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Progressive Muscle Relaxation Program Plan for a Division 1 Women's Soccer Team

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PROGRESSIVE MUSCLE RELAXATION PROGRAM PLAN FOR A DIVISION 1 WOMEN'S SOCCER TEAM

by

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Anxiety leads to increases in heart rate, palpitations, blood pressure, and the production of stress hormones and has been found to have an inverted-u relationship with sports performance. This has made modulating anxiety crucial for improved sports performance and has led to research into various techniques for anxiety regulation. Progressive Muscle Relaxation (PMR) is one technique that has been extensively studied and has found overlapping improvements in stress, anxiety, heart rate, mood, musculoskeletal fatigue, and cognitive functioning with an abundance of this research focusing on soccer athletes. Specifically, with cognitive functioning, improvements in reaction time during periods of fatigue have been observed. The purpose of this paper is to highlight the importance of implementing a relaxation program for SIU women's soccer program for continued success. PMR training will follow similar models and be done three times a week for a minimum of four weeks, with heart rate, reaction time, and Competitive State Anxiety Inventory-2 (CSAI-2; Cox, Martens, & Russell, 2003) values being recorded. Following a 4-week PMR training, a set schedule will be followed to focus on rapid relaxation and practical applications to the sport of soccer.

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CHAPTER ONE

INTRODUCTION

In the scientific literature, there exists many different definitions of stress and anxiety though many share specific commonalities. Stress is a state that results from demands that are placed on the individual while anxiety results when the individual doubts his or her ability to cope with the situation causing them stress (Humara, 1999). Anxiety is characterized by a subjective feeling of tension, apprehension, nervousness, and worry and is associated with an arousal of the autonomic nervous system (Spielberger, 1979). There are two main components to anxiety; cognitive and somatic. The cognitive component consists of negative expectations about success or negative self-evaluation, while the somatic component corresponds to physiological effects such as an increase in heart rate, shortness of breath, sweaty hands, butterflies in the stomach, increased muscle tension, and cold sweat (Pineschi & Di Pietro, 2013).

The focus of the current paper is specifically on anxiety. Anxiety's effect on physical and sport performance has been extensively researched (Khan & Khan, 2017) Anxiety leads to an increased heart rate, palpitations, and blood pressure by increasing the production of stress hormones like adrenaline and cortisol. Catecholamine is also produced and can have an adverse effect on both short term and long-term memory as athletes shift their focus of attention from the task at hand and relevant information to process that to worries about anxiety (Pineschi & Di Pietro, 2013). These hormones can also induce personality, mood and temperament changes (Khan & Khan, 2017). Temperament changes have been seen as both beneficial and detrimental to performance with research showing that negative moods such as tension and anger negatively affecting performance (Hashim & Hanafi, 2011).

In the sport environment specifically, athletes have reported higher trait anxiety scores

than non-athletes (Han et al., 2006). Anxiety can have an extremely negative effect on performance (Bhadoria, 2013). Two specific factors during competitions lead to anxiety for athletes including uncertainty about the outcome and the importance of the outcome, or, the importance of obtaining intrinsic and extrinsic rewards (Pineschi & Di Pietro, 2013). It has been reported that if an athlete is experiencing heightened feelings of apprehension concerning performance outcomes (i.e., cognitive anxiety), optimal motor coordination and movements, even if accompanied by other physical and physiological advantages, cannot ensure an excellent performance (Saha, 2014).

Theories about the relationship between sport performance and anxiety include the multidimensional anxiety theory of performance, which focuses on the negative linear relationship between anxiety and cognitive athletic performance and the inverted-u relationship between somatic anxiety and performance; the catastrophe model of anxiety and performance which states that depending on whether anxiety is low or high, physiological arousal and performance will have an inverted-U or a bell-shaped curve, with a, “catastrophic drop in performance”; and the individual zones of optimal functioning, where the individual has an optimal individual zone of anxiety where his or her best performance occurs (Pineschi & Di Pietro, 2013, p. 182). It is also thought that factors like anxiety or other emotional states can result in making bad decisions by the athlete leading to a decrease in efficiency or poor play (Jaworska, Hawrylak, Buryznski, & Szczepanska-Gieracha, 2015).

Adequate levels of anxiety can produce a better result in sports, but a large majority of athletes consider it to be a detriment to their performance, making ways of controlling their anxiety important (Khan , 2017). Previous research using 160 elite athletes and the Competitive Anxiety Scale and the Self-Rating Athletic Performance Scale found a significant linear

relationship between cognitive anxiety and performance and that low and high levels of anxiety are inversely related to performance, making finding the optimal level of anxiety crucial for sport performance (Ahmed et al., 2016), corresponding to existing theories. Bookani et al. (2015) also found support for this relationship and found that athletes do perform better at an optimal anxiety range that is unique to each athlete. The outcomes of all previous research have led to the importance of controlling anxiety and the optimal ways in which to do so.

Research examining methods of anxiety reduction and control has identified multiple popular strategies that have been effectively used by elite athletes including goal setting, positive thinking, cognitive restructuring, diaphragmatic breathing, imagery, and progressive muscle relaxation (Humara, 1999). Relaxation skills have been shown to help with anxiety management during competitions as well as relieve localized muscle tensions, facilitate the recovery process when rest periods are short, deal with insomnia, and optimize the cool-down period. Particularly, somatic techniques, such as muscle to mind body relaxation through the reduction of muscle tension, enables a lowering of psychological tension (Pineschi & Di Pietro, 2013). Progressive muscle relaxation (PMR) is proposed to exert the strongest effects on the somatic aspects of stress or physiological reactions (Mohd Hafiz, 2019). This has led to PMR being extensively researched and widely used by athletes.

Anxiety has been found to affect sport performance in various ways and can be both beneficial and detrimental, depending on numerous factors. Research supports athletes having an individual optimal range for their own performance and suggests that it is important for athletes to identify and control that range. This indicates that finding ways to control anxiety is crucial for high level performance and has led researchers to explore anxiety and arousal management strategies, including PMR.

CHAPTER TWO

LITERATURE REVIEW

Progressive Muscle Relaxation

PMR is a popular relaxation technique that involves contracting a specific muscle group, holding muscular tension for several seconds, relaxing, and then contracting a different muscle group and repeating the process until all muscle groups in the body have been contracted and released (Pineschi & Di Pietro, 2013. There are numerous approaches/protocols to conducting PMR, but all are known for their muscle tension-relieving effects and regardless of the protocol utilized, PMR enables subjects to relax voluntarily by consciously relaxing muscles (Khanna, 2007). One of the objectives of PMR is to increase the individual's awareness of the difference between the presence and absence of muscle tension (Pineschi & DiPietro, 2013). The main concept behind the effectiveness of PMR is that once the individual is trained and accustomed to the experiences and sensations provided by PMR, they will be able to eliminate unwanted tensions in the muscle groups without having to tighten them first. The possible performance implications of effective PMR use has led to more research into the field of relaxation training (Cox, 2012), and this research has suggested that PMR can lead to improvements in various overlapping areas including anxiety and stress, recovery, mood, musculoskeletal fatigue, and cognitive functioning, which are discussed in greater detail below.

PMR, Anxiety, Stress, and Mood

The impact of PMR use on pulse rate and blood pressure have been studied as well due to their close relationship with anxiety. Specifically, PMR has long been used to counteract these physiological responses to stressors (Maimunah et al., 2016). Hashim (2011) conducted a study of 16 adolescent soccer players (mean age of 14.1 years) using PMR for 12 sessions found that

PMR had positive effects on state anxiety as well as a significant reduction in somatic anxiety. Another study looking at boys aged 9-12 years found that the use of PMR three times a week for 15 minutes a day altered attentional focus from anxiety provoking thoughts and anxious apprehensions to the bodily sensation of relaxation (Srilekha, 2013). A 2019 study by Allison, Hamilton, Yuan and Hague (2019) looking at first year veterinary students found improvements in relaxation and stress after using PMR prior to exams supporting the use of PMR as a general self-care strategy.

Stress has generally been found to have a harmful effect on the immune system; as stress increases, cortisol is produced and the immune system is harmed (Pawlow, 2002). A study from Pawlow (2002) looked at the effects of performing an abbreviated PMR program consisting of two sessions one week apart on salivary cortisol levels in undergraduate students and found that PMR had produced improved levels of relaxation and decreased levels of both state anxiety and perceived stress. Furthermore, performance of PMR was associated with significantly lower levels of salivary cortisol, potentially reducing those harmful effects on the immune system (Pawlow, 2002). Given that these significant differences resulted from just two sessions of PMR, there could be implications for improvements from longer, more thorough, PMR training.

Additional effects of stress include changes in mood and temperament. In general, PMR is a beneficial tool for mood regulation. A study from Taniguchi, Hirokawa, Tsuchiya, and Kawakami (2007) using Japanese adults found positive effects of a 10-minute relaxation intervention on general mood ratings and a reduction in confusion and fatigue scores. For athletes specifically, increases in stress hormones can also induce personality, temperament, and mood changes (Khan, 2017). Mood regulation is important in sport as it is postulated that certain mood patterns are advantageous for athlete’s performance with negative moods such as tension

or anger negatively affecting performance (Hashim & Hanafi, 2011). This makes appropriate mood regulation strategies very important for athletic performance. Another study using 16 adolescent soccer players aged 13-15 years receiving PMR training for 30 minutes 3 times a week for 4 weeks found reduction in four negative subscale scores using the Profile of Mood States-Adolescents (POMS-A) including confusion, depression, fatigue, and tension (Hashim & Hanafi, 2011). This was compared to a group receiving autogenic relaxation with that group reporting improvements as well. For this study they performed the PMR in small groups of eight in a blue-painted room with supervision.

PMR and Pulse Rate

One important facet of elevated anxiety levels is the physiological responses that may be impacted, such as pulse rate. PMR has been shown to decrease pulse rate in multiple studies. Another study by Singh et al. (2000) found pulse rate decreased by 11.21% in boxers from pre-test to post-test after 45 minutes of PMR training. Khanna et al. (2007) looked at pulse rate in 30 females and PMR for 20 minutes for 10 consecutive days and found that pulse rate was reduced post PMR training, suggesting the efficacy of PMR training in relieving anxiety and reducing high pulse rate which is a common symptom of an anxious state of mind. PMR leads to a reduction in sympathetic nervous system activity and an increase in vagal activity, thus lowering pulse rate (Khanna et al., 2007). A study by Gallego-Gomez et al. (2020) examine 112 nursing students (84 females and 28 males) with a mean age of 24.3 years old receiving guided PMR training prior to an exam and heart rate in conjunction with stress levels, measured by blood pressure, cortisol levels and exam scores. Results indicated that PMR showed an increase in exam scores and a reduction in heart rate and the authors stated it was an effective tool for control and decrease of anxiety and stress levels.

PMR and Physical Recovery

A 2019 study from Oguz examining young adults' sleep behaviors (ages 18-25 years) and found that PMR improved sleep quality as well as decreased sleep delay, disorders, and day drowsiness. The author suggested that this finding could be due to that awareness and conscious relaxation that PMR allows for that enables better sleep and recovery. PMR has also been studied as a tool to aid and assist in physical recovery for athletes. A significant amount of research has been done on the effect of sleep and proper recovery, or lack thereof, especially when it comes to elite athletes. During the stress of sport and performance, elite athletes experience a deviation from homeostasis, requiring restoration during recovery for training and performance standards to be maintained (Beckmann & Kellman, 2004). Athletes, coaches, and athletic trainers have identified sleep as an important aspect of the recovery process and as crucial for optimal performance as it is critical for protein synthesis, growth hormone release, and facilitation of glucose metabolism (McCloughan, Hanrahan, Anderson, & Halson, 2015). McCloughan et al. (2015) looked at PMR and sleep due to the sports science and psychology staff of the Australian Olympic team employing it at the 2012 London Olympics. Using a sample of elite dancers aged 18-23 years they found that after two weeks of PMR training done at least once daily after training but prior to bed, sleep onset latency was improved in athletes with higher levels of trait anxiety, suggesting that athletes with higher anxiety see greater improvements in their sleep from performing PMR than individuals with lower anxiety levels. PMR has been found to benefit sleep in samples of non-athletes as well.

PMR and Musculoskeletal Fatigue

For athletes who participate in sports with defined time-based games (i.e., those with distinct halves of play), most injuries occur in the last 15 minutes of each half when the body is

overloaded and fatigued which suggests that exercise can have a substantial impact on changes in nervous and muscular systems and on the stabilization of the joints and lower limbs (Jaworska et al., 2015). Furthermore, it is thought that factors like anxiety or other emotional states (e.g., anger, frustration) can result in making bad decisions by the player leading to a decrease in efficiency (Jaworska et al., 2015). The link between body parts and the central nervous system and the activation and movement of body parts is affected, such as loss of coordination or speed, and the person may become unable to perform simple practiced tasks as effectively (Khan, 2017). This makes mental preparation fundamental with many studies showing positive effects of PMR. PMR is proposed to exert the strongest effects on somatic aspects of stress or physiological reactions, particularly those involving the musculoskeletal system with many studies supporting the effectiveness of PMR on reducing musculoskeletal fatigue (Maimunah et al., 2016). Mansour (2010) observed that 24 sessions of 30 minutes of PMR training led to lower epinephrine and higher norepinephrine and beta-endorphin levels in a sample of third-year ballet students (n = 40). This change of levels suggests that reduced muscle activity and increased muscle relaxation, respectively, contribute to the reduction of muscular tightness. It is speculated that PMR training decreased accumulated stress in the body and symptoms of fatigue by helping the athletes to lower tension.

Studies looking at the impact of PMR on physical skill performance have been predominantly suggestive of a positive relationship. Saha (2014) found that male soccer players (18.6-20.9 years old) receiving an abbreviated PMR intervention of 20 minutes a day on two days of the week significantly improved their level of coordination between upper and lower body when balancing as well as soccer juggling performance and agility. Another study looking at 32 male soccer players with a mean age of 15.68 years old playing in the top league of ‘Senior

Youth' in Poland found that after going through PMR training athletes distance covered in the Cooper Test was significantly increased (Jaworska et al., 2015). The goal of the Cooper Test is to run as far as one can in a 12-minute span so significant increases in distance covered could be linked back to the stress coping and calming of the body that is associated with PMR.

PMR and Cognitive Functioning

Fatigue from prolonged intermittent high-intensity exercise, such as practice or competition for athletes, has been considered as the main cause of deterioration in cognitive performance (Maimunah, 2016). During a state of fatigue, athletes' processing capabilities and cognitive processes tend to slow, affecting their cognitive-motor performance, evidenced by slowed reaction times (Brisswalter, Collardeau, & Rene, 2002). Thompson et al. (2009) found that male soccer players' decision making time and errors significantly increased following periods of fatigue-inducing exercise. This makes the ability to maintain cognitive-motor function during these periods of fatigue crucial for improve sports performance. Specifically, Chmura et al. (1994) looked 22 male soccer players (mean age of 21.3 years old) and the effects of fatigue during an incrementally increased bicycle ergometer test on reaction time measured by a visual five-choice reaction test and found that reaction time increased, especially when exercise intensity exceeded 80% of maximal oxygen consumption. Chmura and Nazar (2010) looked at fatigue and reaction time similarly in thirteen male soccer players (aged 23.2 $\pm$1.0 years) and found that when running velocities reached 87% of maximal velocity, reaction times progressively increased.

For cognitive and mental aspects of sport performance, PMR has been found to be effective in improving the imagery ability, mental preparation, and concentration ability and mental skills of subjects (Bhadoria, Bhukara, & Shikha, 2013). One study by Hanafi, Hashim, &

Ghosh (2011) used 24 male school athletes aged 13-18 and examined the effects of fatigue on reaction time before and after PMR training. Subjects completed four rounds of cycling at 60% VO2max for 10 minutes followed by 2 minutes at 90% with a 3 minute window between rounds where 5 trials of a four-choice visual stimulus test were completed. Scores were then averaged. They then underwent 4 weeks of PMR training for a total of 12 sessions. Afterwards, the testing was repeated. Overall they found a significant decrease in reaction time post-intervention. Maimunah (2016) then extended this research and looked at 7 and 16 muscle group PMR intervention, comparing an abbreviated form to a total form, and asked subjects to participate 3 times a week for 4 weeks with running instead of cycling during testing to induce fatigue and found that there was a significant decrease in reaction times in both groups compared to control, with the 16-muscle group producing significantly quicker reaction time. The improvement in reaction time in the extended and even in the abbreviated PMR intervention indicates the effectiveness of PMR training for improving cognitive-motor functioning during exercise by controlling the physical arousal occurring during exercise (Maimunah, 2016). The basis for this experiment with the subjects running instead of cycling better simulates a soccer match and provides a more translatable result as it pertains to game-like situations and the ability of PMR to mitigate the declines in cognitive performance that are typically seen.

Practical Applications for the Sport of Soccer

There is a significant amount of research in the extant literature on PMR that has been conducted on soccer athletes. Soccer, in general, is a good sport to test because it is a long, tiring, game that involves quick reactions, decision making, and technical skills along with using various aerobic and anaerobic energy systems. One study comparing anxiety levels of different sports found that among team sports, soccer had higher trait anxiety scores (Han et al., 2006),

thus, the impact of PMR on soccer players may lead to even greater improvements. Selmi et al. (2018) looked at soccer training and mood balance and found that high intensity-interval training increases mood disturbance, tension, fatigue, and led to a decrease in vigor while small sided games typically ensure mood balance as measured with the profile of mood state (POMS). Some sort of relaxation training has been proven to be beneficial for soccer athletes as it has been shown to help athletes adjust their action, thoughts, feelings, and physical sensations and even contribute to improvements in performance.

CHAPTER THREE

SUGGESTED PROGRAM IMPLEMENTATION

PMR Training for Soccer

Recent studies (Chmura & Nazar, 2010; Maimunah, 2016; Thompson, 2009) examining PMR interventions and assessment of reaction time for soccer athletes have followed similar protocols, so those will be used a guideline for the program suggested for the SIU women's soccer team. The soccer program at SIU consists of 21 players with an additional 5 slated to start this upcoming preseason (i.e., Fall 2020). In total, there are two seniors, three juniors, sixteen sophomores, and five freshmen. PMR training would begin during preseason, which is the first week of August, and would occur 3 times a week for each group for a minimum of 4 weeks encompassing all of preseason and into the first week of season. Training would occur in small groups of approximately nine girls, grouped randomly, in the team locker room post-practice.

The locker room consists of two couches as well as multiple chairs which enables the girls to spread out. They also have their lockers that they can sit at. Groups will be rotated to allow for little wait time (e.g., 15-30 minutes) but due to the group rotation, there will be a day for each group where they will have to wait for the previous group to finish (i.e., in week 1, Group A will go first, then Group B, then Group C; during week 2, Group B will be first, then Group C, then group A, etc.). Athletes will be in a comfortable seated or lying down position with dim lighting. PMR training will follow a specific transcript (Appendix A) at every session and will be conducted each time by the same person, in order to ensure as much consistency as possible with the PMR protocol. This PRM protocol will utilize differential relaxation, with a focus on contracting, holding and then releasing muscular tension to allow the athletes to learn and appreciate the difference between those two experiences.

Assessment

Baseline resting heart rate, reaction times, and somatic and cognitive anxiety would be assessed using a heart rate monitor, an 8-choice visual stimulus reaction time test using a MOART Reaction Timer (Lafayette Instruments), and the Revised Competitive State Anxiety Inventory-2 scale (CSAI-2; Cox et al., 2003), respectively. Heart rate and reaction time would be recorded prior to the first practice and the baseline CSAI-2 would be given prior to the first practice and preseason game. The CSAI-2 is a sport-specific scale that has demonstrated reliable and valid measures of cognitive and somatic anxiety and self-confidence in competitive situations and comprises of 27 items with 9 items in each subscale with responses rated on a Likert scale (Cox et al., 2003). Reaction time will be assessed for a total of 20 trials each time with the average of the trials being recorded. Going forward, heart rate and reaction time would be measured after practice and just before beginning the PMR training. These would be reassessed at the end of two and four weeks, and CSAI-2 would be assessed prior to each game, to assess if the program is working based off of reaction time and heart rate values and CSAI-2 scores and to see if any modifications need to be made. Reaction time, heart rate, and CSAI-2 scores will be recorded in Table 1. Modifications could include switching days or groups or time that an athlete is able to attend, number of days per week needed, or possibly continuing it throughout the entire season.

Table 1. Example Data Collection Sheet

Athlete Name	Heart Rate	Reaction Time	CSAI-2 Score

At the end of the initial four-week relaxation training period, rapid relaxation, and the ability to relieve tension without tightening the muscles to make it more applicable to real-world scenarios would become a focus. Relaxation training typically moves from progressive, to release only, to cue controlled, to differential, to rapid, to application (Maynard & Warwick-Evans, 1995). This allows for the relaxation skills to be more transferable and sport specific. Release only focuses on the relaxation without the contracting while moving down the body; cue-controlled uses the release only with the word relax cued when breathing out; differential is where they learn to relax muscles that are tense at an appropriate time without focusing on ones that aren't and this is where it can be made sport specific; rapid relaxation teaches them to relax in naturally occurring situations and requires the subject to take two or three breaths, exhaling slowly after each, and associate relaxation with exhalation; and the final stage is where rapid relaxation becomes more sport specific and subjects are asked to use it in the game in situations such as when the ball goes out of play or the referee blows the whistle for a penalty (Maynard & Warwick-Evans, 1995). A schedule for the introduction of different relaxation techniques is in Table 2. Research has also shown that relaxation, imagery, and cognitive interventions are each beneficial but more powerful when used in conjunction with one another (Humara, 1999). Introducing some other frequently utilized concepts with PMR, such as directed self-talk, would be beneficial for the overall control and relief and performance of the athlete.

Table 2. Progressive Schedule of PMR

Relaxation Type	Duration	Times Per Day/Week	Objective
Progressive	4 weeks	3d/week	Teach what it feels like to relax
Release Only	1-2 weeks	2x/day	Sense tension without contracting and relax
Cue-controlled	1-2 weeks	2x/day	Scan body and relax only where tension is found with relax being a cue work on exhalation
Differential	1-2 weeks	Multiple times throughout practice	Scan body and relax particular body parts during sport specific movements
Rapid	1-2 weeks	15-20x/day	Relax in naturally occurring non-stressful situations. During this period other techniques can be introduced to further facilitate relaxation
Application	Continual	As needed	Use as often in game situation to become relaxed

CHAPTER FOUR

SUMMARY

Numerous research studies have shown the positive effects of PMR on athletic performance, with improvements in anxiety regulation, mood, heart rate, musculoskeletal fatigue, and cognitive functioning being seen (Chmura et al., 1994; Chmura & Nazar, 2010; Hashim & Hanafi, 2011; Jaworska et al., 2015; Khan, 2017; Maimunah, 2016; McCloughan, Hanrahan, Anderson, & Halson, 2015; Pawlow, 2002; Saha, 2014; Singh et al., 2000; Srilekha, 2013; Thompson, 2009). PMR training has been specifically utilized with soccer players specifically with improvements being seen. Therefore, a PMR program for SIU women's soccer program would be advantageous for success. Following the protocol (see Appendix A) and working towards rapid relaxation, and the inclusion of another concept such as directed self-talk, would hopefully lead to improvements in confidence, anxiety, and motor skill performance.

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APPENDIX

Progressive Muscle Relaxation Script

Progressive muscle relaxation is an activity designed to relax your mind and body by progressively tensing and relaxing muscle groups throughout your body. Try to apply considerable tension in each muscle group without straining and then quickly and abruptly release the tension and feel the muscle relax. You'll tense each muscle group for about 5 seconds and release the tension in a sudden burst. If you have any injuries skip over these parts of the body to avoid any possible exacerbation. Find a comfortable position either sitting or lying down somewhere where you won't be interrupted.

Begin by allowing your body to get more comfortable wherever you are. Take a few full deep breaths in through your nose and out through your mouth. Just notice yourself breathing. Let your attention focus now in your body. Let any distracting thoughts come and go if you begin to notice your mind wandering, bring it back to the muscle group you were focusing on.

Starting at the top of your head when you're ready, tighten the muscles in your forehead by raising your eyebrows as high as they will go as if you were surprised by something. As you begin to tighten, breathe in for about 5 seconds and release and breathe out slowly feeling a relaxation smooth across your forehead.

Next squeeze your eyes closed. tightening your eye muscles. Notice how this feels. Breathe in and hold the tension 4-3-2-1 and breathe out and release relaxing your eyes. Slowly open your mouth as wide as you can as you might when you're yawning, hold it there as you breathe in, hold, and release and breathe out. Tune in to what it feels like as you release each muscle group. Do you notice any tingling or buzzing sensations?

Next as you breathe in, smile widely, feeling your mouth and cheeks tense hold and release and breathe out and notice the softness in your face and the draining of tension. Gently and carefully pull your head back as if you were looking above and behind your head as you inhale tense neck and hold 4-3-2-1 and release. Slowly bring your head back to a position that's most comfortable for you. Gently wiggle your head and your face muscles try to release any residual tension that may be in your neck and face. Take a deep breath.

Now make a fist with your right hand and notice the tension build-up in your hand and forearm hold for five seconds as you breathe in, breathe out and release all that tension in your fist allowing your hand and forearm to become nice and loose with your fingers settling wherever they will.

Move your right forearm up to your shoulder flexing your bicep. Feel a build-up of tension and breathe in noticing the flex hold and breathe out, extend your arm back out and release. Pay careful attention to that muscle group and notice any tingling or buzzing or flowing sensations.

Now tighten your right tricep by extending your arm down by your side and locking your elbow pushing and flexing as you breath in and exhale and release. Now be aware of your left arm and notice any differences in sensation or tension from your right arm to your left arm.
Next make a tight fist with your left hand, breathe in and hold the tension, exhale and release the tension in your fist allowing your hand to become limp and loose. Notice the tensional discomfort flow out.

Bring your left forearm up to your shoulder flexing your left bicep as you inhale, visualize that muscle group tightening and hold and breathe out and release.

Now tighten your left tricep by extending your arm down by your side and locking your elbow and pushing and flexing as you breathe in, hold and release, and exhale. Again notice the sensations draining into or out of your muscle.

Now tense the muscles in your shoulders as you bring your shoulders up towards your ears and hold as you breathe in and tense and release and breathe out allowing your shoulders to droop down and relax by your side. Let the tightness flow out and relax and gently move your shoulders, see if you can feel gravity pushing your shoulders down towards the Earth.

Now with a straight back push shoulder blades back trying to almost bunch them together opening up your upper chest as you tense your scapula area. Tense, hold and breathe in and release and and breathe out. Notice any points of contact around your shoulders and any sensations. Notice the relaxation. Allow the tension to drain.

Next tense your upper back by pulling your shoulder blades together and arching your back pushing your chest and belly forward. Hold this tension as you breathe in and now exhale letting your shoulders and back muscles relax. Feel the tension drain, really attending to the release Notice any draining, tingling, warmth, calm, or buzzing sensations.

Tighten your chest by taking a deep breath in and pushing your shoulders forward and toward each other. Hold this and exhale and blow out all that tension. Again notice that release as you breathe out and relax.

Now tighten the muscles in your abdomen by sucking in and tensing as you slowly inhale and tense those muscles and hold and release the tension and breathe out.

Next gently arch your lower back by rotating your pelvis forward and flexing your lower back muscles around your spine. Hold this tension as you breathe in and breathe out and relax. Try to feel the looseness in your upper body and let go of any residual tension or stress feel free to gently move or wiggle your chest back shoulders abdomen and settle into a deeper relaxation as you do this you settle back into position gently notice that tension dissipate.

Now tighten your buttock muscles squeeze together and hold as you breath in and release and breathe out imagining your hips and pelvis area all loosening.

Now tighten your right thigh but pressing your legs straight and looking your knee and pushing slightly against this or plant the sole of your foot on the ground and push up. As you tense breathe in and hold the tension, notice the feeling of tightness and release that tension and breathe out. Notice any residual sensations. Allow them to drain.

Tense your right calf by extending your right foot and toes away from you. Flex this muscle as you breathe in and release and breathe out. Again, bringing as much attention and awareness as you can to the sensations of the release and the drain of tension.

Curl your toes on your right foot underneath tensing the arch of your right foot as you tense the arch breathe in hold, and release and exhale. Now notice any differences between your right leg and foot having actively drained tension to your left leg and left foot.

Moving to your left leg and thigh tighten your left thigh by pressing your leg straight and locking your knee and pushing slightly against this or plant the sole of your foot on the ground and push up. as you flex your thigh breath in and release and breathe out noticing the tension drain. Noticing the muscle relax.

Tense your left calf by extending your left foot and toes away from you flex your calf and breathe in and release and breathe out.

Now curl your toes on your left foot underneath, tensing the arch of your left foot. Breathe in and hold the tension notice the tension and as you release and breathe out notice that tension drain.

Continue to allow your whole body to relax. feel the weight of your body. notice the sense of gravity feel that gentle push towards the Earth. Take a few deep breaths, feel the breath and feel your body as you do so. When you are ready gently open your eyes and take a moment to notice your surroundings before you get up.

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