

Exercise and Stress Part V—Stress Management

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Introduction

Imagine this: you have an 8 o'clock appointment for a job interview; since it typically takes you 1 hour to arrive at the location, you leave at 7 o'clock. But then it happens...traffic! As you slowly crawl along the highway, you begin to think catastrophic thoughts—"I am going to be late, and won't get the job. Oh, I am so stupid for leaving at 7!" Then, you begin to honk your horn, and make dangerous maneuvers around other cars in order to get to your interview on time. Throughout this drive, your heart is pounding, your hands trembling, and your vision is narrowing. Finally, you arrive at the job interview...15 minutes late. To your delight, you find out that the interviewer was also stuck in traffic, and just arrived! Relief sets in, and the stress begins to dissipate. But then it happens again...you get turned down for the job, and you are right back where you began—stressed out. Scenarios like these occur daily in many of our lives, stealing joy from us. In this context, the purpose of this paper was to analyze why we get stressed, and how to manage stress at 5 levels: environment, cognitions, physiological control, coping skills, and combination techniques.

Stress Management

It is the unfortunate truth that many people only begin to manage stress when they only absolutely have to. The medical community waits for the very last moment to handle problems. For example, *after* you get coronary artery disease, then you finally start to take care of yourself. But even then, the stress management techniques are poor. Typically, people rely on drugs, which just cause even more problems. Further, drugs do not deal with stress—they help the symptoms of stress. Therefore, it is vital to implement stress management in order to actually dissipate stress. But, there is no reason why we have to wait until we are on our death beds to implement stress management! We can do it now, and prevent disease, and optimize performance for years to come.

Simmons (2006) suggests that there are three components to effective stress management.

First, effective stress management should actually decrease the stress response, and definitely not make it worst.

Second, it should allow for achievement and development. Let's say you are dealing with a client who is stressed, because they are working so hard on their Dr. Degree. Well, an easy solution would be to tell your client to simply quit school. But this is poor stress management. The goal is to *manage* stress, not ignore and avoid it.

Lastly, stress management should be flexible to individual differences. For instance, though we should try and set reasonable goals, some people's goals are going to be higher or lower than others. Suppose someone wants to become a professional

basketball player one day, you should not tell them to lower their goals because they will never make it. However, you should design a complex goal program consisting of process, performance, and outcome goals, which will maximize reinforcement opportunities. For more information on this, refer to Wilson, G. (2006) [Goal Setting – An In-depth Analysis](#).

Therefore, we should be lenient with stress management, and not try to impose our way into other people's lives. Further, we should be understanding of people's lifestyle habits, and try to design a program that fits well for them.

Attention

One of the more popular theories is to view attention as a sort of "capacity" (Wilson, 2004) or fuel for information processing. This fuel is thought to have a limited space or ability to process information. Therefore, how we allocate our attention is absolutely a vital component for performance. If our attention is drained by worrying about things which are irrelevant to the task at hand, performance will decrease. For example, let's say you are squatting, but at the same time, you are thinking about how you are going to finish all your homework at night. Homework is an irrelevant cue to your squat, and thinking about it will degrade your performance. Throughout this paper, I will mention the importance of allocating your attention towards relevant cues, and ignoring irrelevant cues in the environment. For much more information on attention, refer to the following two articles by Wilson, J. (2004), [Association / Dissociation Theory](#) and [The Psychological Refractory Period Paradigm](#).

Behaviorism

Behaviorists were so called because they felt that the acquisition of a skill (learning) required the formation of a bond between a stimulus and a response (Hull, 1943; 1952; Hergenhahn and Olson, 2005, Schmidt et al., 1999). The stimulus could be a pitch in baseball, with the response being a perfectly executed swing, or a most muscular pose during a bodybuilding contest. They did not deal with cognitions, and instead suggested responses were a result of automated behaviors triggered by stimuli in the environment. Behaviorism will be mentioned several times during this article, so it is important for the reader to have a grasp of this concept. For more information refer to the following article, [Specificity Part II: Specificity Theories](#).

Interventions

In order to understand effective interventions, it is helpful to review the psychosomatic model discussed in article 3 of this series. The psychosomatic model describes the connection between the mind and the body, and the resultant effects on health and disease generated from this connection. It is composed of several steps.

First, a stimulus (such as food, cold, etc.) is introduced into the environment. Secondly, the individual brings the stimulus into the body (has perception of it). Cognitive Appraisal is a stepwise process. After perception of the stimulus, you compare the stimulus to past experiences and then select out a response, and benefit from the experience (Sawyer, 2005). If you appraise the situation as being negative, then your emotional response will most likely be high cognitive anxiety,

which is a negative emotional state. This emotional state would then drive the body (the supposed "link" between the mind and body; I say supposed, because evidence suggests all these stages are intimately linked between the mind and the body) to initiate physiological arousal, and a response, with the resultant effects promoting health or disease. It is important to understand that this model is not always linear. For instance, increased physiological arousal can directly effect perceptions or emotions, and perception can effect arousal.

Keeping this model in mind, Simmons (2006) suggests stress management can intervene at 5 levels.

First, environmental control; this would involve manipulation of the stimulus and perception stages. Second, we can intervene at cognitions; this would involve cognitive reappraisals. Third, physiological control; this would involve manipulation of the physiological arousal stage. Fourth, we can intervene by administrating various coping skills which allow the individual to become less reactive to stressors and improve healthy stress responses. And lastly, we should use a combination of all 4 of these interventions.

The rest of this paper will focus in on effective interventions for stress management.

What you Need versus what you Got

Simmons (2006) suggests that happiness is comprised of the following equation:

Happiness=Got>Need

Unhappiness=Need>Got

In our present day society, it seems that people never have enough. Advertisers tell us we should have that fancy car; we should have that big house; we should have more technology than our neighbor. This creates a false sense of *need* in our lives, and leads to envy, fear that you will be left behind or not good enough, and consequently, more stress.

It is vital that we reappraise this situation. Fortunately, Knowlden (2005) covered exactly how to go about doing this in his article, [Unlocking the Strategies for Marketing Cultural Paradigms](#). For the solution to this problem, refer to that article. Particularly, read under the section entitled "buying behavior analyzed."

Environmental Control

The next several sections will discuss ways to manipulate your environment, thereby, alleviating your stress. The two methods discussed will be social engineering and time management.

Social Engineering

Perhaps the most effective method the current author has employed in stress management is a concept called Social Engineering. It is relatively simple to implement, yet extremely logical and effective. The purpose of social engineering is

to know what stress situations are for you, and learn how to deal with, remove, and respond better to them (Simmons, 2006). Here is how it works.

First, identify the stressors. For instance, let's say you get stressed with traffic. That is a good start, but you need to identify what it is about traffic that makes you stressed. It could be that you do not want to be late; that you are moving too slowly; or perhaps it is a conditioned response. Whatever it may be, try to understand what it is about the situation that makes you stressed. A good way to identify stressors is to keep a diary. Just write down whatever makes you stressed, closely analyze what it is about those stressors that make you stressed, and then work on relieving your stress.

Second, ask yourself is the stress avoidable? And if it is avoidable, is keeping that stressor in your life worth while? If it is avoidable, and you do not want to deal with it, then just avoid it! This is the simplest solution that people often fail to consider.

There are several examples of this. Let's say that you are dieting, and having ice-cream around makes you stressed. First, identify why it makes you stressed. One reason may be, because you do not want to cheat, and you do not want to gain fat. But it is so tempting to you, that you have to fight every urge in your body to avoid it. Well one of the principle techniques of satiety (hunger) manipulation, is to surround your environment with quality foods. If you are surrounded all day by crispy creams, ice cream, and pizza, it is going to be almost impossible not to cheat. Just remove that stressor away from you. For more information on satiety manipulation, refer to Wilson, G. (2004), [An Investigation of the Satiety Mechanism: A Research Initiative](#).

Another example could be a spiritual temptation. Let's say you have a friend that is continually tempting you by inviting you to parties, offering you drugs, or what have you. Well, do you really want to be hanging around a guy or girl like that? Though it may be difficult, consider dumping your friend. Not only is such a person a horrible influence on you, but he or she is clearly causing you stress, which is extremely bad for your performance as an athlete, and your health. Spiritual examples will be discussed more in article 6.

Or let's say you have too many responsibilities in your life, and someone makes a request of you that gets you stressed, because you know it will explode your workload. Again, if it is optional, and not as important as your other duties, tell the person you simply cannot take on another project right now. This will be discussed further under time management.

Third, if you feel the stress is unavoidable, or if it is optional, but you feel it is important to deal with, understand why this is the case. Doing this will highlight your goals, and values, allowing you to see the importance of the situation. Instead what we tend to do is think to ourselves "why is this happening to me?" It helps to get rid of this mentality, and instead focus on ways to handle the situation. This reduces uncertainty, and allocates your attention towards more relevant cues, enhancing performance.

So for instance, in school, instead of kids whining about writing papers, they should put the paper in its place and say this is important for school, and school is vital because it is going to help me do what I want to accomplish for the rest of my career

(or whatever your academic goals may be). This also facilitates process goals, which results show are excellent for enhancing performance. For more on process goals, refer to the goal setting article mentioned earlier in this article. Another example could be cardio. Many bodybuilders do not enjoy cardio; but just focus on the benefits of it! Just imagine how hot it is going to be in the summer. The last thing a bodybuilder wants is to be fat and out of shape come summer time. And cardio is a vital component to getting shredded.

This mentality I speak of is defined as *Identified regulation*. It occurs when athletes participate in an activity because the activity is considered of high value and important to the participant, even if they do not enjoy the activity itself. For example, lifting weights to become huge. Or going to school, or doing your homework because it is a great way to learn about things which may be useful to you. Evidence suggests that this is an effective form of motivation, which enhances performance. For more information on this, refer to Wilson, G. (2006), [The Effects of External Rewards on Intrinsic Motivation](#).

Fourth, think of alternatives to handling your stressors. Typically, there will be at least one better alternative than the method you are using. For instance, let's say traffic is a stressor for you. And let's say you identify that the reason traffic is a stressor to you, is because it makes you late to school. Well, if it takes you 30 minutes to get to school, consider leaving an hour early to school, and just studying in the library. This way, traffic is not so stressful for you. Or, let's say that cheat foods stress you out, and your brother is always purchasing junk food and bringing it into the house. Instead of getting stressed and angry at your brother, think of an alternative solution that does not involve you getting so stressed. For instance, you could calmly talk to your brother, and figure out a solution to your problem. You could even explain social engineering to him! But when you think about it, the only thing getting angry and stressed is going to do is hurt *you*. So why do it?

Lastly, keep evaluating your stressors, trying alternative methods, and refining your stress management techniques. Over time, you will become more and more efficient with dealing with your problem.

Time Management

A common problem people have is carrying all their worries around with them, often focusing on the end result, rather than the process of getting things done. This not only increases stress, it absorbs attention, decreasing the capacity to perform well. This is where time management comes in to play (Simmons, 2006)

Time management starts off right where social engineering began. In order to implement effective time management, first identify the necessity of each duty. If the situation is avoidable, and not important, then just dump it. If the situation is unavoidable, then cease from whining about it, and instead think about why it is unavoidable—this will increase the value of the activity, motivation, and free attention.

After duties have been determined, then establish the importance of each duty. This can be done with a priority ranking scale such as: Type A (high priority), Type B (in-between), and Type C (does not have to be done, but doing it would be beneficial).

Once this is done, determine the dead lines for each event, and roughly how much time each event will take. This can be difficult to do, but you will improve with practice. Then with this information, create a daily schedule of how to go about accomplishing the tasks.

There are several keys to this. First, prioritize Type A tasks; then Type B; finally, Type C tasks should be considered optional, and often times at the end of the month, you should just take Type C priorities and dump them!

After this, create a time schedule of when and how to go about accomplishing these goals.

Next, it is important to create a schedule that is flexible and realistic. Remember, the goal of time management is not to just get more things done—it is to relieve stress. A schedule that contains no flexibility will greatly heighten the stress response. For example, do not create a schedule like this:

7:15: Wake up

7:20: Take a shower

7:30: Eat

7:40: Leave to work

8:00: Arrive at work

That is much too strict, and the slightest deviation will leave you off pace. And even if you make it on time, it will be at the expense of rushing; definitely not stopping to spend time on anything or anyone else, and most likely, you will be stressed.

After this is done, stick to the schedule. If a task was determined to take 2 hours to work on, do not work on it for 6 hours or for only 30 minutes—work on it for 2 hours, with a pre-determined bandwidth. For instance, lets say that you determine a task takes 2 hours, plus or minus 30 minutes.

Now here is perhaps the most important part of time management: when performing these activities, block all other worries out of the mind. If the schedule was designed correctly, then there is no need to carry all those worries around, because following the schedule will allow for task completion. Further, worrying about everything else will distract your attention, and diminish performance.

Goal Setting

Proper goal setting is suggested to enhance self efficacy, narrow in and direct attention and effort, increase intrinsic motivation, promote persistence, and enhance learning, among other benefits (Weinberg & Gould, 2003). By setting realistic and effective goals, we can enhance our performance, and help manage stress. For more information on goal setting, refer to Wilson G. (2006) [Goal Setting – An In-depth Analysis](#) and Knowlden (2003) in [Muscle Mind Doctrine - Theoretical Concepts of Strategization](#) and [Muscle Mind Doctrine - Goal Sheets](#).

Cognitions

Simmons (2006) suggests that “we are not influenced by the facts, but our interpretation of facts.” In other words, it is not a situation that stresses us; rather, it is our appraisal of the situation that causes stress.

The following sections will deal with how to manage stress by reappraising perceived stressors. Stress will be viewed from a cognitive perspective; therefore, the most applicable definition for stress is by McGrath (1970), who suggested that stress was the perceived imbalance between demands and response capabilities when failure to meet those demands is deemed important. Before moving on, let’s analyze this definition.

Suppose a male athlete is squatting 400 pounds, the heaviest he has ever lifted. As the athlete prepares to perform the lift, he begins to feel apprehension, because he has never lifted this much before, and as an athlete, improving his lifts are clearly important to him. In response to his apprehension, his heart rate and respiration begins to rise.

McGrath’s definition helps explain this scenario. First, the situation is important to the athlete because he is serious about his program. Second, the athlete makes an appraisal about the demands (a 400 pound squat) and his response capabilities (what he believes his capacity is to squat 400 pounds). Because he is unsure about his response capabilities, stress rises. There are several ways to intervene here. We could intervene at the environment (as discussed previously; i.e. we could lower the weight); or, we could intervene at his appraisals. The next sections will focus on the later intervention.

Fear

Grantly Dick Rend (1944) investigated why women in his day experienced more pain in hospitals than at home births. In short, his findings seemed to indicate that fear was the intervening variable here. When we think of hospitals—the sterilization, smell, environment, etc.—we have a conditioned response of fear. And this appears to exacerbate the stress response.

In this context, Simmons (2006) suggests that we should focus on the desire to succeed, rather than the fear of failure. This is inline with the need achievement theory, which suggests that successful athletes have a high motivation to succeed, and a low motivation to avoid failure (McCullagh, 2005). For instance, Arnold in pumping iron said he was not afraid of vomiting in the gym, because he had done it many times. Rather, he focused on the glory of succeeding and making his body grow. People that focus on success instead of failure also seek realistic challenges and competitors instead of easy challenges or unrealistic challenges. While low achievers have a high motivation to avoid failure, and a low motivation to succeed. They therefore, avoid realistic challenges, and instead choose either easy challenges that they can win in for sure or unrealistic challenges such as shooting a basketball from half court in which they are supposed to fail.

Thus, focusing on the pride of success instead of the fear of failure, will facilitate performance, and decrease stress.

Saliency

Saliency refers to what stands out to you the most. The saliency of stressors are determined by 4 factors (Simmons, 2006): elements of a situation, habits of thinking, beliefs, and perspectives.

The elements of the situation are what aspects are obvious about the stressor, such as deadlines, limited time, etc. For instance, the closer you get to a deadline, the more stressed you may tend to be.

Habits of thinking refers to how we automatically respond to stressors.

Beliefs deals with whether you began to think rational or irrational thoughts when pondering the stressor.

Perspectives, or cognitions, deals with how we appraise stressful situations.

The next several sections will analyze habits of thinking, beliefs, and perspectives.

Beck—Habits of thinking

Aaron Beck (1963) suggested that people have automatic responses to stressors. This is a behaviorist perspective. For instance, you may think to yourself when you are stressed, that you cannot help yourself, and nothing you do will make a difference (learned helplessness; refer to article 1). Or, you may think that when things are difficult, you are supposed to get stressed out, and if you are not stressed out, then you won't do well, or it means that you don't really care.

For example, let's say a guy is squatting 500 pounds in the gym and 5 different people see him squat the weight. All 5 individuals may have completely different, automatic responses. A teenager may stand in amazement; a young man may think to himself, "you know that guy is juiced..."; another person may be thinking "isn't that unhealthy?", while yet another person may be thinking, "that is not that impressive; I could lift 600 pounds!"; while a newbie may be depressed, and think "I'll never be that strong..."

The take home message here is that you will think the first automatic thought that comes to your mind. Again, this is a learned response that is automatic, and unique to the individual.

Beck suggested that because the thought was not well thought out, or complex, but discrete and straight forward your mind would think it was true, and jump to fast conclusions. The problem is that this automatic thought can effect our emotions and behaviors. For instance, the newbie above who said he will never be that strong will think that is true, and get depressed (emotions), and may quit (behaviors).

Another learned response is to beat ourselves up. If we make a mistake, we'll say, "oh, I am so stupid! How could I make such a stupid mistake!" Next time you watch a baseball player strike out, or pop out in a key situation, watch his response. Often times, he will angrily throw his bat on the ground; say a profanity; hit himself on the head; and down himself. Also, consider your own sporting career—when you made a

mistake, how did you respond? For many athletes, again, they respond by beating themselves up.

The main problem with this is that you are focusing on the past, and there is nothing you can do about it. All this will do is make you feel guilty, angry at yourself, sad, and stressed, and it will allocate your attention to irrelevant cues, which will further decrease performance.

Because these thoughts are automatic and not well thought out, they are often fallacious in nature. For instance, you may say to yourself, "I am going to be late to school again" but in reality, you have never even been late. Or, you may blame a situation on yourself, and call yourself a fool; but the situation may have been entirely out of your control, and there was nothing that you did wrong at all.

Another problem with negative habitual self talk, is that once it starts, it is hard to stop it. It often starts a cascade effect, and you end up beating yourself up for a while. It can further be exacerbated by more failures. For instance, let's say you are late to work, and you say to yourself "I am so stupid for leaving late!" and then when you get to work, a co-worker says to you, "you're late..." This will confirm your habitual thought that you are incompetent, strengthening the bond of this response to other stressful situations.

We can intervene here by reappraising our automatic thoughts, and using verbal persuasion.

Verbal persuasion has been identified as an effective technique to enhance performance (Brown, 2003). Verbal persuasion involves positively influencing an individual to accomplish a task through verbal speech or self persuasion (Brown, 2003). It can be provided from an outside source such as a coach telling an athlete "I know you can do it" or through positive self talk, such as an athlete telling him/herself "I can do this."

Brown (2003) successfully implemented a step-wise process for verbal persuasion, that is commonly utilized in the literature. First, report when you use negative verbal talk, and the effect that it had on performance, as well as when you used positive verbal talk, and the effect it had on performance. Then perform three sequential steps. First, recognize when you use negative self talk. Second, ask a neutral question such as "what can I do?" or "What skills do I have to accomplish this?" or "what did I do in the past to overcome this?" And third, change the negative self talk to a positive statement such as a solution the problem.

So for example, let's say you are squatting 400 pounds for the first time ever, and you drop the weight. Your initial learned response may be to say, "I suck! I cannot believe I did not get that" and the rest of your workout may then suffer, because you are so depressed. Instead, intervene here with verbal persuasion. First, recognize and stop your negative self talk. Second, ask a neutral question, such as "why did I not get that weight?" and think of a solution to the problem such as "I just need to switch my program up, and implement some periodization" or "I need to up my calories." Then, replace that negative self talk with a positive statement, such as, "Hey, I have gotten great gains the last several weeks, I am on track. And my muscles are looking great! Let's kill this workout!"

The benefits of this for stress management are three fold. First, it stops the negative thought cascade right in its tracks; second, you will slowly begin to replace your habitual negative self talk with habitual positive self talk. Second, this forces you to think calmly, and rationally, instead of just blurting out a quick and perhaps fallacious thought.

Rational Emotive Therapy

If I don't do great on this presentation in class tomorrow, everyone will think I am stupid, and then the teacher will flunk me! Then I'll never graduate from college and be a loser for the rest of my life!

Albert Ellis (2004) proposed Rational Emotive Therapy (RET) to deal with irrational thoughts such as these. Before discussing this form of stress management, let's analyze irrational thoughts.

Irrational thoughts often drive people crazy. They are ridiculous, unfounded, and illogical. They contain several characteristics as follows (Simmons, 2006): an erroneous filtration system; polarized thinking; over generalization; catastrophic thinking; personalization; and the fallacy of fairness.

First, humans often tend to just focus on the negative and beat themselves up over it. We may do 40 great things, and one bad, and all we can think of is the negative (which is an erroneous filtration).

Polarized thinking involves setting up false dichotomies. For example, saying something is good or bad, black or white, etc. This thinking is often fallacious and irrational.

Another irrational belief is over generalizing. For instance, saying, "I am always late" or "I never get a break." This ignores the times when you were not late, and when you did get a break. Others may also over generalize and say "I always win."

We also tend to personalize things. If traffic stops, we may blame ourselves for it, even though traffic flow is out of our control.

The fallacy of fairness suggests that everything should be fair and work out for everyone. For instance, you may think to yourself "it's not fair that he is stronger than me!" or "everyone should like me because I am a good person." First, we don't live in a fair world; second, this does not propose solutions, it just causes more problems. Instead of complaining about not being as strong as someone, you could analyze *why* you are not as strong as someone.

There are several problems with this line of thinking, and RET works to solve them. This involves several steps.

First, take a moment to realize how foolish irrational thoughts are and laugh at them. In the first quote of this section, the kid is thinking absolutely irrationally. The teacher is not going to flunk him, and his presentation is not going to determine the rest of his college career.

Then, avoid extremist thoughts; instead, think calmly, rationally, and realistically. This involves getting rid of the perfectionist rational. People must admit to their humanness, and realize that they are not perfect. Using the traffic example, first, stop thinking catastrophically, and change to rational thinking. The speed of traffic is not in your control; thus, worrying about the situation will not make things better. Further, being late is in the past, so beating yourself up over the situation is pointless; instead, think of solutions to the problem. For instance, focus on driving safely, and just say to yourself, if you are late, you'll just apologize, and that you will not make tardiness a habit.

Next, do not be a perfectionist. We need to realize that we are humans, and are not perfect. We should be reasonable with ourselves, and give ourselves a break.

Perfectionists also do not understand the issue with learning; that is, you must make mistakes in order to learn (Sawyer, 2005).

For instance, Hagman (1983) and Winstein, Pohl, and Lewthwaite (1994) revealed that guided (i.e., errorless) practice was detrimental to retention and transfer, especially if presented on every acquisition trial. Four mechanisms may facilitate this process. The first two being that errors may increase cognitive effort and elaborative processing, enhancing learning (Sherwood & Lee, 2003; Shea and Morgan, 1979). Third, it may help develop a schema, as evidence suggests that there are positive benefits from correct and incorrect movements for schema learning, which is based on a relationship among all stored elements (Schmidt and Lee, 1999). And fourth, 100% relative feedback impedes the intrinsic processes, such as problem solving, in the inter-trial interval, known to be important for learning (Sawyer, 2005; Bjork, 1988; Landauer & Bjork, 1978; Schmidt, 1991). For more information on these terms refer to the specificity series by Wilson G. and Wilson J (2005) [the science of training variables](#).

The take home message is that we must not be afraid to fail. Failure is a necessary part of learning, and it will improve us in the future. If we beat ourselves up every time we fail, as perfectionists tend to do, then we may develop a high motivation to avoid failures, impeding learning. Instead, when we make a mistake, we should celebrate it, because it is an opportunity to learn. Analyze your mistake, correct it, pick yourself up, and move forward with life.

Cognitions/Perspectives

Cognitions have to do how we appraise situations (i.e. whether we label them good or bad, etc.). The above discussions of Beck and Ellis dealt heavily with cognitions; the following paragraphs will give a few more general tips on how to appropriately appraise situations during stress management.

A method that helps is to simply put things in their place. Think about the big picture, instead of one small event.

Next, develop an optimistic perspective. This was discussed in article 3, on learned helplessness. As the book of proverbs says, "For a just man falleth seven times, and riseth up again." This concept keeps a person pushing on, and focusing on positive things, no matter the set of circumstances. For instance, if it took you ten times to pass your drivers test, so what, you got it still, right? Interestingly enough, too much

optimism will never make you sick—there is no such thing as being too happy (Simmons, 2006).

Don't be so sensitive to stressors. For instance, don't explode every time you don't get your way. Implementing RET and other methods discussed will help immensely.

Focus on process goals. This maximizes your control. If you are in traffic, just focus on driving safely and not getting a ticket. Stressing out over being late will not make traffic clear up, or help you get there faster. It will only hurt you.

Reappraise our thoughts on stress. Many people have the fallacious notion that if you don't act like a raving lunatic, that means you don't care. But in fact, it is just the opposite. By controlling your stress and anger, it means you do care—you care about optimizing your performance and health. And acting irrationally will not only impair your performance and health, it will not help resolve any situation you are in. Instead, when in a stressful situation, think rationally, and implement the techniques discussed above.

Stress = Uncertainty * Importance

Building on the work of McGrath, Martin (as reported by Simmons, 2006) suggested that stress could be defined as uncertainty * importance.

We can intervene here at two spots.

First, we can analyze the importance of a situation. Often times, we make a situation more important than it really is. Again, this has to do with irrational thinking. Take a moment, to put your situation in perspective. Most likely, it is not going to mean the end of the world if you do not do well.

Second, we can intervene at the uncertainty aspect. This is highly in our control. Let's say you are giving a speech in front of a class. The best way to decrease uncertainty is to be well prepared. You should have your speech memorized; you should practice your speech several times in a non-hostile environment before the speech (stress inoculation; discussed later on); you should be confident in what you are speaking about; and you should come prepared with coping skills to manage arousal (which are amply provided throughout this article).

Relaxation versus Stress

The stress response was discussed in detail in article 2. Relaxation is the physiological response directly apposed to the flight or fight response. During the flight or fight response, oxygen consumption, respiration, heart rate, blood pressure, etc. are all **up**. While during relaxation, oxygen consumption, respiration, heart rate, blood pressure, etc. are all **down**.

It is important to understand that *diversion* does **not** equal relaxation. For instance, getting drunk just blocks out the pain, but it does not relax you or get rid of your stress. This is similar to a post dramatic stress response. First, you forget something because it is so painful to you, that your mind blocks it out. However, the stress is still there, you are just ignoring it. And sometimes, it will pop right back up.

For those of you who have watched X-men, this is similar to when Wolverine is trying to remember his past, and sometimes has nightmares about it, but cannot quit recollect what his nightmares mean.

A classic example of diversion is coming home from a hard days work, collapsing on your couch and watching television to relieve stress. Mihaly Csikszentmihalyi (2002; who is famous for his work on flow state) examined this. He had people wear a buzzer around all day, and it would periodically go off. When it went off, people were told to record exactly what they were doing, and how they felt using a mood state scale questionnaire. Results found that television did not did not relieve stress, with the exception of very engaging activities that people were highly involved in such as sports, or cooking and learning shows (only when they were interested in them). Conversely, engaging with family consistently improved psychological states, as well as hobbies. Traffic consistently increased stress; while work had mixed results.

So again, it is important to understand that diversions, such as just sitting down and watching T.V is not a very effective stress reliever. These types of activities are better classified as diversions that simply numb the senses (Simmons, 2006).

This again is why effective stress management is so important. Relieving stress takes work, and skill. It is not something that you will easily accomplish on your own.

Physiological control

The next place we can intervene is at physiological responses. Jacobson (1938) said that, "I never met an anxious person who was relaxed" and "I never met a relaxed person who was anxious." This suggests that if the body is relaxed, mental stress will diminish (a somato-psychic approach). Thus, he invented progressive relaxation. This involves flexing a muscle for a few seconds, and then letting go to relieve the tension.

Herbert Benson (2000), who did work on meditation, showed evidence that combining mental relaxation with physical relaxation optimized the relaxation response. He suggested 4 methods to augment relaxation.

First, start in a quite environment. This will cut down on outside stimulations. Though the goal is to be able to cause relaxation in any environment, starting out in a quite environment is suggested.

Second, place the body in a comfortable position and make sure you are supported.

Third, use a monotonous mental device such as focusing on breathing patterns, or humming. You do not want to listen to elaborate music that distracts you. An opposite method that some use, is to listen to *all* sounds in your environment, but not thinking about them. Try to hear a penny drop a mile away, but do not allow it to increase any cognitive thoughts, just let it go through your mind.

Fourth, have a passive attitude, leaving all expectations behind. For example, don't tell yourself to get relaxed, just let it happen.

It's important that as you meditate, you do not think, or allow any cognitive processes to go through your mind. Think of it like this: if you put cement into a cup of water, it will float to the bottom; however, if you mix it up, it will rise, and mix all around the cup. Every time you think about something—i.e. worrying—you are mixing up the cement in the cup of water. The goal is to let the cement drop to the bottom of the cup of water; or in this case, let your thoughts and worries drop to the bottom of your brain. So you could tell yourself something such as “my mind is clear, I am taking in no thoughts or worries. I am aware of my environment and the sounds of my environment, but I am not thinking about them.” The goal is to have your mind at complete peace. As you practice this, you will find that you will be able to replicate it in other stressful situations. When a catastrophic thought comes up, you will be able to stop the rapid thinking going on in your head, and relax.

Simmons (2006) suggests 30 minutes of progressive relaxation combined with mediation a day, and suggests that it may be even more effective than a good nights sleep for inducing the relaxation response.

As you practice this method, your body will get more efficient, and you will be able to achieve a relaxed state early on. This happens through a process called Kinesthetic Acuity, which is the ability of the body or parts of the body to replicate movement or force without the use of sight. This is achieved through various sensory receptors, which provide afferent feedback, which is relayed to the Central Nervous System (Sawyer, 2005).

Soon, you will know what it feels like to be relaxed. You will sense when the wrinkles on your forehead are tensed, and know how to relax them. It is important that you try and implement this throughout the day. When you feel stressed, try to relax your muscles. As you practice this, you will get more and more efficient.

In-depth instructions on Progressive Relaxation

The following are instructions on how to effectively implement progressive relaxation (based on the recommendations of Weinberg and Gould (2003, p. 268).

1. Implement the 4 techniques mentioned above by Benson.
2. Flex your pectoralis and deltoid muscles, by pressing your palms against each other and pushing. Hold that for 5 seconds, and immediately let everything down in a comfortable position. Take 10-15 seconds now to focus on how your chest and delts feel when they are relaxed, then move on the to next muscle group.
3. Flex your upper back towards the ground, and repeat procedure.
4. Raise your forearms slightly in the air, and clinch your fists and flex your forearms. Hold that for 5 seconds, and immediately let everything down on the ground where you are lying, in a comfortable position. Take 10-15 seconds now to focus on how your arms feel when they are relaxed, then move on the to next muscle group.
5. Flex your biceps and triceps now, and repeat the same procedure.
6. Curl your toes tightly, and repeat the same procedure.
7. Plantarflex your calves, and repeat the same procedure

8. Lift your thighs a few inches off the ground, and tense your quads and hamstrings. Repeat the same procedure. But now, focus on your entire lower body for 30 seconds.
9. Tense your lower back, by extending it, then repeat procedure (but only focus on relaxation for 15 seconds, as before).
10. Flex your glutes, and repeat procedure
11. Flex your abdominals and repeat procedure.
12. Clench your teeth, to feel the tension in your jaws, wrinkle your forehead and scalp, and the rest of your face as tight as you can. And repeat procedure.
13. Finish the session by performing deep breathing (discussed next).
14. You can stay in this relaxed position for as long as you like. Many just go to sleep!

When you are doing this, it is vital that you pay close attention to what it feels like to be relaxed. The goal is to develop relaxation for the moment, and be able to replicate this later on. If you focus on what it feels like to be relaxed, you will be able to achieve relaxation just by focusing on relaxing a muscle in any environment. Eventually, you will not need to flex your muscles to perform this effectively; just focus on relaxation, instead. Again, each tension phase should last about 5 seconds; then take 10-15 seconds to think about what your muscles feel like relaxed. At first, you may consider repeating each step twice. For instance, flex your glutes for 5 seconds, relax for 10 seconds, flex your glutes again for 5 seconds, relax for 10 seconds, and then move on to the next muscle group. You may also consider starting with one body part at a time, instead of two. For instance, do your left arm first, then move on to your right.

Throughout this, some advise saying terms such as, "I feel light and relaxed" Or "Heavy and Calm." Athletes typically prefer the term light better, because they do not like the feeling of being sluggish, or heavy.

Lastly, the current author has found this to be a great way to relieve insomnia. Performing this before you go to bed, and with meditation, is an excellent way to improve relaxation, and go to sleep in peace.

Deep Breathing

Deep breathing is a very easy and effective method. It involves slow, rhythmic breathing. Weinberg and Gould (2003, p. 267-277) suggest taking a deep inhalation to a count of four seconds, and exhaling to a count of eight seconds. Simmons (2006) suggests that 5 minute deep breathing sessions are effective for facilitating relaxation. It is also a good idea to use this under situations of stress. Often when we are in a stressful situation, our respiration will go up, and breathing is shallow. Try to slow things down, and implement deep breathing here.

A mechanism by which deep breathing works is activation of the vagus nerve (the primary parasympathetic nerve) as the stomach expands.

Exercise and Stress

Americans operate in a hectic environment. This has contributed to alarming numbers of mental ailments including 16 and 32 million cases of depression and

anxiety, respectively (McCullagh, 2005). These same people often make excuses to avoid physical activity; in fact, 50% of American adults are completely sedentary (McCullagh, 2005). In this context, the purpose of this section was to discuss the role of exercise in stress management, in order to demonstrate the importance of people making time for physical activity.

There is an abundance of evidence suggesting that exercise may reduce symptoms related to cognitive stress. North, McCullagh and Tran (1990) performed a meta-analysis identifying 80 studies on the effects acute and chronic exercise programs on depression. Results indicated that exercise was just as effective as psychotherapy, with the greatest benefits coming from long duration programs (9 weeks or longer), and for people with greater depression. 81% of 27 narrative reviews between 1960 and 1992 concluded that exercise was related to anxiety reduction. Based the abundance of evidence suggesting that exercise could help cognitive disorders, the US Surgeons General Report (Corbin & Pangrazi, 1996) stated that exercise “appears” to relieve symptoms of depression and anxiety. Such a conclusion was very cautious; fortunately, research since then has indicated a causal link between exercise, and reduction in cognitive ailments.

The most comprehensive paper on this topic was recently submitted by Landers (2006), who performed a review article on physical activity and mental health. Some notable findings were that 5 meta-analyses found small to moderate effect sizes (.23-.57) for exercise and improved self esteem; Alderman et al. investigated 102 studies, and 608 effect sizes on exercise and reductions in psychological stress. Results found an overall effect size of .37. These results and many others led Landers (2006) to suggest that there is a causal link between exercise, and improvement in various psychological markers of well being.

There are several theoretical rationales for these results. Structural changes in the brain may mediate these results. For instance, in his review, Landers found that exercise enhanced brain-derived neurotrophic factor (BDNF), which has been shown to improve cognitive function. Another structural change suggested by Landers was the endorphin hypothesis. It appears that physical activity, particularly long duration aerobic exercise, enhances endorphins, which are known to mediate stress relief. This is commonly referred to as “the runners high.” Another mechanism may be positive interactions in social milieus at gyms, and such like facilities (McCullagh, 2005). Lastly, evidence suggests that exercise, particularly moderate intensity exercise, decreases muscle tension, leading to a cognitive stress reduction through a somato-psycic response (Simmons, 2006).

Landers suggested that aerobic and anaerobic exercise (i.e. resistance training) optimally increase positive affect (mood) at 45-70% VO₂ max (or 1 RM for weight lifting). And second, you need to exercise for at least 30 minutes.

Systematic Desensitization

The name is very descriptive. Systematic Desensitization is a behaviorist approach that suggests that fears are often conditioned, and do not involve cognitive processes. It deals with phobias, panic attacks and such like situations. For example, if someone has difficulties talking in front of large crowds, just standing in front of a large crowd (the stimulus)—even if you do not have catastrophic cognitive thoughts—could trigger a stressful response.

As the term systematic dictates, it is a progressive process. Opposite of this would be "flooding" which involves completely exposing someone to their fears, until they are no longer afraid. For instance, if someone is afraid of snakes, you would throw them in a room of snakes until they were no longer afraid. However, this technique is simplistic, and though it may help, it also may produce adverse residual effects (Simmons, 2006).

Thus, the goal of this technique is to systematically desensitize the fear of the stimulus. There are several steps to implementing this technique, as follows (Simmons, 2006).

First, the client must learn how to be relaxed. This can be done through using the aforementioned techniques such as progressive relaxation.

Then, implement imagery. Imagery can be defined as creating or recreating images in the mind. Imagery involves all the senses including visual, kinesthetic, auditory, and olfactory senses. It also involves moods and emotions (Simons, 2005).

Along with this, implement modeling (observational learning). This involves watching someone else perform a certain behavior.

Finally, you should slowly expose the individual to the stimulus in real life.

Let's elaborate on this with an example.

Suppose someone is afraid of dogs.

First, have them perform progressive relaxation and meditation for a week, to get them to learn what it feels like to be relaxed.

Second, implement imagery. Start slowly, by imaging being a block away from a dog. Now, pair this stressful situation with relaxation techniques. So while they are imaging this, have them focus on being relaxed and calm. And you can keep imaging getting closer and closer to the dog, until the person images being with the dog, and perhaps petting the dog, all the while being relaxed. If the person ever freaks out during an imagery session, simply take a step back, and slowly progress forward. It is important to understand that the person must be imaging his or herself doing the action, and the more senses are involved in the situation, the better the results will be.

Another great technique is modeling. Most effective models for this method are peer coping models. These are models with similar attributes to the client such as age, gender, height, etc. And, they also have a phobia with the situation (in this case, dogs). The client would watch the coping model successfully cope with his or her fear of dogs, and the hope is that the client will think "if this person can do it, so can I." Evidence supports the efficacy of this technique (McCullagh, 2005).

Finally, you should have the person actually confront his or her fear in real life. Again, take it progressively, and take a step backwards any time you have a set back.

During this time, you should implement verbal persuasion, and educate the person on their phobia. For instance, tell them that dogs are friendly animals, and won't hurt them. This will help decrease the fear and uncertainty aspects of stress.

Stress Inoculation

Again, the name of this method is very descriptive. Like a disease, you are trying to inoculate your body to stress. You do so by developing defense mechanisms and coping skills to deal with stress. There are several keys to this method (Simmons, 2006).

Many people avoid stress by avoiding any situations that causes a certain stressor (such as talking in public). Stress inoculation is the opposite of this. It involves confronting what stresses you, and developing defense mechanism. Suppose someone is scared to talk in public. First, they should practice in a non hostile environment, where their probability of success is high, such as in front of friends and family. As they practice, they need to continually try and refine coping strategies that will decrease the stress response. The more you practice, the more refined your coping skills will become. As you accumulate successful experiences, and increase your coping skills, this will increase your confidence in your capacity to speak in public, effectively decreasing the stress response.

Summary

The purpose of this paper was to analyze why we get stressed, and how to manage stress at 5 levels: environment, cognitions, physiological control, coping skills, and combination techniques. Numerous techniques were discussed such as social engineering, and progressive relaxation, which will allow the reader to effectively manage stress. To continue to part 6 of this series, click [here](#).

Keep it Hardcore,

Venom

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