Thighs (quadriceps and hamstrings)
 - d. Lower back, abdominals, gluteus muscles
 - e. Chest and upper back
 - f. Neck and trapezius muscles
 - g. Shoulders, upper arms, lower arms, wrists and hands
 - h. Face

You will notice the feelings in your body change as you become more relaxed. Relaxation is attended by feelings of warmth, pulsing or vibrating in the muscles, and heaviness. You can perform a complete Very Abbreviated Progressive Muscular Relaxation routine in about 2 minutes. Practice this 3 or 4 times each day, until you become adept at relaxing in various locations and situations.

There is a guided relaxation session on the Audio CD, tracks 2-3 and takes 23 minutes. I have also included a video introduction to this relaxation exercise, DVD Chapter 2, *Very Abbreviated Progressive Muscular Relaxation*.

Section 13: Focused Neuromuscular Relaxation

Focused Neuromuscular Relaxation is also based on Dr. Jacobson's work. Dr. Jacobson was the first medical researcher to exhaustively research the nature, cause, and effects of muscular tension. He used a device that he designed along with Bell Laboratories called an electromyograph to measure the electrical potential in the muscles. Dr. Jacobson discovered that people who were untrained in relaxation techniques had muscles that were in a constant state of tension.

This unrelieved tension was the source of a great deal of unnecessary psychophysical distress. Dr. Jacobson determined that the easiest way to relax the muscles was simply to *do nothing*! His method of progressive relaxation begins with the client reclining and then focusing on the sensations of tension in the right or left leg, and then continuing this body scan for the entire body. No contractions or movements of any kind are required – just allow the muscles to relax naturally. After completing one relaxation circuit from the toes to the head, repeat two or three times. During each successive circuit, the muscles will progressively relax more and more.

Later researchers added one step to Dr. Jacobson's method. While you are relaxing, focus on the feelings of warmth that are automatically generated by the relaxation process. After you become aware of the sensations of warmth, you will be able to guide and direct those sensations from one body part to another, producing increased sensations of comfort and relaxation. Use the same eight muscle groups and relaxation pattern you used with the Very Abbreviated Progressive Muscular Relaxation Exercise:

- a. Toes and feet
- b. Calves
- c. Thighs (quadriceps and hamstrings)
- d. Lower back, abdominals, gluteus muscles
- e. Chest and upper back
- f. Neck and trapezius muscles
- g. Shoulders, upper arms, lower arms, wrists and hands
- h. Face

There are two guided relaxation sessions on the Audio CD, Track 4 [Focused Neuromuscular Relaxation Using Sensations of Warmth – 11 minutes] and Track 5 [Focused Neuromuscular Relaxation Using Your Breathing – 9 minutes].

Chapter 6: Self-Regulation Through Visualization

Section 1: Guided Imagery and Visualization Exercises

There are four visualization exercises included in this Mental Sports Training Program. They are presented in order of complexity, so that you may learn new skills, and refine existing skills, in a sequential fashion, building upon each exercise as you progress toward the more complex visualization exercises.

Exercises 1, 3, and 4 can be performed on your own after establishing a self-hypnotic, relaxed state. Exercise 2 is included on the Mental Sports Training CD, track 4.

The first two visualization exercises teach you how to work with simple geometrical shapes and colors, allowing you to strengthen your ability to create, stabilize, maintain, and alter an image.²⁰

Visualization Exercise #3 teaches you how to visualize three-dimensional objects.

Visualization Exercise #4 will assist you in creating a detailed vision of your perfect body.

Section 2: Visualization Exercise #1 – Visualizing A Simple Geometrical Shape

This first exercise consists of visualizing a simple, uncomplicated two-dimensional object. You will use the image of the upside-down triangle located after these instructions (Figure 6.1). Please follow these directions:

1. Take several deep breaths and relax. You may enter a light trance state, where your mind is relaxed and calm. If it helps to enter this light trance, please close your eyes and re-access the same kinds of feelings that you have when you listen to the CDs. You will be able to open and close your eyes throughout this exercise without disturbing your trance.
2. Open your eyes and look directly at the image of the triangle for about a minute until you are completely familiar with it.
3. Close your eyes and imagine that you are still looking at the triangle. Scan it with your eyes exactly like you did when you were looking at it with

your eyes open. See the whiteness of the triangle surrounded by the gray lines, and notice the gray area within the triangle.

4. Open your eyes and look at the printed triangle again. Compare the printed triangle with your visualized image of it.
5. Close your eyes again and visualize the triangle. Imagine that it is about 18 inches in front of your eyes. This will project the image outward, which will allow you to scan the image exactly as if it were an external image.
6. Continue to alternate between viewing the printed triangle and visualizing the triangle with your mind's eye for about 5 minutes. Concentrate on trying to stabilize your internal image so you can hold it steady for 5 to 10 seconds. When you can perform this exercise with a fair degree of ease, you are ready to progress to Visualization Exercise # 2.

Section 3: Visualization Exercise #2 – Visualizing Simple Geometrical Shapes and Colors

The second exercise consists of visualizing 3 simple geometrical shapes (square, circle, and triangle), and 5 colors (white, red, yellow, blue, black). The instructions are included on the Mental Sports Training CD, track 4. There is an example of the shapes and colors you will be visualizing located after these instructions (Figure 6.2).²¹

Section 4: Visualization Exercise #3 – Visualizing Three-Dimensional Objects

This exercise involves visualizing a simple, familiar three-dimensional object such as an apple, a flower, a cup, a pen, a watch, or any other object you desire. Here are the instructions:

1. Take the object you have chosen and place it about two feet in front of you at eye level, or just below eye level. Set it by itself, so there are no other objects that might distract or confuse you during this exercise.
2. Take a few deep, relaxing breaths and enter into a light trance. If it helps to enter this light trance, please close your eyes and re-access the same kinds of feelings that you have when you listen to the CDs. You will be

able to open and close your eyes throughout this exercise without disturbing your trance.

3. Look directly at your object until you feel familiar with it. Close your eyes and imagine that the object is about two feet in front of you. See it clearly in your mind's eye and scan the image, just like you did when you were looking at it with your external vision. Notice the shape of your internal image, its color, any irregularities or imperfections.
4. Open your eyes and compare the two images. Notice any details that were missing from your internal image.
5. Close your eyes, and repeat this process a few times until you are comfortable with your ability to visualize the object.
6. You can practice this exercise at any time and anywhere you might be. Select an object within your visual field, study it, and then close your eyes and imagine it as vividly as you can.

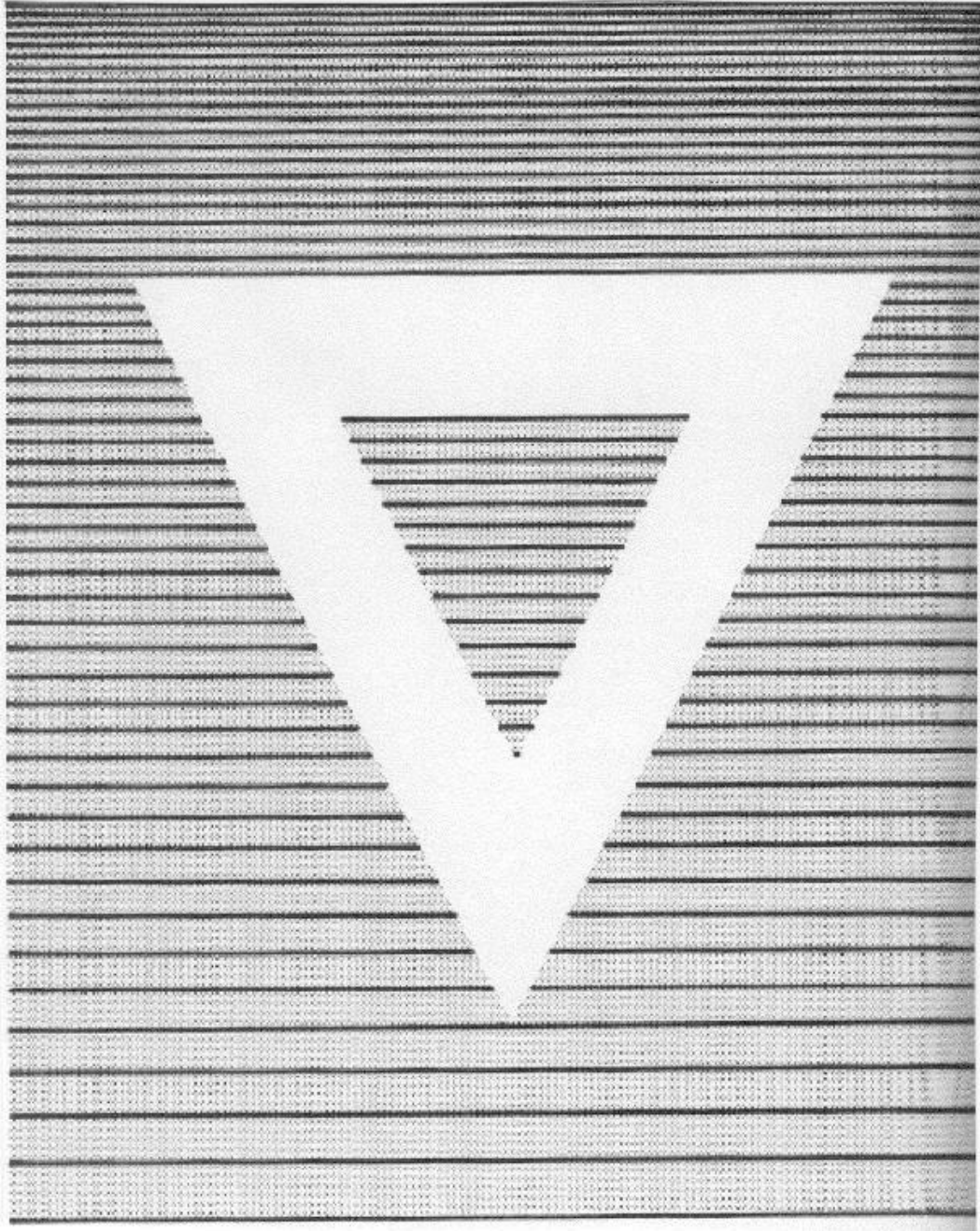


Figure 6.1
Visualization Exercise #1

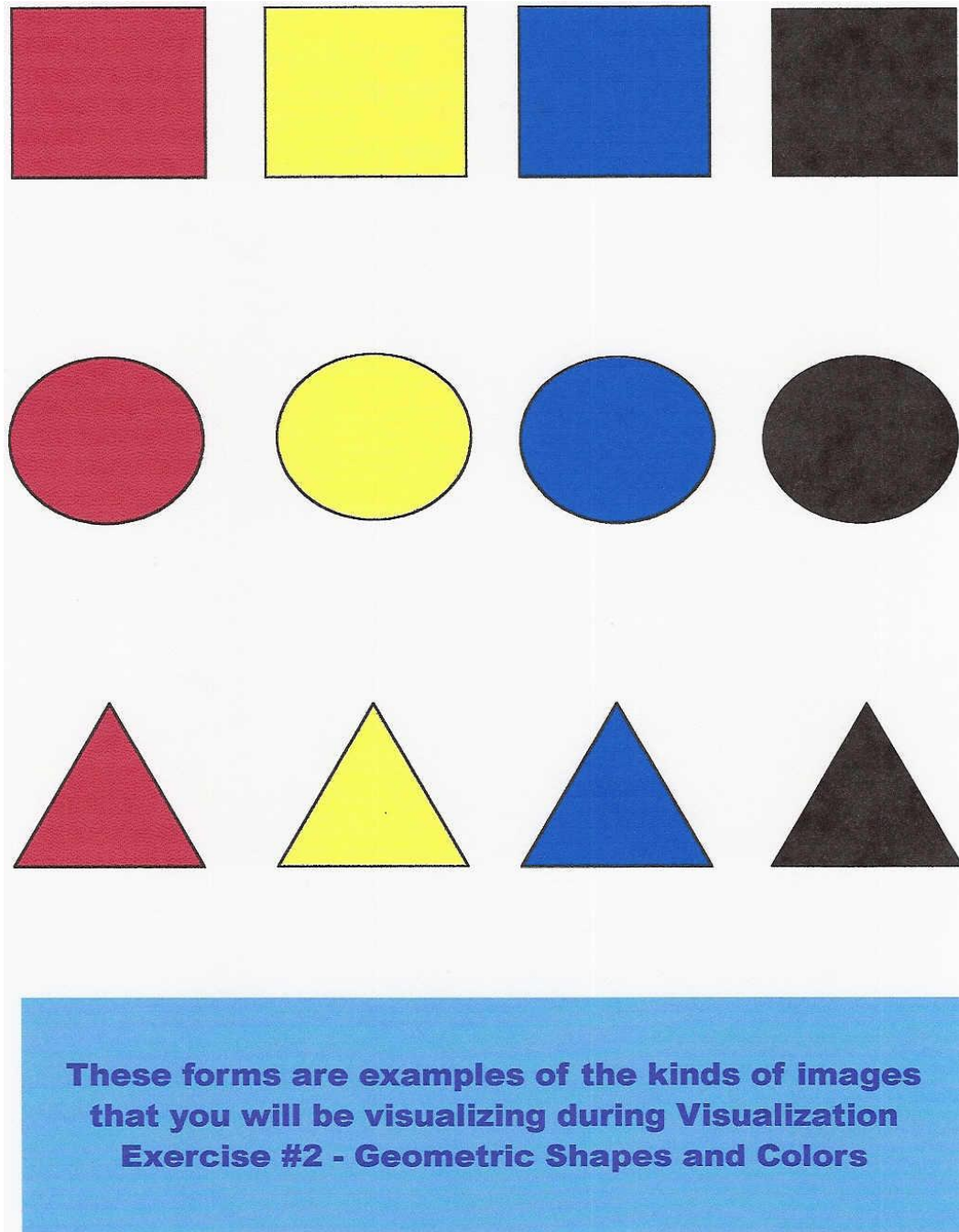


Figure 6.2
Visualization Exercise #2

Section 5: Visualization Exercise #4 – Visualizing Your Perfect Body

This is one of the most difficult visualization exercises because it involves our own bodies and our ideas and conceptions about our own bodies, many of which may be idealized or distorted by our body image. It is therefore divided into three sections: the first section will describe an exercise to sharpen and clarify our self-image; the second section will describe an exercise to modify and alter our body image so that it will conform to our desires and goals; the third section will provide tools to strengthen and protect your health using visualization.²²

Sub-Section 1: Visualizing Your Present Body:

Exercise 1: Visualizing Using a Mirror

1. For this exercise, you will need a full-length mirror.
2. Take a few deep, relaxing breaths and enter into a light trance. If it helps to enter this light trance, please close your eyes and re-access the same kinds of feelings that you have when you listen to the CDs. You will be able to open and close your eyes throughout this exercise without disturbing your trance.
3. Now open your eyes and gaze at your image in the mirror. Start out with a single part of your body, such as your face, or your chest, or your legs, and focus on that for about a minute.
4. Now close your eyes, and construct a mental image of your body, paying close attention to the details. After stabilizing the image for a minute or so, open your eyes and compare your internal image with the external image in the mirror.
5. Continue this exercise with each part of your body, until your internal body image is as close to your external body image as possible.
6. Notice as many details as you can: your hair, your fingernails, how you smile, your teeth, your eyes.
7. In your imagination, watch yourself doing something that you are familiar with. Look at your movements, the way you hold your body. For

example, watch yourself answering the phone, or vacuuming the house, or doing the dishes, or driving a car. Notice how you feel as you move, how your voice sounds as you speak.

Exercise 2: Visualizing Using a Current Photograph

1. For this exercise, you will need a recent photograph of yourself.
2. Take a few deep, relaxing breaths and enter into a light trance. If it helps to enter this light trance, please close your eyes and re-access the same kinds of feelings that you have when you listen to the CDs. You will be able to open and close your eyes throughout this exercise without disturbing your trance.
3. Now open your eyes and gaze at your image in the photograph. Start out with a single part of your body, such as your face, or your chest, or your legs, and focus on that for about a minute. If the photograph is not a full-length photograph, focus on the details that are available to you, especially your face.
4. Now close your eyes, and construct a mental image of your body, paying close attention to the details. After stabilizing the image for a minute or so, open your eyes and compare your internal image with the external image in the photograph.
5. Continue this exercise with each part of your body, until your internal body image is as close to your external body image as possible.
6. See yourself doing what you were doing in the photograph. Recreate the entire situation: the people who were there, the occasion, who took the photograph, and so on.

Exercise 3: Visualizing Using an Old Photograph

1. For this exercise, you will need an older photograph, perhaps one of you when you were a child or a teenager.
2. Take a few deep, relaxing breaths and enter into a light trance. If it helps to enter this light trance, please close your eyes and re-access the same kinds of feelings that you have when you listen to the CDs. You will be

able to open and close your eyes throughout this exercise without disturbing your trance.

3. Now open your eyes and gaze at your image in the photograph. Start out with a single part of your body, such as your face, or your chest, or your legs, and focus on that for about a minute.
4. Now close your eyes, and construct a mental image of your body **as it was in the photograph**, paying close attention to the details.
5. See yourself doing what you were doing in the photograph. Recreate the entire situation: the people who were there, the occasion, who took the photograph, and so on.
6. You may want to visualize yourself as you grew up from this early time, visualizing successive stages in your life.
7. Remember that this is a visually constructed mnemonic image – it is a memory from your past. You may experience many different feelings and emotions based on your memories of the incident in the photograph. This is perfectly normal and natural. If any of the emotions or feelings becomes too intense, you can terminate the trance and return to your normal waking consciousness simply by wishing to do so.

Sub-Section 2: Visualizing Your Perfect Body:

1. For this exercise, find a comfortable place to sit or recline.
2. Take a few deep, relaxing breaths and enter into a light trance. If it helps to enter this light trance, please close your eyes and re-access the same kinds of feelings that you have when you listen to the CDs. You will be able to open and close your eyes throughout this exercise without disturbing your trance.
3. Begin with a visualization of your body as it is now, making sure you include as many vivid details as possible. Then begin altering this image so that it conforms to your desires and goals. This alteration of your body image utilizes the same processes as Visualization Exercise #2 when you changed your internal circle into a square and then a triangle.

4. After you have stabilized your new body image, surround it with an aura of bright white light that surrounds and penetrates every part of your visualized body image. Maintain this visualization for about a minute.
5. Now change the color of the aura from bright white to deep blue, and maintain this visualization for about a minute.
6. After you are satisfied with your visualization experience, you may terminate the trance by simply allowing your visualized body image to fade, and then return to normal wakeful awareness.
7. Supplement your visualization exercise with some targeted auto-suggestions. While viewing yourself in the mirror, talk to those parts of your body that you want to alter. For example, if you would like your stomach to be flatter, say aloud to your mirror image “Stomach, I want you to be flatter,” or “Abs, I wish you were more defined.” Your body may initiate a dialogue with you at this point, where your abs respond by saying something like “We will be more defined if you will concentrate on doing your sit-ups.”
8. It is very important to realize that standards of beauty are extremely arbitrary! Although you can sculpt the body you desire using these techniques, be careful not to violate your own body’s integrity and ecology. Trust yourself and your unconscious mind – YOU decide what your standards of beauty and health will be.

Sub-Section 3: Visualizing Your Healthy Body:

Exercise 1: Conducting A Body-Systems Review

The Body-Systems Review (Table 6.1) is a comprehensive analysis of your body’s strengths and weaknesses.¹⁴ We all have certain complaints and illnesses that recur on a regular basis. Use the following Body-Systems Review Table to note any symptoms, illnesses, or complaints for each body system.

Body System	Illnesses/Complaints/Symptoms
Skin	
Hair	
Eyes	
Muscles	
Skeleton	
Heart	
Liver	
Kidneys	
Stomach	
Colon	

Genitals	
Nervous System	
Other	

Table 6.1 - Body-Systems Review

Exercise 2: Completing Your Health Colors Chart

Using the information from your Body-Systems Review Chart, color the Health Colors Chart (Figures 6.3 and 6.4).²³ The first chart is for women, and the second chart is for men. Use colored pencils, crayons, or markers – whatever you prefer. Choose colors that feel right to you for each system or organ. If the system or organ is one that is chronically ill, or ill at the moment, then choose a color to represent the condition of illness that is currently present.

Once you have completed your Health Colors Chart, use the chart to begin visualizing the organs and systems that are normally healthy and strong. Imagine a bright, powerful light of the same color as you chose for the chart, and direct it to those organs and systems. When you have completed the visualizations for your healthy organs, use the same technique for those organs and systems that are currently distressed. Visualize the distress in the same color you used on the chart. Get a feel for the distress as you visualize the organ/system and the color. Then, change the color from the color of distress to a color of health. Hold this visualization for a few moments, and then let it fade from your awareness.

You can repeat this exercise as often as you like. Please make additional copies of the forms as needed.

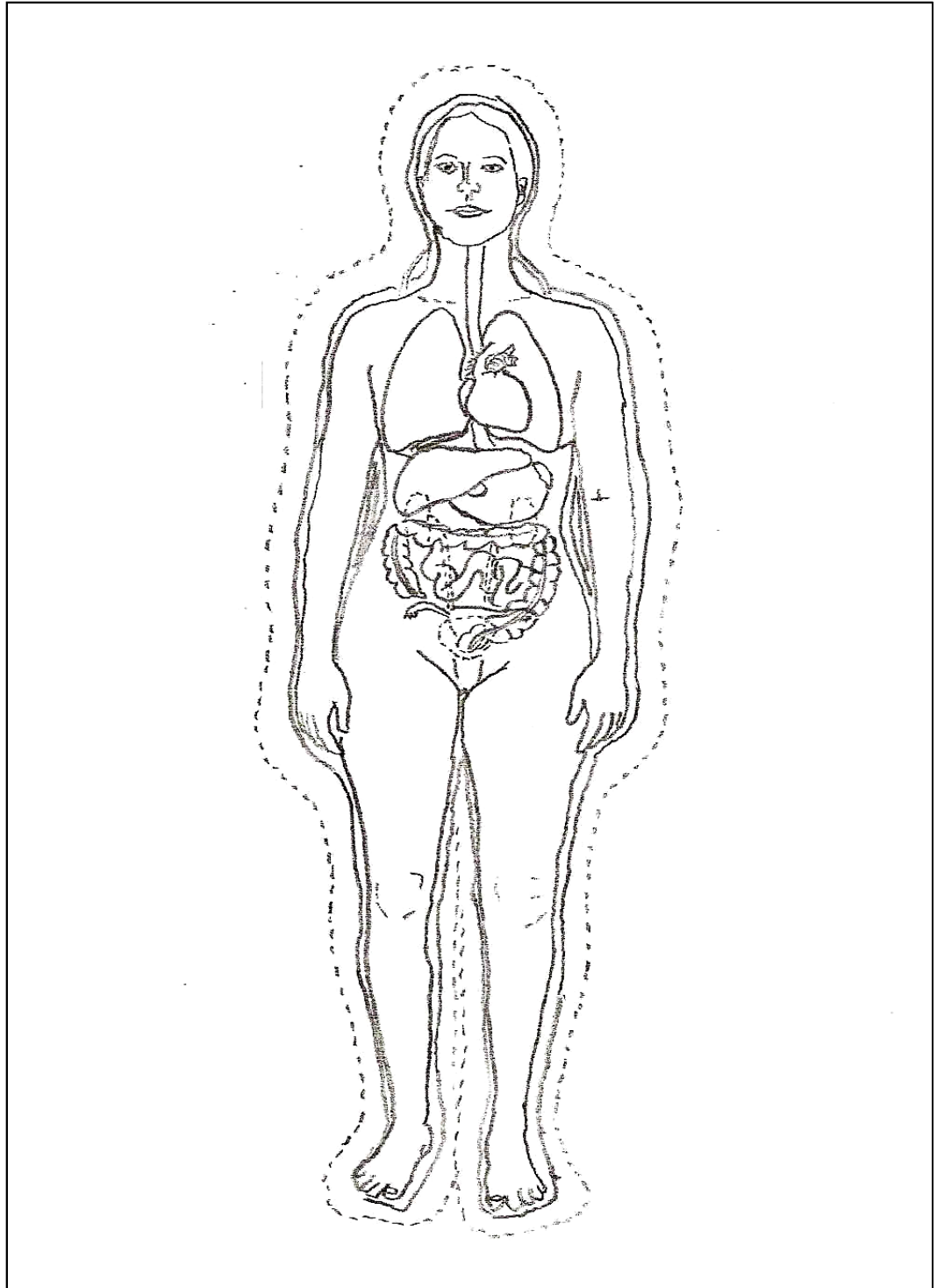


Figure .6.3 - Health Colors Chart – Female

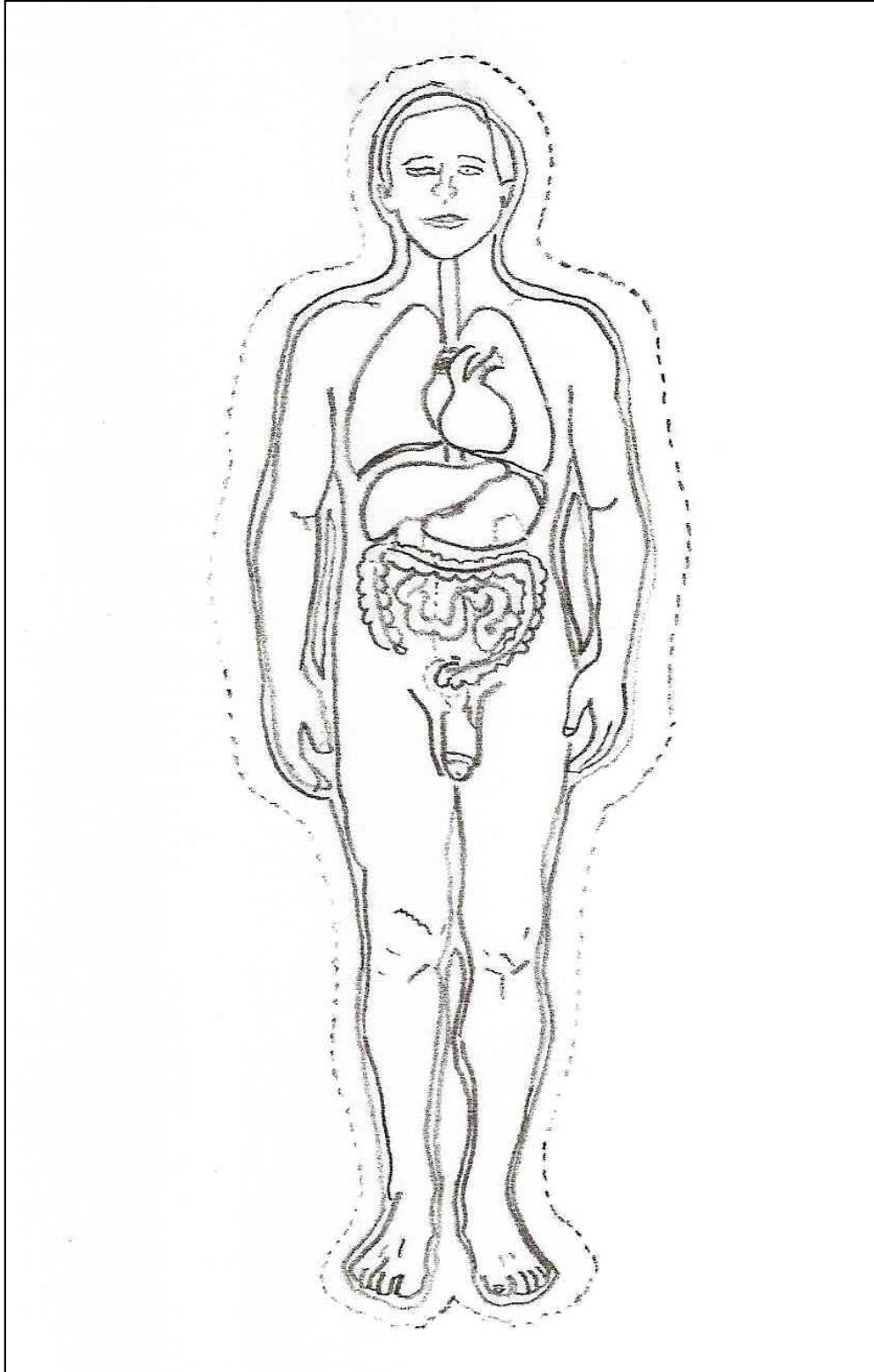


Figure 6.4 - Health Colors Chart – Male

Chapter 7: Self-Regulation Through Psychophysical State Management

Objectives for this chapter

The psychophysical state management chapter is designed to introduce you to some simple trance experiences. When you have completed the exercises in this chapter, you will understand the meaning of 'trance' and the experiences that attend trancework. You will also begin creating a Trancework Journal (Table 7.1).^{24,25}

Instructions for using the Mental Sports Training Audio Files

You can listen to the audio tracks anytime that you desire, although you should always listen to them in a safe quiet environment where you won't be disturbed or distracted for the length of the session. The sessions vary in length from 10 minutes to 16 minutes.

After listening to the track, you may wish to make an entry in your Trancework Journal. The objective is to begin recording experiences, memories, ideas, images, or feeling that arise as a result of performing the trancework exercises. Tracking these experiences over time provides continuity and reference points for your self-improvement work.

Remember that these exercises are designed to be relaxing, enjoyable, and fun. Have a good time with them!

Trance Exercise 1: Learning to Ride

This trance exercise builds on the Progressive Relaxation Exercises. The metaphors and imagery in this exercise will assist you in learning to communicate with and to trust your unconscious mind and its vast resources. ***Learning to Ride*** is a 12 minute exercise located on track 5 of the Mental Sports Training CD.

Trance Exercise 2: Invisible Barriers

This trance exercise trains you to recognize and eliminate self-created barriers to improvement. ***Invisible Barriers*** takes 10 minutes, and is located on track 6 of the Mental Sports Training CD.

Trance Exercise 3: Self-Hypnosis

This trance exercise trains you to enter a state of hypnosis on your own anytime that it would be useful to do so. ***Self-Hypnosis*** takes 12 minutes, and is located on track 7 of the Mental Sports Training CD.

Trance Exercise 4: Basic Pain Management

This trance exercise trains you to enter a state of hypnosis for controlling painful or unpleasant sensations. It takes 12 minutes, and is located on track 8 of the Mental Sports Training CD.

Working On Your Own

After you have practiced these basic skills for a while, you will get a feel for how to utilize them to improve your athletic performance. Select an area you wish to improve, write down the steps that you want to take toward the improvement, and then create a simple set of visualizations that will take you closer to your goal.

After you have written down the visualization instructions, enter an alpha state using one of the relaxation or self-hypnosis techniques, and then use your imagination to enact the visualization that you have scripted. Change anything that feels wrong or out of place until you have perfected the visualization instructions, and then monitor your progress.

Mental Sports Training CD Index

1. Track 1: Warning Message [Don't Listen To This CD While Driving!] – 00:28
2. Track 2: FNMR-Warmth – 10:46
3. Track 3: FNMR-Breathing – 8:51
4. Track 4: Visualization Exercise #2 – 10:40
5. Track 5: Learning to Ride – 11:13
6. Track 6: Invisible Barriers – 10:28

- 7. Track 7: Self-Hypnosis Training – 11:52
- 8. Track 8: Basic Pain Management – 13:40

The audio files are available at our website:

<https://polymathese.wixsite.com/polymathese/sports-engineering>

Session #:		Date:	
Time:		Place	
List any images, thoughts or feelings that were significant to you during the session:			
List any plans or decision you made during or immediately after the session:			
List anything else that you would like to note from the session:			

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Table 7.1 - Trancework Journal Form

Self-Regulation Through Rhythmic Breathing

Our breathing occupies a unique place in psychophysical state management because breathing can be totally automatic and regulated by our unconscious mind, or we can take conscious control of it by holding our breath, or breathing faster or slower.

Because our breathing occupies this unique state midway between conscious and unconscious processes, rhythmic breathing is one of the most valuable state management techniques available to us. There are many different rhythmic breathing techniques available to us. The one you will learn here is one of the simplest and most effective techniques for relaxing and centering the mind and body.

Every breath we take has four discrete parts to it: an inhalation, a pause, an exhalation, and another pause. The pauses may be slight, but they are noticeable when we begin to pay attention to our own breathing patterns. Also, the pauses are bio-mechanically necessary, since they occur during the moment when the diaphragm is changing directions.

In order to begin taking control of our own states, we can start with the most basic of all breath rhythms.²⁶ The rhythms are measured in generic units, and each unit can then be assigned a personal value, determined by our own comfort levels and bio-physical activation level at the time we are practicing. If we are already relaxed, then the units will be longer. If we are playing racquetball or baseball, then the units will be shorter, because our breathing will be more rapid.

Here is the matrix for the Basic Rhythmic Breath Pattern:

<u>Sequence</u>	<u>Activity</u>	<u>Units</u>
1	Inhalation	1
2	Pause	$\frac{1}{2}$
3	Exhalation	2
4	Pause	$\frac{1}{2}$

To translate this matrix into a real breathing pattern, decide how long you want your inhalation to take. The easiest duration for most people is to inhale for a count of 4. This translates into the following pattern:

<u>Sequence</u>	<u>Activity</u>	<u>Units</u>	<u>Duration</u>
1	Inhalation	1	4
2	Pause	$\frac{1}{2}$	2
3	Exhalation	2	8
4	Pause	$\frac{1}{2}$	2

To measure the duration of your breathing elements, you may count silently to yourself, you may use a stopwatch or a clock with a second hand, you may count your heartbeats, or you may just guess about the duration, making sure to take twice as long for your exhalations as you do for your inhalations. During your exhalations, purse your lips slightly so that there is some back-pressure generated. This will allow you to control the exhalation, to slow it down, and it will also place tension in your diaphragm, which is a bio-mechanical method of inducing an alpha state.

Practice your Basic Rhythmic Breath Pattern several times a day. You should practice for a minimum of 10 complete breath cycles. After you have completed these 10 cycles, you will find yourself in an obvious alpha brain wave state.

Chapter 8: Self-Regulation Through Speech

“The word is a powerful sovereign, for with a very tiny and completely invisible body it performs the most divine works. It has in fact the power to take away fear, banish pain, inspire happiness and increase compassion.”²⁷ Gorgias, the 5th century Greek Sophist wrote these words in praise of the power of speech to alter the lives of men.

Indeed, human beings of all times and cultures have recognized the inherent power that language has to alter human behaviors and moods. In the 20th Century, modern researchers have demonstrated the effects of speech on the human organism in multiple ways.

Emile Coue, a French pharmacologist writing during the 1920's, developed a self-regulation program which he called 'Conscious Autosuggestion.'²⁸⁻³⁰ Research conducted in the Soviet Union from 1935 to 1961 demonstrated the genetic, neurological, and functional links between self-regulation and speech.³¹

Children during their early development will repeat the names of objects and people to themselves over and over in order to reinforce the learning process. They will also repeat instructions and admonitions from their parents whenever they are unsure of a situation. For example, you might recall the early safety rules for crossing the street that your parents had you memorize: “Stop, Look, and Listen.”

You might even notice that every now and then adults will also talk to themselves when they encounter uncertain situations or need to remember something important.

Such regulatory self-admonitions are called 'Affirmations' by the members of the Association for Transpersonal Psychology, who include deliberately constructed self-talk routines in their therapeutic programs.³²

Affirmations are short, positive statements that reflect your desires and goals. Dr. Coue's classic affirmation was: 'Every day, in every way, my life is getting better and better.' When performing your affirmations you should repeat them OUT LOUD to yourself for 2-3 minutes. Dr. Coue recommended that we say our affirmations out loud 30 times each day. It may also be useful to say them out loud in front of a mirror, so you can see yourself as you reaffirm your goals and commitment to reaching those goals. Use the

Affirmation Worksheet Form (Table 8.1) to create affirmations for yourself. The worksheet divides our experience into five dimensions: Physical, Emotional, Mental, Spiritual, and Energy. Examples of affirmations for each dimension using Dr. Coue's verbal form are provided in the table below:

Physical:	Every day, in every way, I am getting stronger and stronger.
Emotional:	Every day, in every way, I am feeling calmer and calmer.
Mental:	Every day, in every way, I am thinking more and more clearly.
Spiritual:	Every day, in every way, I am becoming more and more loving.
Energy:	Every day, in every way, I am becoming more and more alert.

How To Make Your Affirmations More Powerful:

- Repeat each new affirmation 30 times in the morning while looking at your image in the mirror
 - First 10 repetitions will eliminate any negative internal dialogue
 - Second 10 repetitions will induce a light alpha trance state
 - Final 10 repetitions will reprogram the unconscious mind with new internal dialogue
- Use your affirmations during normal conversations as responses to others' phatic inquiries:
 - 'How are you?'
 - "I'm feeling strong, thank you!"
 - 'What's happening?'
 - I'm working out regularly, thanks!
- Add a 'when' clause or a 'because' clause:
 - 'Every day, in every way, I am getting stronger and stronger when I work out at the gym.'
 - 'Every day, in every way, I am getting stronger and stronger because I am lifting more and more weight.'
- Add a visualization of your outcome ***as if it were already achieved.***
- Add a feeling of gratitude to God, the Universe, your family, your unconscious mind, etc. for helping you to achieve your goals.

Physical Dimension	Affirmation #1:	
	Affirmation #2:	
Emotional Dimension	Affirmation #3:	
	Affirmation #4:	
Mental Dimension	Affirmation #5:	
	Affirmation #6:	
Spiritual Dimension	Affirmation #7:	
	Affirmation #8:	
Energy Dimension	Affirmation #9:	
	Affirmation #10:	
Other Affirmations	Affirmation #11:	
	Affirmation #12:	

Table 8.1 - Affirmation Worksheet

Chapter 9: Self-Regulation Through Humor

A well-developed sense of humor has always been considered to be an indicator of psychological and physical health. In addition, many philosophers, physicians, and psychologists from earlier times have attributed healing powers to laughter.³³ More recent research in psychosomatic medicine has provided additional confirmation of these observations, and one well-documented example of healing through humor has become legendary.

In 1964, after returning from a trip to Moscow, Norman Cousins, the editor-in-chief of the prestigious *Saturday Review* magazine, was admitted to the hospital with a diagnosis of terminal ankylosing spondylitis. This is an immune system disease which results in the fairly rapid disintegration of collagen throughout the body. Collagen is the connecting tissue that holds the joints together, so this disease is particularly painful and debilitating.

Mr. Cousins was informed by his doctors that he had only a 1 in 500 chance of recovery, and that there was nothing that modern medicine could do for him. With his primary care physician's approval and support, Mr. Cousins decided to take charge of his own care, and made three therapeutic decisions that ultimately saved his life.

First, he checked out of the hospital and into a hotel room where he could have more privacy and more control over his diet. Second, he asked his primary care physician to prescribe an intravenous drip of massive quantities of Vitamin C, which had been shown in some studies to aid in the development of collagen. Third, he arranged to have a movie projector installed in his room, and asked his friend, Allen Funt, the director, producer, and star of the classic TV show, *Candid Camera*, to provide reels of the show for him to watch while he recovered. Mr. Funt was also able to provide reels of many Marx Brothers films, which were a favorite of Mr. Cousins.

Mr. Cousins, to his delight, discovered that ten minutes of laughter while watching his favorite comedies would provide him with at least two hours where he was free from pain. Also, if he watched the films prior to a sleep cycle, he would be able to sleep uninterrupted for several hours.³⁴

Mr. Cousins originally published an account of his treatment and subsequent recovery in the *New England Journal of Medicine*, and, in 1977, published a more complete account in his very popular book *Anatomy of an Illness As Perceived By the Patient*.

Designing your own humor therapy is easy. Find DVD or YouTube copies of your favorite comedies. Watch them whenever you like. It's that simple. And it works.

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