

CHAPTER 18: TFT AND HEART RATE VARIABILITY

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[PWW-Note: Thought Field Therapy [TFT] and Roger Callahan's pioneering and courageous research is the first of the meridian based psychotherapies. Now there are many offshoots and variations developed by many others.]

[Abbreviations: HRV = Heart Rate Variability. SDNN = Standard Deviation of Normal to Normal intervals. RR intervals = interval between two sequential sinus beats without contained ectopic beats. ANS = Autonomic Nervous System made up of two branches; Sympathetic branch for speedy stress response and Parasympathetic branch for peaceful ongoing maintenance tasks; The ANS has control over most of the body's functioning. ICU = Intensive Care Unit. SCD = Sudden Cardiac Death. SUD = Subjective Units of Distress. PR = Psychological/Psychoenergetic Reversal. VT = Voice Technology™, Callahan's most advanced diagnostic tool]

The HRV can be used as a simple tool for monitoring therapeutic effectiveness.

Donald Singer and Zsolt Ori

The Heart Rate Variability test...gives an incredibly accurate view of the autonomic nervous system as well as the variability of the heart. What I found is that TFT, which I have been using has a dramatic effect on the autonomic nervous system (ANS) in correcting disorders involved in the parasympathetic and sympathetic nervous system.... it is extremely difficult to change the ANS because it is a stable characteristic. There is no placebo effect with the ANS... TFT has been for me a nice piece of the puzzle that's been missing as to how to enter and correct rapidly defects in the autonomic nervous system.

Fuller Royal, MD
Medical Director, The Nevada Clinic

It is well known that various emotional problems can contribute to increased risk for individuals with heart difficulties. In some cases, the emotional problems may influence the development of a heart or other organ difficulty. It has been well documented that anger and rage are hazardous to the heart and it is also commonly observed that depression contributes to early death after a heart problem.

HEART RATE VARIABILITY (HRV)

At one time it was believed that the rhythm of the heartbeat should be perfectly even. However, in 1965, Hon and Lee noted that fetal distress was associated with "alterations in interbeat intervals before any appreciable change occurred in heart rate itself." In 1996, Sayers and others focused attention on the existence of physiological rhythms imbedded in the beat-to-beat heart rate signal (Task Force, 1996, p 1043)

Although the procedure to measure the variation in the intervals between heartbeats is called *heart rate variability* (HRV) it is not the heart rate itself that is being addressed, but rather the intervals between heart beats [SDNN = Standard Deviation of Normal to Normal intervals]. Research found that an even interval is a danger signal and a predictor of mortality. What is desired is a form of chaos, which appears to be associated with information processing and health. The software involved in HRV is complex and derived from physics and electrophysiology. "Rhythmicity, a major feature of the electrocardiogram (ECG) signal, is a characteristic of biological systems and deviations from rhythmicity are often associated with information transfer." (Schmidt and Morfill, p. 87)

A new and exciting field in cardiologic research is developing through the use of instruments that measure HRV. The HRV instrument yields a number of important indices and has become a marker for, among other things, the degree of balance or imbalance in the autonomic nervous system. (Malik and Malik and Camm)

HRV results are stable and unresponsive to placebo. "HRV parameters were studied in order to assess their reproducibility between baseline and placebo (i.e., when receiving placebo therapy.... Surprisingly, the mean and standard deviations of all HRV measures were identical between placebo and baseline measurements..." (Kautzner, p. 167). A similar position is reinforced (Bosner and Kleiger, 1995, p. 338) by other authors: "[T]he lack of placebo effect and the limited individual variability in their measurement made them suitable variables for the study of interventions on autonomic tone." They point out this has been verified by P.E. Stein in an unpublished study. *These factors make HRV a desirable objective physiological measure to evaluate therapy.*

HOW I WAS INTRODUCED TO HRV

In July 1997 I received a phone call from Fuller Royal, MD, chief of a medical clinic in Las Vegas. He told me of some astonishing findings while experimenting with one of my simple algorithms for phobias in treating medical patients and measuring the results with the cardiology procedure called heart rate variability. It makes sense that the phobia algorithm might help HRV when one views the results of Kawachi, et al. (1995). They found people with phobias had lower heart variability scores and therefore would be more prone to heart problems.

To my great surprise, I witnessed Dr. Royal proceed to eliminate *all traces of medical symptoms* in twelve patients using my simple algorithm. These dramatic results were then validated by HRV, which showed dramatic improvements for each. (This is documented in our TFT and HRV video.) Interestingly, the patients responded in our time-tested fashion, i.e., they progressed as the algorithm progressed. When the patient did not respond, Dr. Royal would do the PR [Psychoenergetic Reversal] correction and repeat the algorithm. The patient would then, predictably, respond favorably.

The variability in the heart rate is being used as an objective measure of what is happening, among other things, in the autonomic nervous system. Interest in HRV is growing and in the near future, most physicians, and especially most psychotherapists, will doubtless have this equipment in their offices since it will give them immediate, objective feedback and evidence as to the power of various treatments they are administering.

In my opinion, within the near future all psychotherapies will necessarily be tested with this objective measure. This objective instrument is known to be free of placebo influence and, as more psychotherapists begin to use HRV, we will see an end to testing psychotherapies with a control group and statistical tests in the attempt to demonstrate that the minuscule effects of most feeble conventional approaches are greater than chance. [Here's a quote from Julian L. Simon Resampling: The New Statistics (p 19) "In much - even most - research in social and physical sciences, statistical testing is not necessary. This is because where there are big differences between different sorts of circumstances - for example, if one medicine cures 90 patients out of 100 and the other medicine cures only 10 patients out of 100 - then we do not need refined statistical tests to tell us whether or not there really is a difference. And the best research is that which shows big differences, because it is the big differences that really matter. If the researcher finds that she/he must use refined statistical tests to reveal whether there are differences, the differences do not matter much."]

It is important to understand that when we measure the HRV, the client is tuned to his most severe problem. After TFT treatment, the person again thinks of the same problem and we see profound physiological differences immediately, due to the treatment. Some professionals who use HRV, attempt to get the person to think warm and loving thoughts in order to be distracted from their problems. We do a quite different procedure. We ask the person to think of their most disturbing thought and then we remove all discomfort associated with that thought. In this way we are removing the cause (perturbations) of the problem. After TFT treatment the most disturbing thought loses all power to cause upset. The HRV then shows dramatic physiologic changes corresponding to the client's report of dramatic psychological changes.

The HRV started as a clinical and research tool for cardiologists, but its influence in clinical psychology, psychiatry, and general medicine is growing rapidly. More and more investigators are using HRV in the domain of psychological problems. See the applications by Carney et al (1995); Friedman and Thayer (1998a, 1998b); Kawachi (1995); Komatusu, Kimura, Sanchala, et al. (1992); Langewitz, and Ruddel (1998); Lehofer.(1997); McCraty, et al (1999); Malik and Camm (1995); and Yeragani, et al. (1991, 1998).

HRV EXPERTS SURPRISED BY TFT IMPACT

Recently, Ian Graham of the United Kingdom, reported on the first International TFT Conference in Oslo, Norway. Ian reports (Graham, 1999):

"John Hetlelid, a Norwegian expert in the field of Heart Rate Variability testing was next to speak. He expressed his own astonishment at the instantaneous impact of TFT on HRV -- apparently on testing TFT for the first time he was convinced that there was an error in the data he obtained. Only when the test was repeated with the same result did he believe what he had witnessed! Much data was then presented that confirmed TFT's capability. He is now analyzing TFT treatment point by treatment point, to determine the relative contribution of each to successful treatment." [My prediction on this matter is that the last one in an effective series will show as effective even though the preceding points may have been required, just as in a combination lock. One might get the impression that only the last number is relevant in a combination lock but the last would have not been able to do the job unless the preceding numbers were entered in the correct order. Also, there will be individual variation as in all human matters.]

It has become commonplace to get such reactions from professionals who are experts in HRV. Many of these experts then explore the rapid effects of TFT and become excited about TFT as a treatment with great potential to improve the HRV results.

CASE STUDY IN HRV AND CAUSAL DIAGNOSIS

Since Dr. Fuller Royal's discovery of the power of TFT on improving measures of HRV (Callahan, 1997), I felt it was worthwhile to see if my work could help heart problems for patients under the care of a cardiologist. The day after I viewed Dr. Royal's HRV results using TFT, I received a call from a person I will call "Jim," who was in a hospital's Intensive Care Unit (ICU). He was not calling for help but perhaps calling to say "good-bye" in case he did not survive the severe attack he was having of atrial fibrillation. The drugs were not helping and, in fact, it was found later, he had been given one drug to which he was found to be severely allergic. This drug was worsening his condition.

If it were not for my experience at Dr. Royal's clinic, it never would have entered my mind to even attempt to help such a problem as atrial fibrillation. I readied the Voice Technology (VT) and led Jim through a number of treatments. It took about fifteen minutes. Despite the toxic chemical opposition of the drug, the treatments were able to do the job. About a half-hour later, Jim called back and said the atrial fibrillation had stopped! This was in July 1997. Two years later, Jim was in town and I had some HRV measuring equipment handy. I wanted to see how he would show up on this diagnostic equipment, which I had not had earlier. I took an HRV reading prior to treatment. Then I had him do an algorithm and took another reading. Then I treated him with Voice Technology and did still another reading. Here is a brief summary of the results (interested professionals can get copies of the complete results by contacting me). These results clearly show the progressive power of our treatments as one goes from algorithm to VT.

The following scores are from a program called Freeze-Frame, which is useful but does not give the range of information that Biocom Heart Scanner yields. The latter was developed to meet the standards of the European Society of Cardiology and North American Society of Pacing and Electrophysiology. The Freeze-Frame uses a treatment procedure radically different from TFT as they attempt to get the person to be rid of negative thoughts by having them think good thoughts and thoughts of love. TFT on the other hand, eliminates the cause of the bad thoughts and it is typically done in minutes, while other procedures may take weeks or months and do not yield the same degree of dramatic results we typically enjoy.

HRV	Percent in High Synch	In Ideal Zone	Time
Pre-therapy	33%	0%	3:49p.m.
Post-algorithm	54%	0%	3:58p.m.
Post-VT therapy	79%	100%	4:11p.m.

Note that the readings on HRV are reported to be stable over time and it typically takes weeks or months of ordinary work or therapy to change these readings. Here we are working in a *total time*

frame of mere minutes (each HRV measure itself was of five minutes duration). There was no attempt to have him think about "nice things."

Another test was given to Jim a month later. His SDNN [Standard Deviation of Normal to Normal intervals] was 87, his power 3545, and he was "within the box" [or optimum SDNN and ANS balance]. This suggests that the previous treatment has held up.

We now know our successful procedure for treating fibrillation was no fluke or accident. Several TFT trainees have reported, to date, a total of eight cases of fibrillation helped dramatically with TFT Voice Technology. One of these cases was also in an ICU ward at the time of treatment by telephone.

The simple algorithm improved the heart scores (according to this HRV reading) by 21%. However, the major change brought about by TFT Voice Technology™ is putting the autonomic nervous system into the ideal zone of balance of 100% according to this instrument. *Naturally, all such findings need to be evaluated by a competent cardiologist in terms of guiding the treatment of a particular patient.*

This striking result makes sense as to why the VT treatment was able to help this patient's heart get into the appropriate healthy groove when he was in ICU and suffering additionally from a drug to which he was known to be allergic. It also suggests that an algorithm would not have been sufficient to help dramatically. Later, I obtained a more sophisticated HRV, the Biocom Heart Scanner previously mentioned, which conforms to International Standards of Performance and Jim's score on this instrument will be presented below.

THE PRECISE TREATMENT

The VT treatment resulted in a far more dramatic result, even though the algorithm improved the situation somewhat. The exact treatment given by VT causal diagnosis was as follows: The letters refer to different acupuncture points, e.g., if = index finger, c = collar bone point, e = under the eye; a = under the arm, eb = eyebrow, sh = side of hand, etc. 9g indicates to do the nine gamut treatments and sq (for sequence) simply means to repeat the same treatments which came before the nine gamut treatments in each holon. [A holon simply refers to one series of treatments distinguished by the presence of the nine gamut. In this example, there are three holons. The term "holon" was chosen for it refers to both whole and part. Each treatment is a whole in itself and sometimes is also part of a whole treatment.] This treatment is not an algorithm but was individually determined for this client. It is not likely to help some other person who would probably need to have their own individually diagnosed series of treatments in order to be helped.

if, c, e, a, c, 9g sq
c, if, eb, sh, c, a, c, 9g sq
e, eb, c, a, c, if, 1, c, a, c, 9g sq

The client tapped each of these points five times. Then he did the nine gamut treatments and then the majors were repeated. Throughout, the client was checked for PR and none occurred during this session.

Ordinarily I am treating psychological problems and measuring the results with an HRV measure. It has increasingly become obvious however, as more medical doctors take our training, that TFT can be applied with good results to various medical problems of which this is but one small example.

HRV AND PREVIOUS FINDINGS OF TFT VALIDATED

"HRV studies should enhance our understanding of physiological phenomena, the actions of medications, and disease mechanisms." (Task Force, 1996, p. 1060) A number of findings in TFT are supported by HRV results, For example, we have found a very high relationship between objective improvement in HRV due to TFT treatment and the reported SUD of the client. As the SUD goes down to 1 on the 10-point scale, we see the HRV reflect this change and improvement.

Since TFT is such a powerful and effective treatment and is able to completely eliminate most psychological problems, we are put in the unique position of being able to observe what might make a problem return. We have found that identified toxins allow us to predict with high success what might make an eliminated problem return. The HRV will show a predictable decline when a person ingests or is exposed to a toxin.

We have a phenomenon in TFT we call inertial delay. This is a rare situation when a person is treated with TFT and no further perturbations are showing and yet the client reports no improvement. We usually find after a period of time ranging from minutes to hours (rarely more than one day), the client will report a dramatic improvement. This is unusual in TFT, for most often, change takes place immediately. Occasionally, we have found the same inertial delay with the HRV measurement. Typically, however, just as it is with the SUD, changes on the HRV take place immediately. In general, we can expect inertial delays when toxins and/or advanced age are involved.

HRV IN MEDICAL RESEARCH

EPIDEMIOLOGY

The Framingham Heart Study Group "showed that in a population that was apparently free of coronary heart disease or congestive heart failure, depressed HRV was associated with subsequent cardiac events (angina, myocardial infarction, coronary heart disease death or congestive heart failure." (Yap and Camm, p. 396) (The tests used in these studies were of longer term than we use.) Yap and Camm also report that reduced HRV also predicted an increased risk for all causes of mortality in the elderly population (mean age 72 years).

The role of SDNN (an indicator of the spread of the variability of the heart) was shown to be highly predictive of sudden death. "The results showed patients with low short term RR interval variability (mean during 24 hours of per-minute standard deviation of RR intervals < 25ms (milliseconds) corresponding to SDNN) had a 4.1-fold higher risk for sudden death than patients with higher short-term variability (> 40ms)." (Yap and Camm, p. 397). The authors conclude: "Thus HRV may provide prognostic information beyond that provided by the evaluation of traditional cardiovascular disease risk factors in a seemingly disease free community population." (p. 397) Such predictions of mortality are especially reliable with people who have had a heart attack.

In. patients with diabetes mellitus, a reduction in time domain measures of HRV seems to precede clinical expression of autonomic neuropathy and indicates an adverse prognosis. (Yap and Camm, p. 408) The authors point out that HRV can be important in helping to identify high-risk patients for subsequent management.

Kautzner (1995, pp. 169-170) states HRV is useful in the early diagnosis of diabetes and also for monitoring its progression.

DRUGS AND HRV

"Drugs are a common cause of autonomic dysfunction, often as a side effect" (Mathias and Alam, 1995, p. 22) Tranquilizers also are reported to have a poor effect on HRV.

MORTALITY AND HRV

"In recent years, analysis of heart rate variability (HRV) has become a standard tool for the prediction of cardiac mortality with the general 'rule of thumb' that a reduced variability is a signature for disease and enhanced risk." (Schmidt and Morfill, 1995, p. 87)

Kautzner states that the "reproducibility of HRV indices is far superior to those of other variables that are also known to predict mortality in survivors of myocardial infarction, such as ventricular ectopy or episodes of silent ischemia. Thus, HRV might be preferable for risk stratification studies and for *evaluation of the efficacy of various interventions* [Callahan's emphasis]!" (p. 170)

Fallen and Kamath (1995) report, regarding sudden cardiac death, that "'HRV is a powerful prognosticator of overall mortality." In the chapter on HRV and Sudden Cardiac Death, Singer and Ori, echo the general finding that "low HRV [is] a powerful predictor of all cause mortality." (p. 433) They add:

Indeed, low HRV, defined in terms of the standard deviation of the mean of all 'normal' RR intervals (i.e., interval between two sequential sinus beats without contained ectopic beats) was found to be a powerful independent predictor of long-term mortality survivors of MI [Myocardial Infarction]. Similar observations have been reported by others. Indeed, low HRV may be a more powerful predictor of mortality than such standard determinants as left ventricular ejection fraction, wall motion abnormalities, frequency and complexity of ventricular ectopy, standard ECG indices, exercise capacity, and the signal averaged ECG." (p. 434)

They also note, "Combining low HRV (SD measure < 30 milliseconds) and inducibility correctly identified all SCD (sudden cardiac death) survivors who died during a 100 month follow-up." (p. 435) And they add, "Preliminary analysis of data from long term (to 8 years) follow-up of SCD survivors with mortality as the endpoint confirms the strong predictive value of low HRV (SD<30) for recurrence of major arrhythmic events ... five died during the observation period. Of these, four exhibited very low HRV (SD: <20 milliseconds)." (p. 438)

The authors conclude with the strong statement, "Despite these and other caveats, the data support conclusions that HRV determinations represent an independent predictor that greatly facilitates the identification of individuals at increased risk of SCD." (p. 442)

"The absence of variability is a highly significant risk factor for adverse outcomes following acute MI (myocardial infarction), including all cause mortality, arrhythmic, and sudden death." (Bosner and Kleiger, p. 331)

Vanoli et al. (1995) conclude "The lower the HRV, the greater the probability that acute myocardial ischemia results in a dominance of sympathetic reflexes and consequently, in a greater risk for the occurrence of lethal arrhythmias.... A normal HRV after MI reflects a preserved physiological cardiac vagal activity that is protective against ventricular fibrillation." (p. 358)

Casolo (1995) introduces his chapter with the definitive comment: "*It is now generally accepted that heart rate variability (HRV) is reduced patients with heart failure.*" (p. 449)

EXAMPLES OF HRV RESULTS WITH TFT

In measuring HRV we use an instrument called the Heart Scanner. Keep in mind when reviewing our reports that experts in HRV have grown accustomed to seeing only very small, if any, positive changes in HRV scores. Recently, a physician commented, after viewing some of the changes in HRV scores as a result of TFT intervention, that he learned about HRV in medical school but forgot about it since nothing could be done to dramatically improve it. He is very excited to find that in fact HRV can be changed and changed dramatically with TFT. This has renewed his interest in HRV.

I could find in the literature only two reports of improved HRV (SDNN). Both of these involved the use of exercise over time. In one case (Task Force, 1996, p. 1055) reports a study done on dogs given exercise over a six-week period and this improved the SDNN by 74%. A similar study on human males resulted in an improved SDNN score of 69% over an eight-week period (Malfatto, et al pp. 532-538).

One of the scores used to predict mortality is the variation of the periods between beats. "...HRV has become a standard tool for the prediction of cardiac mortality with the general 'rule of thumb' that a reduced variability is a signature for disease and enhanced risk." (Schmidt and Morfill, p. 87) "Numerous studies, carried out using a variety of methodologies, have found low HRV to be a powerful predictor of all cause mortality." (Singer and Ori, p. 433) A measure of this variability is called the SDNN which is the standard deviation (a measure of variability).

Cut-off scores of SDNN below 100, and also below 50 have been used to predict mortality. These scores are used in conjunction with other information, but the SDNN has been found to be the best predictor of mortality not only for heart problems but also for early diagnosis of diabetic neuropathy (Kautzner, p. 170) and for alcoholism. "Several primary neurological disorders including Parkinson's disease, multiple sclerosis, Guillain-Barre syndrome, and orthostatic hypotension of the Shy-Drage type are associated with altered autonomic function. In some of these disorders, changes in HRV may be an early manifestation of the condition and may be useful in quantifying the rate of disease progression and/or the efficacy of therapeutic interventions." (Task Force, p. 1060)

In our work, we pay attention to three scores on the HRV-the SDNN, the Total Power and the proximity to "the box." "Within the box" indicates a balanced autonomic nervous system.

MARTIN -- BORN WITH A DEFECTIVE HEART

Martin" is a 44-year-old man who was born with a defective and misplaced heart. He carries a note with him at all times explaining his condition should he be taken into an emergency room. His base scores before treatment were: SDNN = **32** (this is below the 50 cut-off point); his pre-treatment power = **511**. These are very poor scores and reflect his heart problem. Considering the fact of his defective heart, it is astonishing to find how much his scores improve after TFT-VT treatment.

His SDNN of **32** jumps up to **73** (more than double); his power score jumps to a very nice **2170** compared to the extremely low score of **511** prior to TFT-VT treatment. Also, he was not "within the box" (indicating autonomic nervous system balance) prior to treatment and after treatment his ANS shows balance. He was advised to take a copy of these pre- and post-test results to his cardiologist.

MEDICAL DOCTOR WITH CHRONIC DEPRESSION AND POOR HEALTH

At a recent causal diagnostic training, a 58-year-old physician volunteered to be a demonstration subject. He had suffered from depression for many years and his general health was very poor. Since he did not respond to years of other psychotherapies or depression medications, he simply resigned himself to a life of depression and poor health. He was able to help many others attain good health in his practice but he felt he would never get better. The HRV expert who was present, Peter Julian (a psychoneuroimmunologist), gave him an HRV prior to treatment. Julian exclaimed that he had never seen such a low power score as **54**! His SDNN was not very good either; it was a dangerously low **32**! I found a psychological reversal present, which had to be corrected or else he would have been impossible to treat. It is possible that if previous therapists knew how to correct this problem, they might have been able to show some results.

Within five minutes I was able to eliminate all traces of depression using standard TFT causal diagnosis. Julian then did another reading and this physician's power score immediately jumped from a record low of **54 to 6596** (in the normal range)--an increase greater than a hundred fold! His very poor SDNN jumped from a dangerously low **32** to a very desirable **144**! These are the kinds of results that doctors and researchers experienced in HRV find unprecedented.

PSYCHIATRIST WITH HEART PROBLEM AND WORRY

In other TFT causal diagnostic trainings, I had the opportunity to treat two more physicians. Each of these doctors had diagnosed heart problems. The first was a 37 year-old psychiatrist who had his own private psychiatric clinic. He requested treatment because he was very worried about the status of his heart, which had been a known problem for five years.

Unfortunately, we did not get a base score before TFT causal diagnostic treatment was done, so it is likely that his HRV scores were worse than indicated here. His SDNN (after TFT causal diagnosis directed therapy) was still a poor **41**. His power after TFT causal diagnosis directed therapy, prior to TFT-VT treatment, was a poor **202** and he was *not "within the box,"* indicating an imbalance in the ANS.

After VT we got dramatic improvements. His SDNN immediately jumped to **69**; his power score which was a poor **517** (even after treatment!) jumped to **2153**. Prior to the VT treatment he was far

"from the box" (ANS balance) and after the VT he was "in the box," showing that his ANS is balanced. Also, his worry, which certainly was not helping the problem but nevertheless is a perfectly normal emotional response, was completely eliminated after the VT treatment. The treatment took about six minutes.

PHYSICIAN WHOSE HEART HAD STOPPED

This 36-year-old brilliant physician was victim to a complete heart stoppage three months earlier. Fortunately, he was close to a hospital and they were able to get his heart going again. Prior to TFT-VT his SDNN was a dangerous **16**. This is the lowest SDNN I had ever seen in my few months of doing HRV work. Below 50 is considered risky. His power was also extremely low at **131** and he was far "out of the box" indicating a severe imbalance in the ANS. After VT treatment we got dramatic improvements. His SDNN, which was a dangerous **16** jumped up to **91**. His power score, which was a serious low of **131** suddenly, expanded to a very nice **3018**. Also, his ANS now shows balance by being "within the box."

CONCLUSIONS

The results we report will be very good news to heart patients and their cardiologists. We have shown, thanks to Dr. Royal's discovery regarding HRV and TFT, that we can dramatically improve HRV scores. Prior to this work, only very modest changes were reported due to exercise. Exercise is good in its own right, but TFT and VT can facilitate dramatic improvements in HRV scores in a brief period of time. Recall that exercise improved SDNN by some 70 to 30% in humans and dogs respectively, over many weeks.

These are very small improvements and they took a matter of from six to eight weeks to achieve. The improvements due to TFT are much more powerful and dramatic and increases of 200% are not unusual. Some have improved scores in a ratio of over a hundred times better than before treatment. Also, these changes do not require months of work but are accomplished almost instantly.

Our finding on improving HRV is very promising and like almost of all of TFT the results are unprecedented. It remains to be demonstrated, however, that these very encouraging results get translated into improved quality as well as increased endurance of life. Research and clinical experience strongly suggest this may very well be the case.

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