Rest, Does the Drive for Efficiency Really Lead to Sufficiency?

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Recommended Citation  
Kieffer, H. Scott, "Rest, Does the Drive for Efficiency Really Lead to Sufficiency?" (2009). Faculty Scholarship Papers. 37.  
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REST

Does the Drive for Efficiency Really Lead to Sufficiency?

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Messiah College, August 2008

Integration of Faith and Learning Paper

for promotion to rank of Full Professor
PREFACE

Personal Narrative

In his book Let Your Life Speak, Parker Palmer (2000) states that:

"If we are to live our lives fully and well, we must learn to embrace the opposites, to live in creative tension between our limits and our potential. We must honor our limitations in ways that do not distort our nature, and we must trust and use our gifts in ways that fulfill the potentials God gave us" (p 55).

During my first reading of this book, I jotted down a note in the margin to denote a possible subtitle to this section that could read "Where Our Passion Meets Our Pathology." Little did I realize, the next 5 years would pose not only a challenge to the creative tension between my limits and my potential but also to my limits and my health. During the past 5 years I have published 3 articles, have presented at 20 national or regional research conferences, and have been elected/appointed to 5 national or regional committees in key organizations in my field. Yet, my pursuit of academic success and desire to achieve “Fellow” status were at odds with the limitations posed by my personal limits, teaching workload, family obligations, and service to God and society. I have come to realize that I have not been honoring those limitations but have distorted my gifts due to an imbalance in recognizing the difference between passion and pathology.

Nearly two years ago, over Winter Break, I first encountered the collision of my passion and pathology. As an exercise physiologist, I have a pretty good sense of my body. One afternoon, after a quick assessment, I discovered that my blood pressure was 168/128 mmHg (just below the threshold of a medical emergency). The subsequent journey for a diagnosis took nearly two years with trips to several specialists, including neurologists, cardiologists, and immunologists, consultations at numerous clinics, including the Hershey Medical Center, imaging centers, and the Johns Hopkins Neurological unit; and hosts of tests that poked, prodded, and nearly electrocuted me. Finally, I found myself sitting at an immunology clinic at the Hershey Medical Center with one of the country’s leading specialists in Chronic Fatigue Syndrome (CFS). He concluded that I was indeed suffering from CFS, a medically unexplained illness clinically classified by the Centers for Disease Control and Prevention (Evengard & Klimas, 2002).

Symptoms of CFS include:

- Impaired memory or concentration capacity
- Recurrent sore throat
- Tender cervical or axillary lymph nodes
- Mild muscle pain
- Arthralgia (joint pain)
- Headaches (of new origin)
- Sleep disturbance
- Post exercise malaise (exacerbation of fatigue following exercise)

Although the diagnosis and identification were finally named, more stress followed because it was difficult to find the energy to manage a fatigue syndrome. Moreover, as an exercise physiologist, I felt of all people, I should know how to deal with CFS. After consultation with my physician, a management plan was implemented that included lifestyle changes, an experimental drug therapy (a specific heart medication) that has been shown to systemically attenuate the sympathetic nervous system, and a carefully monitored exercise program. The collision of my passion and pathology has not ended the journey, but rather has initiated a new journey that has helped me better understand the potential God has given me.

Palmer (2000) asserts that difficult times like these are when we arrive at the heart of a paradox and previously unknown worlds open up to us. Thus, for me, writing this paper has been both challenging and rewarding as I have tried to understand life from a new vantage point. Through the writing process I have tried to explore the physiological underpinnings of overtraining, the body's response to the maladaptation to stress, and the understanding of rest (both physical and spiritual). In addition, I have tried to open up a new world from my experience and capture the promise of rest, specifically through Sabbath type activities; to seek a new type of rest in Christ; and cognitively and spiritually to embrace God's amazing grace.

Scripture clearly points to living in God's peace and rest not beyond but within the midst of our anxious and stressful conditions. In both the Old and New Testaments, the authors identify the presence of external pressures they encounter, but even the most cursory reading of these passages points us to a deeper and fuller kind of rest available with God in the middle of such difficulties. This kind of rest offers us a profound level of freedom within the distraction of life that overwhelms us and causes us to suffer from weariness. This is perhaps most beautifully expressed in the words of Jesus in Matthew 11: 28-30:

28 “Come to me, all you who are weary and burdened, and I will give you rest. 29 Take my yoke upon you and learn from me, for I am gentle and humble in heart, and you will find rest for your souls. 30 For my yoke is easy and my burden is light.” (NIV)
INTRODUCTION

Over the past 20 years, the impact of stress on the body and the consequences of a stressful lifestyle have emerged as topics of interest for the American public as well as a major area of research in the discipline of Health and Human Performance. As a result, bookstores host shelves of new books proclaiming ways to minimize or eliminate stress in our lives and new waves of self-help protocols have been developed to guide readers in the restoration of balance to stressed-out lives. Although the interest, knowledge, and mechanisms are in place to initiate the restoration of balance, our fast-paced society that encourages the need to produce, accomplish, and perform has failed to yield relief from hectic lifestyles. To illustrate this point, the 1999 National Health Interview Survey reported that 60 percent of the American population experienced moderate amounts of stress, and of those reporting, 20 percent experienced high amounts of stress (Brown, Thomas, & Kotecki, 2002). Even though an optimal amount of stress is necessary to stimulate the body to perform better, the burdens of excess stress and the corresponding stress response have taken their toll on the American condition. It is estimated that 30 million Americans suffer from anxiety disorders (Kroenke, Spitzer, Williams, Monahan, & Lowe, 2007) and that another 18 million Americans suffer annually from depression (Office of Disease Prevention and Health Promotion, 2000).

The American preoccupation with work and performance has created a culture that has disavowed and even discouraged one of the basic tenants of life – rest. Swenson (1992) indicates that common "descriptors of our society include active, busy, driven, fatigued, tired, exhausted, weary, burned out, anxious, overloaded, or stressed...yet we seldom hear our society described as 'well-rested'" (p. 226). Perhaps our striving for efficiency in our work and lives has failed us and left us in a state of inefficiency, or at best in a form of pseudo-efficiency. This quest for rest will continue to leave us overloaded and weary until we can find our source of sufficiency, i.e., God’s rest. Dawn, in her book Keeping the Sabbath Wholly (1989), suggests that we need to find a way to recover the Biblical idea of rest rooted in the term Sabbath. She argues that Sabbath rest is not only resting from work but "also from the need to accomplish and be productive, from the worry and tension that accompany our modern criterion of efficiency, from our efforts to be in control of our lives as if we were God, from our possessiveness and
our enculturation, and finally, from the humdrum and meaninglessness that result when life is pursued without God as center of it all" (p. 3).

In our stressed, busy, and complicated lives, it is hard to comprehend the meaning of this kind of rest, let alone the rich possibilities implied in Sabbath rest, or even more specifically, the abstract idea of spiritual rest. Thus, the purpose of this paper is to recover the promise of rest, spiritual and physical, as a remedy for our culture. I will argue that our culture has become disillusioned by the idea that "more is better" and that our excessive pursuit of efficiency may actually lead to a state of inefficiency. To help recover the promise of rest, I will first explore the mechanisms of stress and some of the physiological consequences that may occur during periods of prolonged stress. Secondly, by using the example of overtraining an athlete, I will discuss the physiological and performance consequences of training without appropriate rest and how the body negatively responds to elevated and sustained amounts of stress. Finally, I will apply this example to our overloaded lives and explore how insights of spiritual rest from the Old and New Testaments, as well as an understanding of grace, may help us better understand the meaning of rest and help bring back balance into our busy and overloaded lives.

MECHANISMS OF STRESS

Stress is either a positive or negative response within an organism, including the human body, that is caused by a change in internal or external environmental conditions. Johnson (1995) states that stress is defined as an event or situation that results in the change of the environmental condition. Hole (1990) indicates that as a result of these stressors, several physiological responses are triggered to resist the loss of a homeostatic balance of the organism. In addition, Hole establishes that the shift from homeostatic balance may originate from factors of physiological or psychological origin. He indicates that physiological stress may be a result of extreme environmental conditions (e.g. temperature, low oxygen), prolonged heavy exercise, and loud noises. On the other hand, he also asserts that psychological stress may result from feelings of anger, fear, grief, anxiety, joy, happiness, or sexual arousal.

Regardless of the origin of the stressor, the body initiates a series of responses to the disruption of the homeostatic balance. The body responds by activating the hypothalamus which, in turn, initiates the sympathetic nervous system and triggers the release of specific hormones within the body. Gleeson
(2008) states that the hypothalamic control, specifically the mechanisms of the sympathético-adrenal-medullary axis (SAM) and the hypothalamic-pituitary-adrenal axis (HPA) are stimulated as a response to these stressful situations. Each axis initiates a neuro-endocrine response within the body, and Brown et al. (2002) states that the coupling of these two systems alters the function of nearly every part of the body and prepares it for vigorous muscular activity.

This first stage of the stress response is known as the *Fight or Flight Response*. During this initial encounter with stress, the hypothalamus, the control center of the central nervous system that monitors homeostasis in the body and is the key factor in maintaining the balance between the nervous and endocrine systems, is stimulated. The SAM is also stimulated and a cascade of neuro-endocrine responses is set in motion. The initial response of SAM is the activation of the sympathetic nervous system, which prepares the body for action. The direct neurally-mediated mechanisms include an increase in blood glucose concentration, an increased heart rate, an increased blood pressure, an increased ventilatory rate, and a shunting of blood away from the digestive organs to skeletal muscle (Hole, 1990). In addition to the increased response of the sympathetic nervous system, SAM is responsible for initiating an endocrine response from the adrenal gland. The production and release of the catecholamines (epinephrine and norepinephrine) from the adrenal medulla is a systemic release and causes a widespread sympathetic stimulation within the body (Robergs & Roberts, 1997). Brown et al. (2002) indicates that these two hormonal releases from the endocrine system are of particular importance because the specific response of the hormonal stimulation lasts up to 10 times longer than the sympathetic system alone.

In addition to the SAM response, the HPA is also stimulated at the onset of a stress or stressors. As stated previously, the hypothalamus monitors the homeostasis of the body and initiates a neuro-endocrine response to stress with two different mechanisms. During the HPA mechanism, the hypothalamus first releases a corticotropin-releasing hormone that causes the anterior lobe of the pituitary gland to release Adrenocorticotropic hormone (ACTH) which, in turn, causes the adrenal cortex to release cortisol. Cortisol is an important hormone in the homeostatic mechanism because it promotes the release of amino acids, fatty acids, and the stimulation of gluconeogenesis. This particular process allows the body to mobilize, utilize, or convert the various fuel sources (fat and protein) of the body for the energy
requirement needed to maintain homeostasis. Secondly, Hole (1990) indicates that glucagon and growth hormones are released from the pancreas and pituitary, respectively. The combination of these two released hormones aid in mobilizing energy sources and in the uptake of amino acids for cell recovery. Finally, antidiuretic hormone (ADH) is released from the pituitary to stimulate the retention of water in the kidneys. This resulting uptake of water in the kidneys brings about an increased blood volume, especially during heavy sweating, which is essential to minimize the strain placed on the cardiovascular system due to fluid loss during exercise.

The second stage of the stress response is known as the Stage of Resistance. Brown et al. (2002) describes this as a readjustment stage in which the parasympathetic system is activated to bring the body back to normal. The parasympathetic system has the opposite response of the sympathetic system and attenuates the responses of the sympathetic system (e.g. lowering of heart rate, lowering of blood pressure). Brown et al. indicates that acetylcholine, an inhibitory hormone of the sympathetic system, is released resulting in the reduction of the sympathetic response. The Stage of Resistance represents the period of time in which the homeostatic imbalance is brought back to normal. The mechanism for the return to homeostasis is due to the implementation of stress management strategies (e.g. progressive relaxation) or to the natural acclimation to the stress, in which case the body adapts and becomes accustomed to the stress response (e.g. becoming comfortable speaking in public). In each of these situations, the parasympathetic nervous system is a major component of bringing the body back to a normal (homeostatic) level. Failure to control the increased and sustained activation of the sympathetic response may lead to dysfunction of targeted tissues or organs of the body.

The third stage of the stress response is known as the Stage of Exhaustion. Asterita (1985) states that prolonged stimulation of these organs can result in an altered physiological state which could, in the long run, lead to a stress-related disorder. She further indicates that these stress-related disorders (or specific end-organ dysfunction) can be a result of chronic or persistent hyperarousal patterns from frequent or prolonged overstimulation. Stress-related diseases due to overstimulation or over-reactivity may include the dysfunction of several end-organs. The nervous and hormonal response to stress triggers a number of physiological events; and, due to the integral nature of these responses, many potential end-organs or targets may be affected by these actions. First of all, overstimulation or over-
reactivity may manifest itself in the musculoskeletal system resulting in muscle ache, headache, osteoarthritis, and/or possibly rheumatoid arthritis (Asterita, 1985). Secondly, the cardiovascular system may be influenced by the sympathetic/parasympathetic and hormonal actions of the body. Chronic overstimulation or over-reactivity to stress may lead to hypertension, angina, cardiac dysrhythmia, and migraine headaches. Finally, a host of other potential end-organ dysfunctions, such as, amenorrhea, impotency, incontinence, immunosuppression, and gastrointestinal disorders, may be a result of overstimulation (Asterita, 1985).

A specific example of end-organ dysfunction or targeted tissue response during the sympathetic and parasympathetic interplay can be observed in a review article explaining the psychobiological correlates of asthma (Lehrer, Feldman, Giardino, Song, & Schmaling, 2002). Asthma is an obstructive airway disorder caused by the hypersensitivity of the smooth muscle lining of the bronchioles of the lungs, causing constriction of the airway and a corresponding difficulty of moving air in and out of the lung (Robergs & Roberts, 1997). Affleck et al. (2000) found in their review of literature that under mild stress-related conditions (e.g., stimulation during mental math) that patients (healthy and asthmatics) were able to produce a bronchodilation, which allowed more air to enter the lungs. The mild stress created a beneficial sympathetic nervous system response, which caused the bronchioles to dilate (expand to allow more air flow) to cope positively with the increased mental demand. However, when the patients were placed under higher stress conditions (e.g., embarrassment), 20-40 percent of asthmatics experienced bronchioconstriction (decrease in the amount of air moving in and out of the lung) and corresponding symptoms of asthma. The response following higher bouts of stress in asthmatics suggests that an inhibition of the sympathetic nervous system takes place, thus producing bronchioconstriction caused by the activation of the parasympathetic nervous system. Furthermore, Lehrer et al. indicates that stress-induced sympathetic activation is often followed by a parasympathetic rebound, which could possibly produce a stress related asthma attack. Interestingly, the activation of the parasympathetic nervous system during this rebound effect has been suggested to induce nocturnal asthma attacks in which the parasympathetic nervous system tries to bring the body back to a homeostatic level during the sleep cycle and, in doing so, creates bronchioconstriction. As a result, the patient awakes with an asthma attack.
Mechanisms of Stress Produced by Physical Training

In a culture obsessed with performance and productivity, it is not surprising to find athletes pushed beyond their limits by themselves or their coaches. As in other aspects of life, a certain amount of positive stress is good for motivation, positive self-esteem, and health; however, too much stress causes end-organ dysfunction. When training athletes, coaches must push their athletes extremely close to the point of overload without inducing a condition of overtraining, staleness, or burnout. Unfortunately, there is no perfect formula for training as each individual athlete responds to the stress of training differently and requires an appropriate amount of rest in relation to his or her training load and volume to ward off the potential negative effects of excessive exercise stress.

Since the idea of performance, perfection, and production has also permeated the sport and fitness culture, professionals in the field of exercise science and related fields need to pay careful attention to athletes who push themselves harder and farther to gain any competitive edge. Regrettably, many athletes train at an extremely high intensity and elevated training volume while not realizing that this may produce a syndrome known as overtraining or staleness. Kreider, Fry, and O'Toole (1998) indicate that overtraining is a major problem among competitive athletes and that the pressures of maintaining high volumes of training, coupled with internal and external pressures of sport, may actually decrease athletic function or efficiency. McArdle (1996) states that this decrease in function will persist unless athletes physically rest their bodies, i.e., cease any activity.

It is known that moderate or incremental amounts of stress may help the body respond in a positive manner. In a similar way, the goal in athletics or fitness is to subject the body to appropriate amounts of stress during training which, in turn, produces positive physical adaptations to meet the demand of engaging in activity. Kreider et al. (1998) define this concept as overreaching, which clearly needs to be distinguished from overtraining. More specifically, overreaching is an accumulation of stress resulting in a short-term decrement in performance capacity with or without the related physiological and psychological signs and symptoms of overtraining. Lehmann et al. (1997) indicate that this short-term decline in performance can be seen as a normal part of athletic training and must be differentiated from the long-term stress that leads to overtraining. In addition, Kraemer and Nindl (1998) explain that specific
training regimens may manipulate training to intentionally decrease performance to allow for a rebound in performance to occur. This particular training adaptation is called supercompensation and results in an increased adapted potential of the body following a short-term recovery or rest period. This phenomenon is of critical importance to the athlete because if the proper amount of stress is placed on the body and the appropriate amount of rest is given, the athlete’s body will use the training and rest cycle to actually gain increases in performance.

In contrast to overreaching, Kreider et al. (1998) define overtraining as an accumulation of training and non-training stress resulting in a long-term decrement of performance capacity where the restoration of performance may take several weeks or several months to regain. In addition to this definition, Gastmann and Lehmann (1998) indicate that key symptoms in the overtrained athlete include persistent performance incompetence, persistent high complaint ratings, an altered mood state, and suppressed reproductive function. Gastmann and Lehmann also conclude that this overtraining state originates in a formula in which “training/competition is greater than recovery imbalance,” thus resulting in a multitude of physiological imbalances.

**Overreaching and Overtraining**

As stated previously, overreaching is the short-term physiological detriment in performance due to the deliberate increase in training volume (defined as a combination of the intensity, frequency, and duration of training) to bring about a supercompensation in muscular function. An example of overreaching may be the few days or weeks when a recreational runner decides to train for a 10K road race and experiences a little more fatigue than usual when he or she increases the mileage at the beginning of the training program. However, the runner will adapt to these changes as the training continues or feel better than usual (able to run the old, shorter courses more easily) when the mileage is reduced. Kuipers (1997) suggests that overreaching is most likely a result of muscle fatigue due to the body’s inability to maintain sufficient metabolic processes and the lack of suitable recovery or rest. He suggests that the mechanism of this fatigue stems from an imbalance of adenosine triphosphate (ATP) splitting and ATP regeneration, thus leading to a high concentration of adenosine diphosphate (ADP) within the cell. Since ATP is a high energy molecule in the body from which energy is derived in order for
the body to function, low amounts of ATP and high amounts of ADP will cause the muscle and other areas of the body to fatigue easily or not work as efficiently. In addition, Lehmann et al.'s (1998) review of the literature on extensive short-term training found that in recreational athletes, there was a suppression of blood glucose, free fatty acids, and blood lactate performance at submaximal workloads. These findings suggest that the increased training volume, coupled with the lack of recovery time, decreased the body's ability to perform.

However, while such findings have been generally accepted for overreaching, Wilmore and Costill (1999) indicate that the exact mechanism for the overtraining syndrome is not clearly understood. Although several mechanisms of overtraining have been the focus of recent research, one of the more accepted models for the overtraining syndrome has been the balance between the sympathetic and parasympathetic nervous systems. The interplay between these two systems is not well understood with respect to overtraining; however, the acute response to exercise stress and fatigue is thought to be associated with a sympathetic response, whereas the parasympathetic system may play a major role in the overtraining response. Following a review of the literature and meta-analysis study, Fry (1998) suggests that the sympathetic response is more apt to appear in resistance and explosive types of programs (e.g. weight training, sprinting), whereas the parasympathetic response is more likely to appear in endurance activities as a result of sustained levels of arousal (i.e., exercise of other factors).

In many endurance types of activities, such as running, swimming, and bicycling, competitive athletes and recreational participants are often lured into believing that "more is better." They increase their training and volumes to achieve better competition times or to train for ultra endurance events such as marathons or century (100 mile) rides. Unfortunately, many of these athletes injure themselves due to the increase in training volume or suffer from burnout due to overtraining. In the latter case, overtraining is most likely the result of the engagement of the parasympathetic response. Lehmann et al. (1998) indicate that the parasympathetic syndrome is characterized by high fatigue ratings and apathy. In addition, "overtrained endurance athletes have been found to have (1) performance incompetence, (2) high complaint ratings, (3) altered mood-state, and (4) suppressed reproductive function...which are well correlated with training load" (pg. 20). Lehmann et al. (1997) emphasize that this type of overload is most
likely the result of an imbalance in long-term elevated training volumes and too little time for recovery or rest.

In support of such findings, Costill (1992), one of the world's renowned exercise physiologists, tells a story of his research and experiences with overtrained athletes. In this particular study, he was able to convince a local swimming coach to provide him access to a number of competitive swimmers for his research. During the study, the exercise loads and volumes consisted of 4-6 hours in the pool per day. Due to the coach's desire not to alter the training loads of his best athletes, he gave Costill some of his junior varsity swimmers and a few other trying swimmers that were seeking admission into a collegiate program. Costill immediately decreased the training volume of the athletes and worked more intentionally on the specificity of the athlete's particular event. One of the trying athletes began to show improvement following the decrease in training volume. He ended up making the junior varsity squad, then the varsity squad, became an All-American, and qualified for the U.S. Olympic Trials. His initial high levels of training volume and intensity created a constant state of overtraining that led to a state of performance incompetence (Costill, 1992).

Recent research and laboratory techniques have allowed researchers and clinical practitioners to test and monitor this type of evidence of overtraining. Wilmore and Costill (1999) state that long periods of training are marked by disturbances in the endocrine system, and these specific markers can be evaluated by obtaining blood or urine samples. For instance, Lehmann (1997) reports that overtrained athletes show a 50-70% reduction in basal urinary catecholamine excretion, epinephrine (adrenaline), and norepinephrine (noradrenalin). Lehmann (1998) states that the release of free catecholamines during the night is representative of the tone of the sympathetic nervous system and will result in a decreased function of the cardiovascular system, therefore yielding decreased performance and an increased rate of fatigue (this is suggestive of the parasympathetic rebound as defined with the nocturnal asthma attacks).

As indicated earlier, Kreider et al. (1998) have argued that overtraining is a major problem among competitive athletes and that the pressures of maintaining high volumes of training, coupled with internal and external pressures of sport, may actually decrease athletic function. In addition, Urhausen and Kindermann (2002) state that the overtraining syndrome is one of the most feared complications in the area of sport and is in particular need of further scientific research. Thus, conducting research into the
physiological mechanisms associated with overtraining will help us better understand how optimal levels of training and other external factors associated with sport and life decrease the function of the body and potentially lead to end-organ dysfunction.

*How Does Stress Affect Us?*

Although several negative aspects of stress have been discussed thus far, it is important to recognize the need for a healthy balance of stress, or in athletic terms, *overreaching*, in our lives. I have claimed that an optimal amount of stress on the body causes the body to adapt in a positive manner, and it is essential to maintain optimal amounts of stress for motivation and stimulation to produce a training effect. Brown et al. (2002) presents the Yerks-Dodson Law (Appendix A) which examines the relationship between too little and too much stress. This inverted U-shaped model suggests that too little stimulation leads to boredom and dissatisfaction whereas too much stress leads to exhaustion and over-stimulation. However, the peak of the inverted U-shaped model represents an optimal stimulation in which the body functions at optimal levels. This is also true for training athletes; the balance between overreaching and overtraining represents a fine line. For many coaches working with athletes, the line for stimulation and overstimulation is often blurred and miscalculated.

As with athletes, the fine line between overreaching and overtraining in our own lives is often miscalculated, and we experience the detrimental effects of increased training volume in our daily lives. Nevertheless, it is important to recognize that a busy, stressful lifestyle is not easily eliminated. Our culture values active, productive lives. It offers rewards, recognition, and monetary compensation for those who “produce.” The idea that “more is better” has never been truer in our culture. We often enter a cycle in which we are required to do more; we accomplish those expectations; we are rewarded and recognized for such accomplishments; and then we do even more to maintain the same level of recognition. Thus, the cycle continues to keep us locked in a pattern we are helpless to escape.

In our own academic context, more presentations, more publications, more service, and more time spent with students are not only encouraged but come with the reward of promotion, tenure, and honors of distinction. While these are all wonderful and valuable endeavors and are often quite necessary in order to be considered conscientious faculty members, these academic markers may produce high
levels of stress and unbalanced lives. The same may be true for students who desire or have internal and external pressures to excel. They, too, are rewarded for more involvement, greater accomplishments, higher GPA's, and participation in many curricular and co-curricular experiences. They also can quickly slip into unbalanced lives if they overextend themselves. As a result of the internal and/or external pressures to accomplish, our busy, stressful, and unbalanced lives may cause us to pay less attention to the nurturance of our inner life. We become so preoccupied with the task at hand that reflection on life's deeper meaning and spiritual significance is diminished, or perhaps even lost.

No doubt our lives have grown overcrowded and complex. Manning (1992) indicates that we have become too busy with far too many outer distractions that compete for care of the self. He suggests that civic, parental, financial, spiritual, societal, and professional demands threaten our time, peace, and joy. However, within the context of our busy and performance-minded culture, Manning suggests that we have become uneasy, strained, fearful, and shallow persons. Many Christians are looking for a more meaningful, balanced, and unhurried life.

WHAT DOES THE BIBLE TEACH US ABOUT REST?

I think that Manning is accurate in his assessment of our current culture; we do need to reorder our lives to find balance and rest. Just as the exercise physiologist explores the interplay of the stress response with the optimal training intervention to overreach without overtraining, we need to look at our harried lives to address our overreaching and overtraining that may cause physiological as well as spiritual dysfunction. Three distinct and practical Biblical themes seem appropriate to discuss with regard to understanding rest. First, the Old Testament outlines specific laws that systematically integrate rest into the culture. A cursory reading of the Old Testament and Sabbath law could lead to a narrow and ill-defined understanding of the meaning of Sabbath. However, a deeper exploration of the term yields significant insight to help us reclaim a time and place for rest in today's fast-paced culture. Second, the New Testament shares an invitation to rest in Christ. Reflection on a few passages, specifically Matthew: 1:28-30, Luke 12:22-30, Hebrews 4:1-11, and Philippians 4:6, helps us as disciples of Christ to share our burdens and journey to find rest. Finally, an understanding of rest through God's redemptive grace allows us to experience true freedom from the overtraining within our daily lives.
In the Old Testament we find three main words for rest: “Sabat meaning to stop or cease work or activity; Nuah, meaning to settle down with no movement (to rest from exhaustion) but with a sense of inner ease or security; and Saquat, meaning quality and absence of inner anxiety and external pressure” (Tan, 2000, p. 22). Each of these terms represents a unique and essential form of rest. However, their meanings run counter to our culture’s fast pace and seem to be as outdated as the so-called “blue laws” that forbade activities such as hanging the laundry out to dry or mowing the lawn on Sunday afternoons. Yet, we must keep in mind that the meaning of the term Sabbath rest implies a unique gift from God that allows us to regenerate and experience God’s grace. Interestingly, Baltzer (1998) argues that a review of the vast diversity of languages fails to find a word or concept that parallels the meaning of the Jewish word Sabbath. The question thus arises: How has the word rest, an integral foundation of the Judeo-Christian tradition been misinterpreted or forgotten?

For some, the very idea of resting conjures up notions of laziness and slothfulness that runs counter to the pace and expectations of our society. However, in Exodus 20: 8-11, the Ten Commandments specifically mandate us to rest. Interestingly, the verb used in this passage is nuah (or nahah), meaning “to settle down or to rest from exhaustion,” and not the verb Sabat (root of Sabbath), “to cease work” (Andreasen, 1978). Although the word choice and specific meanings of the two words could spark intense debate over Sabbath observance, Andreasen acknowledges that regardless of the word used for rest, God’s Sabbath serves as a model for humans as a need to rest. “Sabbath did eventually become a most important part of Judaism and it was accepted together with circumcision as a sign of a covenant between Israel and her God” (p. 29). Furthermore, strict Sabbath laws were embedded into the culture to ensure the observance of rest as a central tenet of the Ten Commandments. In fact, this was so important to the Jewish culture during this period that the severity of breaking the Commandment of rest was punishable by death (Exodus 31: 13-17).

As suggested earlier, the word Sabat means literally “to cease from work.” Wray (1998), in her study on early homiletics of the Christian faith, suggests that the idea of rest, specifically the Sabbath, was lost in the ambivalence and hostility of Christian communities towards these Jewish Sabbath traditions.
Thus, in the early Christian Church, the idea or proclamation of rest carried with it an anti-Sabbath message or meaning. While some churches today have begun to tentatively reconsider the possibilities for Sabbath rest, Wray argues that we must actively recapture the early views of rest. She also suggests that due to the separation of rest and Sabbath in early Christian tradition, a new look at the Sabbath, without its legalistic undertones, may be a good way to begin the recovery of a doctrine of rest relevant to our contemporary culture.

Rest is an integral part of the commandment and invitation to life given to us by God. Moltmann (1998), one of the more important and influential thinkers in theology, states that the “seventh day” was a day of finishing and celebration and that “in creation, God went out of Godself. In God’s rest, God returns to Godself. In creation, God engaged God’s creatures. In God’s rest, God gave them space” (p. 4). Here Moltmann paints a picture not of chaos and separation from God, but a wonderful image of a place of relaxation where obedience celebrates the experience of love and the joy of peace. “[W]hen the Creator comes to rest, then the creatures come to themselves and are able to bloom like flowers in the sun” (p. 4). God’s creation is fulfilled in the delight and rest that creation finds in God.

Interestingly, Sabbath rest is not a celebration of people, places, and things as much as it is a celebration of a time of rest. During this time, all of creation was given time to rest and recover: the fields needed rest, strangers were to be given rest, and debtors were given rest in the year of Jubilee. This time of rest is essential for us if we hope to find a way beyond our overly stressed out “24/7” culture. Always accessible by cell phone and email, over stimulated by advertisements on television and in print, bombarded with news and media of all kinds, we have succumbed to a time without rest. Like the overtrained athlete, constant stimulation via increased intensity and volume of activity will almost inevitably—contrary to its intended goal—create inefficiency that results in fatigue. For example, DeMent (1999) argues in his book The Promise of Sleep that constant stimulation throughout the week masks our sleep deprivation. However, when the weekend arrives and we try to relax and enjoy our time off, a sense of fatigue, known as the “Saturday Syndrome,” overtakes us and even the most enjoyable tasks seem to become burdensome because the body needs time to recover from such prolonged overstimulation. As with the athlete, we need to schedule quality time and/or “Sabbath rest” for our minds and bodies to recover. But we can further this analogy and say that just as the athlete who learns to overreach instead of
overtrain, we, too, can find that Sabbath rest will result in a kind of compensation that will renew our energy and sense of purpose similar to the type of super-compensation that overreaching can produce in an athlete. The Sabbath is a gift from God that gives us time to rest, recover, and regenerate from the inside out, thereby invigorating us for meaningful production and restful care of our bodies, our communities, and the whole of creation.

New Testament – Exploring Rest

Andreasen (1978) argues that the strict Sabbath laws from Exodus 31:12-17 are directly related to the new life and fresh possibilities in Israel's new covenant and relationship with God. However, the New Testament – through the new covenant in Christ – redefines rest not as a law but as an invitation to a fuller and deeper kind of rest. The following scripture passage explores this invitation:

Matthew 11:28-30 – Rest for the Weary

28. "Come to me, all you who are weary and burdened, and I will give you rest. 29. Take my yoke upon you and learn from me, for I am gentle and humble in heart, and you will find rest for your souls. 30. For my yoke is easy and my burden is light." (NIV)

The passages preceding the familiar “Rest for the Weary” text provide a context for the application of the words of Jesus. In Matthew 11:20-24, Christ denounces the actions and attitudes of the cities of Korazin and Capernaum, in which he preached and performed many of his miracles. Yet, these two cities failed to keep the faith and transformation that transpired while Jesus lived and worked among the people. Wilkins (2004) asserts in his NIV Application Commentary that with the witnessing of the deeds of Jesus, the people of Korazin and Capernaum had a certain responsibility or privilege to maintain and foster that relationship that began with the works of Christ. However, that privilege led to self-exultation and the rejection of Christ. As with Korazin and Capernaum, our modern cities (lives) have been turned toward outward, self-seeking, and self-fulfilling tokens of life. Wilkins suggests that it is easy to find comfort in places other than Jesus and emphasizes that distractions such as television, alcohol, pornography, and a myriad of other objects dull us to the pain of life.

Following the accusations of waywardness in Matthew 11:20-24, the message from Matthew 11:25-27 brings us back to the focus of the relationship between God, Christ, and believers and sets up the prescription for us to find rest. Wilkins (2004) maintains that as with the two cities mentioned
previously, we have the responsibility not to dishonor or reject the knowledge of the relationship of God, Christ, and self. Upholding this relationship can be burdensome for some. However, in Matthew 11:28-30 we find hope in the “Rest for the Weary”. These refreshing comments do not take away the responsibilities we have been given. Conversely, the passage gives us hope for rest through a personal invitation from Christ. The metaphor of a yoke returns us to the union of God, Christ, and self. The joining together with a yoke does not allow us to meaninglessly hand our burdens over to Christ, but to affirm our responsibility of the knowledge of Christ and to work within the establishment of church and society. Moreover, the passage comforts us in that we are not left alone to aimlessly wander without direction. The passage invites us through the words, “Come to me,” to a hope of shared responsibility through the relationship between God, Christ, and self.

Interestingly, immediately following the chastising of Korazin and Capernaum and the invitation to the followers to share their weary load with him, Jesus challenges the Pharisaic law by allowing his hungry disciples to gather grain on the Sabbath and subsequently heals a man in Matthew 12:1-21. Without delay the Pharisees challenge his unlawful acts against the Sabbath and seek accusations against him. In this passage, Jesus separates himself from the Pharisees because he takes the burdens of the hungry and ill and offers them a new kind of rest.

Luke 12:22-31

22 Then Jesus said to his disciples: “Therefore I tell you, do not worry about your life, what you will eat; or about your body, what you will wear. 23 Life is more than food, and the body more than clothes. 24 Consider the ravens: They do not sow or reap, they have no storeroom or barn; yet God feeds them. And how much more valuable you are than birds! 25 Who of you by worrying can add a single hour to his life? 26 Since you cannot do this very little thing, why worry about the rest? 27 Consider how the lilies grow. They do not labor or spin. Yet I tell you, not even Solomon in all his splendor was dressed like one of these. 28 If that is how God clothes the grass of the field, which is here today and tomorrow is thrown into the fire, how much more will he clothe you, O you of little faith! 29 And do not set your heart on what you will eat or drink; do not worry about it. 30 For the pagan world runs after all such things, and your Father knows that you need them. 31 But seek his kingdom, and these things will be given to you as well. (NIV)

A review of Luke 12:22-31 may help us better understand the thoughts Jesus had regarding our relationship with God and how to deal with anxiety-related issues. First, Evans (1990) finds in verse 22 that in the Greek text, the word worry, or in some translations the word anxious, is the verb merimnan
meaning in a general sense “to be concerned about or to be unduly concerned.” He further suggests that a practical interpretation of the word could refer to “not having an improper anxiety for a proper concern.” The use of the word merimnan immediately follows the parable in Luke 12:13-21 that cautions the reader against greed and one’s focus on self-indulgence. In contrast, Jesus, in verse 22 asks his disciples not to have an improper concern about those very things that sustain life. The verses could seem problematic with regard to the basic needs of survival. However, if the verb merimnan is directly parallel to the previous parable, then Jesus is not asking us to disregard our need but rather to turn our focus to the idea that life does not consist of possessions and things that lead to self-gratification. Bock (1996) points to this passage as corresponding to Matthew 6:25-26, which conveys the idea that life is more than food or clothing and directs us to find a higher purpose. Moreover, in verse 29, the author asks us not to set our heart on (or to seek) these provisions. The Greek word used in this passage comes from the verb meteroízeste, meaning “over bearing” and comes from the root word meteoroí meaning “in mid-air” or “in suspense” (Evans, 1990). Bock suggests that the text to this point “paints a picture of anxious insecurity and instability as it races between various emotions, and the one who recognizes that God cares can be spared anxious mood swings.” Furthermore, he suggests that here lies the essence of hovering between hope and fear and heaven and earth.

Finally, in the closing verses of the passage, Jesus reassures readers that God cares for them. In verse 30, Jesus again asks them not to worry about the things of life but to have confidence that God will take care of them. He cautions them, as the previous parable teaches, that the pagan world runs toward greed and self-fulfillment, which leads directly to an improper concern. This was specifically demonstrated in the preceding parable in which the greed of the farmer directed him to tear down barns in order to build bigger barns that would lead to years of self-indulgence. In addition, Bock (1996) indicates that in earlier translations of the Bible, the text “for the pagan world runs” was interpreted as “the nature of the world.” Bock indicates that the term nature of the world was a common rabbinic expression used when referring to extending intimacy with God. Thus, by coupling the parable with the expression “nature of the world,” Jesus cautions us about the self-indulgences of the world while establishing an intimacy with God apart from the world. Verse 31 concludes by asking the reader to seek the Kingdom of God and to cultivate an attitude of total confidence in God as the provider of our highest good (Evans, 1990).
A final study on rest in the New Testament can be derived from the book of Hebrews.

Hebrews 4:1-11

1 Therefore, since the promise of entering his rest still stands, let us be careful that none of you be found to have fallen short of it. 2 For we also have had the gospel preached to us, just as they did; but the message they heard was of no value to them, because those who heard did not combine it with faith. 3 Now we who have believed enter that rest, just as God has said, "So I declared on oath in my anger, 'They shall never enter my rest.'" And yet his work has been finished since the creation of the world. 4 For somewhere he has spoken about the seventh day in these words: "And on the seventh day God rested from all his work." 5 And again in the passage above he says, "They shall never enter my rest." 6 It still remains that some will enter that rest, and those who formerly had the gospel preached to them did not go in, because of their disobedience. 7 Therefore God again set a certain day, calling it Today, when a long time later he spoke through David, as was said before: "Today, if you hear his voice, do not harden your hearts." 8 For if Joshua had given them rest, God would not have spoken later about another day. 9 There remains, then, a Sabbath-rest for the people of God; 10 for anyone who enters God's rest also rests from his own work, just as God did from his. 11 Let us therefore, make every effort to enter that rest, so that no one will fall by following their example of disobedience. (NIV)

In her dissertation, Rest as a Theological Metaphor in the Epistle to the Hebrews and the Gospel of Truth: Early Christian Homiletics of Rest, Wray (1998) suggests that Hebrews is a homily with a distinct Christological message, despite the lack of Christ's being mentioned in the passage containing the word rest. The direct Christological link established in the introduction to Hebrews (1:1-4) and the remaining text is a supporting sermon to help us find God's rest. Wray suggests that the use of the word rest (not Sabbath) is “used 29 times in the New Testament...and Hebrews 3:1-4,14, contains an extensive discussion of rest, or, more exactly, of the danger of failing to enter into the rest” (p. 4).

Wray also states that the term rest is used nine times in Hebrews 4:1-16 and calls for careful examination to further understand the author's guidance to help us find rest in Christ. The early passages of this text (Hebrews 4:1) remind us of God's rest and that it remains available to us. In verse 4:2, the author of Hebrews specifically reminds us that this promise of rest is not new. Wray suggests that the author is drawing a parallel with the Old Testament promise of rest for those who left Egypt and that the readers of the letter of Hebrews would have made this distinction quickly. In verses 2-7, she asserts that once the link to the teachings of the Old Testament were made, and the reader was reminded of that promise, the focus of the homily shifts to the four points of owning God's authority, hearing God's Word, the consequences of unfaithfulness, and the subsequent inability to find rest.

In verse 7, the author of the homily bridges the Old Testament and authority of God by using the word today. DeSilva (2000) indicates that the word used in this verse specifically points to responding to
God's promise through hearing the Word and by faith. He specifically suggests this text reminds us to respond to:

1) God's voice with trust and obedience
2) Not hardening one's heart
3) Not allowing distrust to turn one's heart away from the prize, which is rest

Furthermore, Wray (1998) concludes it is not sufficient to only hear the Word and have faith that God will eventually give us rest; we must also recognize that rest is available to us today.

Ellingsworth (1983) and Wray (1998) agree that verses 8-9 show that rest is still available. The term Sabbath that is used in many translations is actually the verb anapausis which means not the cessation of work, but a Sabbath celebration that Wray argues means "the very rest of God" (p.83). The passage is used to direct the reader from the common practice of resting the land in an agricultural community of the first century to the rest that remains available to us in God and through Christ. The verb anapausis is specifically used to contrast the verb katapausis that is used later in the sentence and translates as "a place of rest." Although not implicit within the verses, the use of these words focuses the meaning of the text as finding a place of rest in reference to Christ, and to specifically hearing and having faith today. Hearing and having faith will allow us to find the very rest of God by heeding the warnings asserted at the beginning of the homily to the Hebrews.

Rest through Grace

The word grace is a seemingly abstract concept that is difficult to understand let alone incorporate into our mind and soul. Yancey (1997) states that "grace means there is nothing we can do to make God love us more...and grace means there is nothing we can do to make God love us less" (p. 70). As I read this definition, I could not be more sure of God's grace in a cognitive way; however, in the midst of the day, during turmoil, or in the stress of a particular event, the manifestation and true understanding of God's grace often escapes me. I have often wondered if I am alone in not fully grasping the concept of grace or, even worse, I have often deemed myself a bad Christian because I struggle with the concept. I have found comfort in reading about the life of Martin Luther and the insights into his life as he struggled to grasp the concept of God's grace in his own life as well as in the life of the church.
Luther was a very bright student who matriculated through his studies and received his Master of Arts degree by the age of 22. His success in academia made it possible for him to gain entry into law school; however, during a thunderstorm on one of his journeys, he was struck to the ground and made an oath to enter seminary and to become a monk if he survived. Luther’s fervor for learning guided him to join the Black Cloister (Observant Augustinians) due to their seriousness of work and reputation for rigorous study (Kittelson, 1986). Luther became a zealous monk who worked diligently to follow the strict guidelines established by his Cloister and the church. Luther once said, "If anyone could have gained heaven as a monk, then I would have indeed been among them" (Kittelson, p. 53). In addition, Kittelson indicates that Luther sought to love God with all his heart, mind, and strength which in that period of time included fasting, sleep deprivation, and self-flagellation. Luther was so tormented by his sense that he had been condemned by the righteousness of God that he went through many spiritual troubles and dark nights of the soul. Later Luther called this time Anfechitung meaning “a sense of being lost.” Even at one point, Luther exclaimed, "I lost hold of Christ the Savior and comforter and made of him a stock-master and hangman over my poor soul" (Kittelson, p. 78).

During those early years, Luther never found rest in his religion, God, or Jesus Christ. However, as Luther matured in his faith and as a professor, he began to lecture on the Psalms and Romans between the years of 1513-1516 (Kittelson, p. 87) and gained some profound insights into the scriptures. Dillenberger (1962) states that during Luther's lifetime, the church held the position that "man hoped to stand before the righteousness of God by virtue of a combination of serious intentions, works, and sacramental realities" (p. xvii). This is where Luther met many of his anxieties because how could believers – even the most earnest and observant – present themselves before the vast righteousness of God? However, while teaching and preaching on Psalms and Romans, Luther began to revisit the meaning of the righteousness of God and came to the conclusion that “the righteousness of God is now primarily the grace which transforms and makes man righteous…and that grace alone enables man to stand before the righteousness of God” (p. xviii).

Romans 1:16-17 opened the door for Luther’s understanding of grace through Romans 1:17 and the transformation that occurs through faith. This transformation of faith brings us full circle to “Rest for the Weary” in Matthew because the burden and anxiety (i.e., the Anfechitung of life) distracts us from our
resting in Christ. Moltmann (1998) explains that Matthew 11:28-30 invites us to a different kind of rest. Here Jesus contrasts the rest found in the Pharisaic burden of law with the rest we find in God’s grace. Such legalism excludes rest, weighing down believers with the impossible demands of perfection. The rest that Jesus spoke of opens a whole new way of living and thinking as an invitation into the divine rest of God. Busby (1993) expressed this well when he described the restful heart as “a heart that is coming to a place to believe and embrace the truth of its value, worth and acceptance with God [that] is based on a free gift that has nothing to do with performance” (p. 72). This new possibility of free grace and rest that is beyond the burden of performance and perfection comports well with a critique of the lack of rest and preoccupation with productivity so reflective of our contemporary culture.

CONCLUSION

Christians in the fields of Health and Human Performance are at an interesting crossroads. Tan (2000) and Seward (2001) both identify a growing interest in combining some kind of spirituality with health and wellness. Tan claims that numerous people are entering the quest for the recovery of rest from many different vantage points, including Eastern religions and New Age belief systems, to change their lifestyle in a meaningful way. In addition, Seward, a best-selling author on stress-related issues, identifies more than 20 “sages” and “wisdom keepers” that give us universal insight into the connections between spirituality, higher consciousness, and stress relief. Thus, Christian educators and professionals need to understand that this spiritual interest and connection in relation to stress and relaxation are not a passing religious fad, but are profoundly significant for our physical well-being and, more importantly, can be traced to the very beginning of Judeo-Christian belief.

But what does this kind of restful life look like? And how do we escape the never-ending cycle of activity and find well-balanced rest? Or to use a popular expression, how do we find a balance in less doing and more “being”? Wray (1998) states that “rest may be something for which our overworked and stressed-out society yearns, but rest is neither a common experience nor a particular topic of Christian proclamation” (p. 2). She also suggests that rest as a theological metaphor needs to be addressed in our society and concludes that it represents a reality beyond our culture’s experience of rest and physical relaxation. In his book Margin, Swenson (1992) supports this claim and argues that Sabbath rest has to
be a time not only for physical rest but also spiritual rest. He stresses that although physical rest is important for our bodies to recover from fatigue, we also need to encourage contemplation, remembrance, and the worship of God as forms of spiritual rest if we wish to maintain a deeper and more meaningful kind of balance.

The use of the chronic stress condition and athletic symbolism to explore the notion of necessary rest in the Christian life is an intriguing area of study. Reviewing the Old Testament Sabbath, exploring the invitation to rest through Christ in the New Testament, and revisiting the promise of grace may help Christians begin to explore the idea of rest from a new vantage point. First, through the examples of stress and performance, the need for a cessation of activity provides evidence for the need for Sabbath rest. Moreover, from a stress management standpoint, many of the authors I have mentioned point to the detrimental effects of the increased amounts of stress within our society. The constant stimulation of the sympathetic nervous system in the “Fight or Flight” response has been associated with specific end-organ dysfunction and the possibility of chronic health implications. Dawn (1989) suggests that by integrating Sabbath rest into our whole lives, the body will also find relief from stress. She emphasizes that practicing Sabbath rest does not mean putting stress aside for a day or running away from stressful situations. Rather, Dawn suggests that “the very customs of that day [Sabbath rest] give me not only refreshment, which makes the tension much less powerful in the days that follow, but also new perspectives, new priorities, and a new sense of God’s presence...The Sabbath is not running away from problems but the opportunity to receive grace to face them” (p. 24). Second, the New Testament invites us to rest. Matthew 11:28-30, Luke 12:22-31, and Hebrews 4:1-11 invite us to a new kind of rest, a rest in which life and its burdens become a shared responsibility in the relationship between God, Christ, and self. In addition, we are directed in Hebrews to katapausis, a new place of rest in Christ through our faith. This new place of rest is free of the legalistic burdens of the Old Testament that allows for a new intimacy with God.

Finally, we can find rest through grace. In a performance-oriented society in which external works are often rewarded, the comfort of grace through faith is refreshing when the lines of the temporal world and spiritual world are often blurred. As with Luther, our maturation process will hopefully allow us to
become free from the anxieties, pressures, and works of this world and to realize the full potential that God freely gives us.

After 21 years of promoting and encouraging individuals to become physically active as an exercise physiologist, I have come to a point in my life where a time of reflection on rest seems fitting. Through the training of many athletes in my career and though counseling students and clients in the area of health and wellness, I have seen the striving for efficiency result in inefficiency or, at best, a state of pseudo-efficiency. Overloading and overstimulation do not lead to the sufficiency of life that many of us seek. Rather, it is in the quietness and stillness of resting in God that we discover the real meaning of those Old Testament words for rest: Sabat, Nuah, and Saquat. Likewise, the promise of Jesus in Matthew 11:28-30 helps us find freedom from the bondage and distractions of life that overwhelm us and cause us to suffer from weariness. Finally, many suffer from Anfechtung, a sense of being lost. Yet, the realization of the transforming power of Christ and God’s amazing grace can help us comprehend that it is only because of grace that we can stand redeemed before God.
References


Appendix A

Yerks-Dodson Law

Diagram