

THERMAL BIOFEEDBACK TREATMENT REVIEW

Name _____ Sex _____ Age _____

Date of First Session _____ Time _____ AM / PM

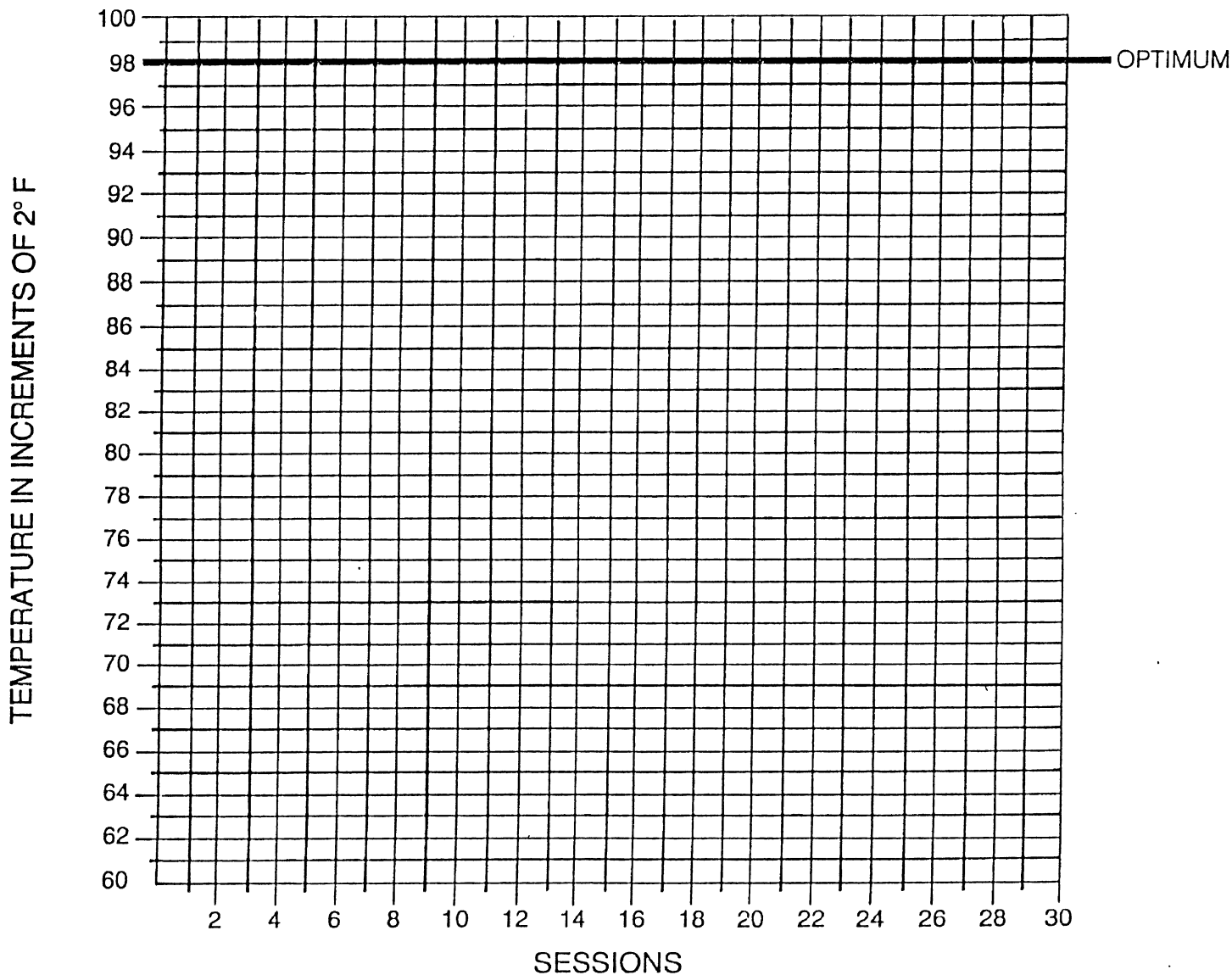
Instructor _____ Session No. _____

Scale _____ Placement Location Probe A Probe B

Threshold (1 way) _____ Mode of Feedback L A V Other

Mode of Training _____

Treatment Goals _____



THE THERMAL BIOFEEDBACK TREATMENT REVIEW is an easy method for recording a patient's progress in skin temperature gains across 30 or fewer sessions. It can serve as a visual reinforcement for the patient as well as a record for research purposes. TO USE THE TREATMENT REVIEW, fill in the patient's name, age, sex, instructor's name, and treatment goal. The Y AXIS is the absolute temperature in increments of 2° Fahrenheit with a range of 60° to 100°. The X AXIS covers training sessions one through thirty. Plot the highest temperature achieved during each session.

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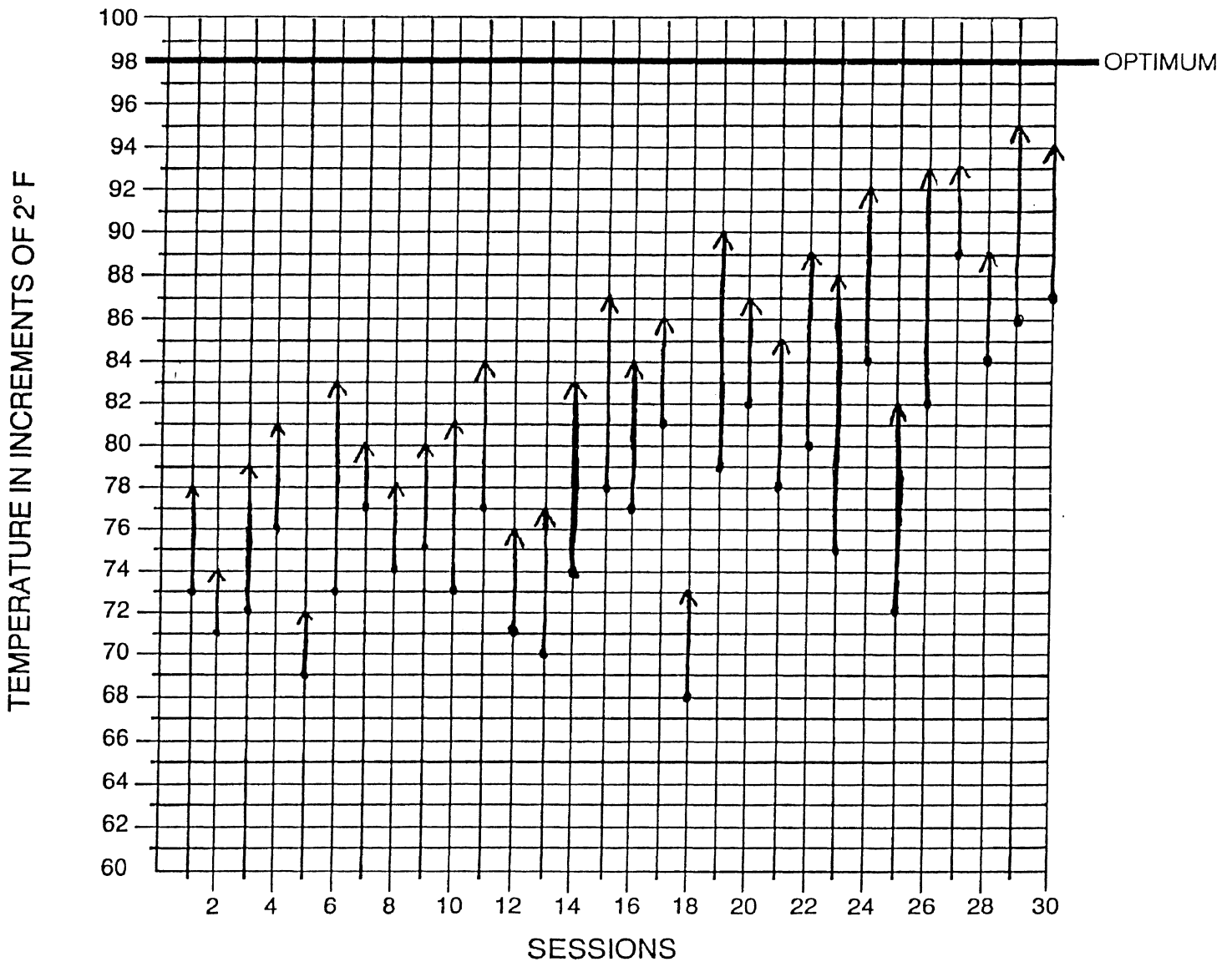
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STRESS AND BODY TEMPERATURE

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Colors of Stress Square or Mood Card or Biodot DOES NOT CHANGE? Your hands may be cold. Touch them your neck or some area that is 90° F. or warmer to see color change to BLUE.

Seek proper medical treatment from professionals. Training described herein should not be undertaken without advice from your health professional. Use of the Stress Thermometer™ and other training materials is the sole choice of the reader.

STRESS AND TEMPERATURE

The Stress Thermometer™ will let you see to 1/10 of one degree the stress you experience in different situations. Changes in hand/foot temperature are a reflection of blood flow - a measure of the stress response. For example, while talking about an upsetting incident involving your parents, an employer/employee, or friend your temperature may drop 5° to 20°. In contrast, when recalling a minor misunderstanding your temperature may only drop one degree. And yet, when you recall the warm sun on a recent vacation, your temperature may increase a full 10°.

What is most surprising is how quickly the changes occur. People often comment, "I never had any idea that little finger could show so much!"

The basic rule for interpreting temperature change is simple, "Warmer hands/feet indicate Relaxation while Colder hands/feet reflect Activation or Tension". When the body's fight/ flight system is activated the muscles tense, heart rate and the vital organs speed up and as a result, blood flow is shunted from the extremities and directed to the vital organs to facilitate the increased level of arousal. As a result, changes of 5°, 10° or 15° can occur within just a few minutes.

The amount of temperature change depends on the stressor or problem and how you react to stress.

- Relative change. You need to observe your temperature over a week in different settings to see what your temperature range is. 72° may be your wife's coldest temperature while 85° may your coldest.

- The long term goal is to consistently raise your temperature to 95° F. and above; to hold that tem-

perature throughout the length of your training session. The Time To Relax relaxation audio CD will teach you to relax and increase hand and foot temperature.

- To develop sensitivity in order to recognize subtle changes in hand temperature throughout the day without the aid of the Stress Thermometer™.

- To develop the skill to increase hand temperature in the midst of stressful situations.

WHERE SHOULD I PRACTICE?

It would be best to train while sitting in a comfortable chair, unless you want to fall asleep. Sit with your spine rather straight, with your hands in your lap, then cross your feet or place them flat on the floor. Remove contacts, loosen clothing, turn off the phone or take care of anything that might disturb your rest and relaxed attention.

The following four suggestions can enhance your learning to relax:

1) Initially, it would be helpful to practice in a quiet environment, wearing loose clothing and removing contact lenses or other things that might distract your attention. Especially if you're a house person, it might be best to practice initially where and when you won't be disturbed.

2) Time your practice an hour after eating so as not to interfere with your digestive process.

3) Try to practice at about the same time each day so your body will look forward to rest and will gradually learn that resting is a habit.

4) After about the tenth session, try relaxing in a more realistic, active setting, using the taped exercise or your memory of a relaxation exercise. Do this test after every 10 sessions to see how well you can rest in the midst of noise and disturbances. This will help you carry your skills into daily life.

You can gather a friend, spouse, family or group of people and train together. Share your experiences to stimulate one another's learning.

UNDERSTANDING TEMPERATURE

Your hand temperature can change from 60° to 99° degrees Fahrenheit (15.5° to 37.2° Celsius). Keep in mind this general rule: "WARM HANDS INDICATE RELAXATION WHILE COLD HANDS REFLECT TENSION". Not everyone reacts to stress through dramatically colder hands and feet. You may also react by tensing muscles like your

forehead, jaw, shoulders, etc. Or perhaps your stomach has butterflies or becomes upset. Each of us reacts to stress in our own special way. Hand temperature is just one simple and effective way to measure stress levels.

There is no "normal" temperature but a range over which temperature fluctuates and changes.

Below 79°	79-84°	84-90°	90-95°	Above 95° (F)
Highly Tense	Slightly Tense	Mildly Calm	Quietly Relaxed	Deeply Relaxed
Below 26°	26-29°	29-32°	32-35°	Above 35° (C)

TEMPERATURE VARIABLES

- The first and most obvious is to avoid touching the thermometer to the cold table top or laying it against a warm leg. You will measure the combined temperature of the table top and your finger and it will be inaccurate. Also, holding the thermometer between the fingers provides an inaccurate reading due to the variance in both surface temperature between the two fingers and the tension used to hold the thermometer. It's fine to hold the thermometer with just your fingers to do a quick check.

Secondly, steroids, tranquilizers, alcohol, hypertensive medication and other drugs in the body will tend to elevate extremity temperature.

Third, in the summer, hand temperatures tend to be warmer because the blood vessels are nearer the surface of the skin.

People do not have 98.6° as their average core body temperature. We have found that everyone can train to increase their hand and foot temperature and to maintain a higher average temperature.

Diet - coffee, soda pop, sugar foods, lack of eating, eating a big meal before relaxing - can all influence your temperature.

Expectations and Performance Anxiety - Your thoughts influence your temperature. If you think, "Oh, I just can't learn to relax." Guess what! You will have a heck of time working against that thought. Reverse thinking, like cold is better, will create COLD. Also, if you try too hard to relax you can end up more tense!

WORRY. This is the hardest factor to overcome. Don't fight worry. Feel the sensation of your breathing. Exhale worry with each breath. The goal is to be a Stress Master™ - to control your own reactions rather than being controlled by events outside yourself.

FREQUENTLY ASKED QUESTIONS

What is a normal temperature? 98.6° ? Most people think that they should try to have 98.6° (the body's average core temperature) as their average temperature throughout the day.

What is a 'good' temperature? The first and foremost goal is to feel what takes place inside yourself. I like to see the temperature increase. A good temperature change is 5° to 10°. The overall goal of an ending temperature is 95° or higher. Again how you feel is the MOST important.

How high can I safely warm my hands? You can cool your hands to the point of getting a headache. You can heat your hands into the high 90's or even low 100's.

Again there is no one normal temperature - just a range over which your temperature fluctuates. Check your temperature regularly to chart your range.

TEMPERATURE CHARTING

The higher the beginning temperature, the less room for change. If your initial temperature is in the high 80's or low 90's, the less room there is for increasing temperature.

BIBLIOGRAPHY

A listing of research papers documenting the effectiveness of stress management and temperature biofeedback devices became too large to maintain. If you would like to source research and clinical application reports, I suggest these professional journals [limited list] : Clinical Science Journal, Psychophysiology Journal, Headache Journal, Biofeedback and Self-Regulation Journal, The American Journal of Clinical Hypnosis, Proceedings of the Biofeedback Society of America, Journal of Clinical Psychology, Behavior Therapy Journal, Journal of Consulting and Clinical Psychology, American Journal of Psychophysiology, British Journal of Psychiatry.

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