

# Stress in the Workplace

## And the Health-Related Disorders It Creates

Presented by

**Lisa-Marie Maryott**  
Herbalist and Holistic Health Practitioner  
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# 1 Introduction

*At 5:30am, the buzzing alarm clock signals the start of Susan's day. With eyes still closed, she musters up some strength to sleep-walk her tired and sore body to the bathroom to get ready for the day. Butterflies in her stomach begin to develop as she contemplates the day before her and as she struggles to get the kids dressed and ready for school. Breakfast for her is a huge cup of coffee - she needs the stimulation to face her commute and the work day. Susan shepherds the kids into the car, glancing constantly at her watch to see just how close she is cutting it. She drops the kids off, drives in horrendous traffic to her office, circles the parking lot several times until she finds a spot, and finally dashes to her desk where she does her accounts receivable and collections work. Her supervisor witnesses her hurried and frantic arrival which is 15 minutes late, and notes that this is the third time in four weeks that she has been late. Susan doesn't like her job, and likes the people who work there even less, especially her supervisor. She ignores her growing anxiety, grabs another large cup of coffee, and dives into the day. Bound to her drab, interior cubicle desk under fluorescent lights, she hunches over a computer entering payment data and generating reports with one hand, and calling customers with overdue accounts with the other. She overhears her co-workers talking about the next round of layoffs, which according to them, is immanent. At 10:30am, she fills her coffee cup again and when she is unsuccessful at finding a nutritious breakfast snack in her desk or in the bottom of her purse to fill her grumbling and acidic stomach, she snags a donut from a box that a co-worker brought and inhales it before getting back to work. At noon, she decides to take a short lunch and runs next door to the fast food restaurant to pick up a quick bite. Her afternoon is filled with many unpleasant phone calls to unhappy customers (where she tries to coerce them into paying for unsatisfactory products and services), a computer system that keeps crashing, and co-workers whose incessant gossiping and talking interrupt her thought processes and slow her progress.*

*At 3:00pm, Susan feels sleepy due in part to a warm and stuffy office, so she heads to the vending machine for a candy bar to get her energy up. On her way back to her desk, Susan's supervisor intercepts her and proceeds to chastise her for being late to work and for having not collected sufficient money from clients whose overdue accounts have been assigned to Susan. The supervisor informs her that if her tardiness and job performance don't improve immediately, she may be put onto a performance plan. Susan feels embarrassed as her self-esteem plummets. With the immanent layoffs, Susan is fearful that her name may appear on the next list. When she gets back to her desk, she reaches for her antacids to squash the pains in her stomach. The work on her desk is enough for two people and there are not enough hours left in the day to get it all done. Susan tries to ignore the rising panic and anxiety insides of her. Her concentration and multi-tasking abilities shot, she does what she can for the day and leaves to pick up her kids.*

*She dwells on work issues and office politics as she navigates rush hour traffic, and reaches for another antacid for her sour stomach. She rubs her tight neck muscles to help alleviate the oncoming headache, and notices that her throat is scratchy and sore, which signals the start of yet another cold this year. She needs this job and can't afford to lose it, so she feels that she can't get sick and will have to just cope with it.*

*Once she has the family home, she gulps down a glass or two of wine to try and erase the past 10 hours, feeds the family, helps the kids with their homework and baths, and straightens up the house. Just as she starts thinking about going to be bed, she jolts to the memory that she owes her supervisor some reports first thing in the morning. Since she didn't have enough time during the day to do them, she writes and runs the reports from her laptop computer on her bed while sucking on throat lozenges and wiping a running nose. She beats herself up at forgetting to call and check in with one of her closest friends who is having a tough time. It is after 11:30pm when Susan takes two Advil tablets and pours herself into bed where she tosses and turns for at least an hour before falling into a restless sleep- and lucky her, she will get to do it all again the next day, and for many days after that.*

How do you feel after reading this – overwhelmed? Anxious? Tired? Like there is no light at the end of the tunnel for Susan? Has any of this ever happened to you? Even though it is a fictitious case study, many people can identify with Susan's experiences because they have lived through similar life scenarios.

Any person who has held a job has likely experienced workplace or occupational stress. Stress does not discriminate – we see it in all geographies, industries, job roles, genders, ethnicities, and age groups. Jobs can be stressful even if you love what you do or where you work. The stress we feel can be short-term or acute in nature, such as working towards a fixed deadline, filling a large order, or working through a reorganization. We are stressed during this period, but return to sanity after the event is over. But chronic workplace stress – stress that extend over a long period of time with no foreseeable end – can be and often is harmful to both our physical and emotional wellbeing. Unfortunately, this stress does not go away simply because we leave the workplace. It can persist well beyond our work day or week, and when combined with all of the other stresses in our personal lives, can push us towards an unhealthy, diseased state of being. We consciously don't want this for ourselves, and we don't always have the ability to change what happens in the workplace. But we do have the ability to take control of our own health and care for ourselves so that workplace stress has less of a negative impact on us.

This paper addresses the physical and mental effects of persistent or chronic workplace stress and Western Herbalism's approach to supporting the nervous, immune, and digestive body systems and their stress related disorders. The focus on these particular body systems is two-fold: first, these are systems where we typically see the initial manifestation of more obvious, stress related symptoms such as headaches, frequent colds, insomnia, chronic fatigue, anxiety, indigestion, ulcers, poor concentration, and loss of appetite; and secondly, they are the systems that when consciously nourished, have a direct and

positive impact on our overall wellbeing and support the health of our other body systems (e.g. cardiovascular and musculoskeletal systems).

## 2 What is Stress?

There are many definitions for stress. The American Institute of Stress says it was: "... coined by Hans Selye in 1936, who defined it as '*the non-specific response of the body to any demand for change*'. Selye had noted in numerous experiments that laboratory animals subjected to acute but different noxious physical and emotional stimuli (blaring light, deafening noise, extremes of heat or cold, perpetual frustration) all exhibited the same pathologic changes of stomach ulcerations, shrinkage of lymphoid tissue and enlargement of the adrenals. He later demonstrated that persistent stress could cause these animals to develop various diseases similar to those seen in humans, such as heart attacks, stroke, kidney disease and rheumatoid arthritis."<sup>1</sup>

When Hans Selye coined this term, many people associated the word "stress" with not the state or outcome, but the actual thing that was stressing a person. So he created a new word, "stressor", to differentiate the stimulus or threat from the response or outcome (stress). For example, long work hours can be seen as a stressor that creates the stress of mental and/or physical exhaustion. In order for a person to perceive and internalize stress, there must be stressors that this person witnesses or experiences directly. Perception is a key point – people do not necessarily respond to stressors in the same way. What one person sees as a stressor may not be a stressor to another, and even if both people see the same stressor, they may not manifest the same stress response.

Expanding upon Selye's definition, Bob Rosen, psychologist and CEO and chairman of the consulting firm Healthy Companies International, defined *stress* in this way: "Stress is a condition we experience when our minds and bodies respond to changing conditions. Too much stress creates excessive fear and anxiety, conflict and defensiveness, feelings of overwhelm and burnout, and chronic inflammation in the body."<sup>2</sup> It is this definition that is a good place to start in identifying chronic workplace stress and its effects on the people experiencing it.

## 3 How Stress Affects Us

When we experience a stressful situation, our fast-acting sympathetic nervous system kicks us into what is termed the "fight or flight" response. To illustrate: imagine that you are walking on a hiking trail and as you crest a hill, you see a mountain lion directly in front of you. You perceive the mountain lion as a stressor (threat) which can initiate emotions such as anxiety and fear. Provided that your immediate response is not to pass out into an unconscious heap on the trail, your adrenal glands begin pumping the hormones adrenaline, noradrenaline, and cortisol into your system, which will increase the heart rate and blood pressure, expand the air passages in the lungs, enlarge the pupils in the eyes, and redistribute

blood to the muscles. It does this because these are the functions you need most in order to fight or flee the mountain lion. It is at this point that the body begins to redistribute energy to the critical body systems- the respiratory system (lungs), cardiovascular system (heart, blood), musculoskeletal system (muscles and joints) and nervous system (brain, eyes, ears). These systems are working at full capacity during the event. However, other body functions such as the digestive, urinary, and reproductive systems are not critical in this high stress situation, so the body decreases activity and energy in these systems. Activities such as saliva production, stomach acid production (for digestion), urination output, and ovulation temporary stop. All of this happens in a matter of a seconds, and it is your body's way of physically preparing to fight or flee and ensuring that you have the energy in the right places in order to do this.

Once you have collected yourself and decided that "flight" is the best choice, you run all the way back to your car at top speed, not looking back but making a B-line for the parking lot. When you are safely inside of the car driving towards home, the stressor is now gone and the longer-acting parasympathetic nervous system takes over to help the body rest and repair from the highly stressful situation. This phase is when your hormones are brought back into balance, the non-critical body systems are fired up again, any necessary repairs are being made, and the body is brought back into homeostasis (stable and consistent).

Now, imagine how your body would react if you ran into mountain lions many times a week and for many weeks at a time. Adrenaline and cortisol would be ejected out of the adrenals continuously. Your nervous system would be constantly shifting from the sympathetic (fight/flight) to the parasympathetic (rest/repair) modes, and then back again. Your critical body systems would be taxed from continually coming into contact with the mountain lion, and likely wouldn't have sufficient time to rest and repair before they would have to be engaged again to fight or flee the stressor the next time. Food you eat in between run-ins with the mountain lion might not be digested properly because there are not enough digestive juices available to break down the food. Fast breathing from an overused respiratory system might cause hyperventilation and panic attacks. Tensed muscles cause fatigue and neck/ shoulder pain and headaches. Rest and sleep can be elusive due to worry over the next run-in and your overly active sympathetic nervous system. The adrenaline will keep your heart rate and blood pressure elevated, which stress the heart and blood vessels. Eventually, the adrenal glands will tire and be unable to produce sufficient cortisol, which is a critical hormone that reduces inflammation. When there is not enough cortisol, inflammation in the body gets out of control and can promote and lead to chronic physical issues like Irritable Bowel Syndrome, leaky gut, gout, lupus, arthritis, general joint and muscle pain, and heart disease. Wearing your body down through these cycles will make you more prone to colds, flus, and other infections. Without getting a handle on how we respond to the various run-ins with the mountain lion, the body will begin to display symptoms of disease and dysfunction. And symptoms only appear once the disease or dysfunction is already present and affecting homeostasis and overall health – and while not impossible, it may not be easy to return to wellbeing.

So how does this all relate to workplace stress? Although the sympathetic nervous system's main purpose is to protect us from dangerous situations, it can also be triggered by ordinary stressors that we face on a daily basis, including stress from our jobs. Being continually under tight deadlines, feeling out of control, worrying incessantly about job security, feeling underappreciated and overworked, and experiencing difficulties with workplace relationships can all invoke the same fight/flight response in our bodies and lead to chronic health issues. And in today's electronic world of being plugged in 24x7 and where living a fast-paced life is increasingly being viewed as a sign of status, we are often unable to disconnect from the demands of the workplace. This act of constantly "being on" further contributes to our stress because we are unable to leave the stressors behind and unwind at the end of the day or week or during leisure activities. This stress then leaks into an individual's personal life and can affect relationships and the home environment, causing more stress because of discord felt with family and friends. All of this stress will eventually take its toll on the body.

## 4 The Numbers Don't Lie

### 4.1 *Stress in America™ Survey Findings*

The *Stress in America™; Missing the Health Care Connection* survey<sup>3</sup>, conducted in 2012 by the American Psychological Association (APA), analyzed the place that stress has in American life and the impact it is having on people's health and wellness. The survey looked at 2,020 adults 18 years or older who resided in the United States. The survey found that Americans consistently experience stress at levels higher than what they think is healthy. Some of the survey's statistics are as follows:

- On a scale of 1 to 10 (where 1 is "little or no stress" and 10 is "a great deal of stress"), adults report their stress level at 4.9, but believe 3.6 is a healthy level of stress.
- 20% of the respondents reported that they experience extreme stress (8, 9, or 10 on the scale).
- Over the past five years, 60% of adults have tried to reduce their stress, with 53% still trying to meet this goal.
- Approximately 7 in 10 Americans (70%) reported that they experience physical (69%) or non-physical (67%) symptoms of stress. Symptoms include irritability or anger (37%), fatigue (37%), feeling overwhelmed (35%), and change in sleeping habits (30%).
- 66% believe their stress has a moderate, strong, or very strong impact on their physical health, and 63% believe the same for their mental health.
- Among the adults surveyed, 1,424 report having been diagnosed with one or more of the following: Type 1 diabetes, Type 2 diabetes, cancer, heart disease or heart attack, high cholesterol, high blood pressure, overweight, stroke, asthma or other respiratory disease, chronic pain, depression, an anxiety disorder, arthritis or obesity.

Since many people understand that chronic, long term stress is not good for them, they are trying to place more importance on healthy behaviors to thwart stress conditions, but they continue to have a difficult time accomplishing the stress management goals that they set for themselves. This same survey found that more than half of the respondents said it was very or extremely important to manage stress (64%), eat healthy (60%), or be physically active (57%). However, here are the statistics demonstrating their relative success at exhibiting these behaviors:

- Only 37% of Americans feel they are actually doing a very good or excellent job of managing their stress
- Only 35% say that they are doing a very good or excellent job at eating healthy.
- Only 33% say they are doing a very good or excellent job at being physically active.
- 32% of the respondents said it is very or extremely important to talk with their health care providers about stress management, but only 17% report that these conversations are happening often or always

The APA states that people who receive little or no stress or behavioral management support from their health care provider are especially vulnerable to the effects from stress.

## **4.2 Other Research Findings**

There are many, many other studies and research findings regarding stress in the workplace that have similar conclusions. Some of them are:

- APA, American Institute of Stress, 2014 Stress Statistics Research study dated July 8, 2014<sup>4</sup>:
  - The top cause of stress in America is Job Pressure
  - 77% - Percent of people who regularly experience physical symptoms caused by stress
  - 76% - Percent of people who cited money and work as the leading cause of their stress
  - 73% - Percent of people who experience psychological symptoms caused by stress
  - 33% - Percent of people who feel they are living with extreme stress
  - 30% - Percent of people who say they are “always” or “often” under stress at work
  - 35% - Percent of people who cited jobs interfering with their family or personal time as a significant source of stress
- The Center for Disease Control and Prevention, Publication No. 99-101 discusses workplace stress and lists three surveys of what workers say about stress on the job:
  - **Northwestern National Life:** 40% - Percentage of workers who report their job is “very or extremely stressful”
  - **Families and Work Institute:** 26% - Percentage of workers who report that they are “often or very often burned out or stressed by their work”



- **Yale University:** 29% - Percentage of workers who report that they feel “quite a bit or extremely stressed at work”
- A 2015 report from the Harvard and Stanford Business Schools looked at 10 common job stressors and how the mental and physical effects of these stressors related to mortality. The study found that serious health problems stemming from job stress can lead to fatal conditions that kill about 120,000 people each year, making workplace stressors and the disorders and diseases they create more deadly than diabetes, Alzheimer’s, or influenza.<sup>5</sup>
- A 2013 *Consumer Health Mindset report* by Aon Hewitt, a retirement and health solutions company, reported that of the 2,800 employees and their dependents surveyed, four of the top five reasons for stress were work-related: financial situation (46%), **work changes** (37%), **work schedule** (34%), **work relationships** (32%) and **influence and control over how the employee did work** (32%).<sup>6</sup>

And while these specific studies focus on workers in the U.S., it is not an American epidemic – studies have been conducted in other global regions such as the United Kingdom, the European Union, and Australia, and findings have been similar. The numbers may vary by a little from study to study, but no matter what report you read, the conclusion is the same: working people perceive and experience a significant amount of workplace stress that has the potential to affect -or already has affected- their physical and mental wellbeing.

## 5 Stressors in the Workplace

*“People are disturbed not by a thing, but by their perception of a thing.” -- Epictetus*

The workplace is filled with things, such as relationships, decisions, and business requirements that can affect us both positively and negatively. As stated previously, a stressor’s reality and effect is based upon the perception of the person experiencing it – a particular workplace stressor can invoke a stress response in one person but not in another. Stressors can occur in a wide range of combinations or circumstances, but are often made worse when workers feel little support from management and their peers and have little control over workplace processes, conditions, and decisions. Feelings of inadequacy, confusion, and worthlessness felt in the workplace can color how someone looks at other aspects of his/her life, and can negatively affect relationships with family, friends, and co-workers – which perpetuates the stress cycle.

Common workplace stressors are:

- Inadequate pay
- Shift work
- Excessive workloads, long work hours, and mandatory overtime

- Mismatched job duties
- Few opportunities for growth or advancement
- Job insecurity
- Personal conflict with workplace personnel and management
- Harassment
- Deadline acceleration
- Low social support
- Micromanagement practices
- Lack of respect from supervisors
- Limited or no control over job-related decisions
- Conflicting demands or unclear performance expectations
- Poor lighting and workspace design
- Exposure to or use of toxic or dangerous materials
- Fear of accident or death on the job
- Death of a co-worker

When these stressors become longer term and chronic, they become too much for the affected individuals who then have difficulty coping both mentally and physically with the stressors. Individuals may begin to experience problems that vary in criticality or intensity. Some of the common stress problems or disorders that result from these stressors are:

- Headaches
- Stomachaches and digestive issues
- Sleep disturbances
- Short temper and anger
- Anxiety
- Musculoskeletal problems
- High blood pressure and high cholesterol levels
- Difficulty concentrating and memory loss
- Frequent colds and flus
- Depression
- Eating disorders
- Obesity
- Heart disease
- Heart attack and stroke

When experienced over time, many of these conditions can have a major and direct impact on not only overall health, but our self-image, self-esteem, and quality of life as well.

## 6 Common Stress-Related Health Disorders

With this basic understanding of what workplace stress is and how it generally affects us, we will next look at some common health disorders that affect the three body systems where we can see chronic stress-related conditions or disorders initially manifest – the nervous, immune, and digestive systems.

### 6.1 Nervous System Disorders

As the place where our stress response begins, the nervous system is the most complex system in our bodies. It is how we interact with our world and the link to our environment - how we see, feel, touch, act, and react. It is our body's control and communication center that is responsible for detecting, interpreting, and responding to both internal and external input and changes while regulating and coordinating our functions. Picture the juggler who is juggling a bowling ball, lit torch, and a chainsaw, and someone throws in a machete and a bucket of gasoline from different directions– he is not only managing and maintaining what he currently is doing, but has to coordinate and integrate the introduction of new (and dangerous!) items in his juggling line up – without knocking himself or anyone else out, lighting himself on fire, or severing a limb. This is like our nervous system – a neural highway that integrates countless bits of information and generates the appropriate reactions to internal and external stimuli.

When presented with workplace stressors that are out of our control, our sympathetic nervous system and its fight/flight response kicks in. The adrenaline and noradrenaline that is secreted by the adrenal glands and are used to “gear up” critical organ systems (like the brain, heart, and lungs) circulates through the blood stream for hours after the response is triggered. The adrenal glands also secrete cortisol, a hormone responsible for reducing inflammation in the body but that is also needed to increase the sensitivity of these critical organs to the stimulating effects of the adrenaline and noradrenaline. When the critical organs are sensitized continually (as in chronic stress conditions), they require less and less of the adrenaline and noradrenaline to climb to higher and higher levels of activity, and will stay at a higher level for longer periods of time. If you occasionally push your body into this type of condition, you may experience mild symptoms. But if you are in a chronic state of stress, then the symptoms can spread across various body systems and present themselves on a frequent or constant basis.

But the reality is that we don't actually fight or flee the stressor most of the time – instead, we may “suck it up” and internalize the stress that we feel. This internalized, continual stress wreaks havoc on the nervous system as it moves through repeated, cyclical adrenaline rushes. When hormones and glands are overworked, chemical waste is produced. This waste causes degeneration of nerve cells and free radical damage throughout the body. As the nervous system and other body systems get overworked, so

does the brain. We begin to experience degenerative emotional, mental, and physical effects on our body. Stress-related health issues may appear in the nervous system, with common symptoms being:

- Anxiety
- Nerve pain
- Brain fog or memory issues
- Difficulty concentrating
- Insomnia
- Depression

Since the nervous system communicates with all body systems, many degenerative signs will appear in systems and organs other than those associated with the nervous system, such as the immune and digestive systems.

## **6.2 Immune System Disorders**

The immune system is the body's "army" of defense against biological agents (pathogens such as bacteria and viruses) that cause illness or disease such as colds, flus, cancer, and autoimmune disorders. Our other body systems rely upon immune health in order to function correctly. The immune system is made up of millions of different types of cells and their by-products that get activated by antigens (foreign substances). These cells are found in either the humeral or cellular parts of the immune system. The humeral part floats throughout the body's fluids and is composed mainly of antibodies that fight bacterial and viral invasions. The cellular part fights pathogens that enter the body's cells. These cells can be found all over the body – in blood, organs, and tissue. When a pathogen or antigen enters our body, our immune system reacts to destroy, immobilize, or neutralize these agents which can originate from both inside and outside of the body. When these agents successfully invade, their presence elicits an inflammatory response which prevents spreading of the pathogen to nearby tissues, disposes of cellular debris from the "battle", and begins to repair any damage that might have been done. Our leukocytes, or white blood cells, are our front line "troops" that wage this war against these agents. Therefore, Inflammation is a necessary, critical and important response to keeping "bad" pathogens out of our bodies and bringing it back to homeostasis.

However, as chronic stress affects our immune system, the humeral part of the system begins to break down and under reacts, which allows it to become susceptible to attacking agents – it is not strong enough to fight and we become easy targets for infections such as colds and flus. We may also experience quicker and higher rates of infection. If the cellular part of our immune system breaks down, then we are at risk for developing various diseases such as cancer. And when the immune system becomes overactive trying to thwart attacks continuously, it may become overstimulated and confused, and begin attacking itself and other parts of the body that can lead to disorders such as allergies and

autoimmune diseases. The more stress we experience, the lower our cortisol levels will be over time. This decrease is due to overburdened adrenal glands and insufficient amounts of cortisol to reduce inflammation, thereby creating chronic or always-present inflammatory conditions to which the immune system can no longer respond adequately. Stress can also exacerbate existing infectious, malignant, allergic, or autoimmune diseases.

Some of the symptoms or conditions that happen when stress plays a role in these immune system responses are:

- Frequent and lengthy colds and flus
- Chronic inflammatory conditions like arthritis, Irritable Bowel Syndrome (IBS), and atherosclerosis
- Seasonal allergies
- Food sensitivities/allergies
- Autoimmune disorders such as rheumatoid arthritis, psoriasis, Celiac Disease, and hyperthyroidism
- Cancer

### **6.3 Digestive System Disorders**

The digestive system is the primary system that enables us to receive nutrients, and is also a key system of elimination. We eat food and drink fluids to obtain these nutrients that the body needs in order to have energy and experience homeostasis (balanced, stable state of being). This system is a long pathway made up of various organs that are all interconnected. Digestion begins in the mouth (actually, it begins in the brain before we even take a drink or bite of food) and ends in the anus, and aside from the voluntary acts of intake, chewing and swallowing, digestion is an involuntary action that our bodies just know how to do.

As discussed earlier, when we are stressed and our fight/flight response is triggered in our central nervous/sympathetic system, the body shuts down digestion and pushes its energy to the organ systems that most need it. The central nervous system slows or stops blood flow to the digestive organs, slows or stops the contractions of digestive muscles, and decreases the secretions needed for digestion. If there is food in the digestive system and not enough energy allocated to its function, dysfunction can take the shape of digestive complaints. Improper diet can also contribute to digestive system dysfunction.

Common complaints exhibited in people experiencing chronic stress are:

- Bloating or fullness while eating
- Heartburn (possibly too much acid in the stomach)
- Nausea
- Gas (belching, flatulence)

- Upper abdominal pain
- Acid Reflux/Gastroesophageal Reflux Disease (GERD)
- Ulcers

The shutdown of digestive processes can also affect the liver's ability to produce, secrete, process, and balance hormones and bile, and to clean or process waste and toxins out of the blood. This can lead to issues such as hepatotoxicity (liver toxicity), inability to properly absorb nutrients, bowel irregularities, allergies, and hormone imbalances.

#### **6.4 A Note about Adrenal Fatigue Syndrome**

Adrenal fatigue is an all too common condition that occurs in people who have been under a great deal of constant, continual stress. Hypoadrenia, a deficiency in the functioning of the adrenal glands, occurs when the adrenal glands can no longer secrete the right amounts of steroid hormones, such as cortisol. This means that too much physical, emotional, psychological, and/or environmental stress have weakened the glands – in other words, they are fatigued. The lower end of this condition is Addison's disease, which is a rare, life threatening condition (if left untreated) that can actually involve structural or physiological damage to the adrenal glands.

Hypoadrenia manifests itself more commonly within a broad spectrum of less serious yet often debilitating symptoms and disorders that are only too familiar to people who experience chronic stress. Many of these symptoms can be found in subsequent sections of this paper. This spectrum has had different names over the past century, having been called non-Addison's hypoadrenia, sub-clinical hypoadrenia, adrenal apathy, and adrenal fatigue. Although fatigue is a tell-tale sign of low adrenal function, it is such a common complaint in so many other conditions that today's medical physicians rarely pursue an adrenal-related diagnosis. Western medicine does not always recognize adrenal fatigue as a distinct syndrome and does not generally considered it a medical emergency. They tend to focus on and treat the extreme disorders of the adrenals, such as Addison's Disease and its counterpart, Cushing Disease, which is when the adrenal glands are secreting too much cortisol. However, with each increment of adrenal function reduction, every organ and body system gets more profoundly affected. Changes can occur in carbohydrate, fat, and protein metabolism, fluid and electrolyte balance, heart and cardiovascular function, and even sex drive. There are other changes that happen at the biochemical or cellular levels as well. Adrenal fatigue often gets overlooked by Western physicians as a possible reason for an individual's stress-related symptoms, and therefore goes untreated.

Western herbalism can successfully address adrenal fatigue through the use of herbs, diet, exercise, and lifestyle changes. There are various tests that can be conducted to confirm adrenal fatigue and identify which phase or stage a person is in, which determines the approaches that can be taken to reduce stress and fortify the body so that it is able to resume normal functions. Many of the strategies listed in this paper can successfully be used to reduce or eliminate adrenal fatigue through Western herbalism protocols.

## **7 The Histories of Western Medicine and Western Herbalism**

Western medical and herbal traditions span thousands of years, and probably began as early as prehistoric times when plants and herbs were used as food and to treat wounds. Spirituality was at the foundation of medicine in the very early days, as many people often thought that illness or injury was caused by angering the gods. In 400 BC, Hippocrates, known as the father of Western Medicine, changed this viewpoint, and proposed that there were natural, not supernatural, forces at work. Hippocratic physicians used a central tenet of theory that believed that illness resulted from imbalances among the four humors of the body – blood, black bile, yellow bile, and phlegm – and they used plants to help balance and cure illness and disease. Centuries later, a Roman anatomist named Galen associated each humor with a personality which translated to predisposition to certain ailments or diseases. This Hippocratic-Galenic practice was integrative and acknowledged a synergistic and individual relationship between a patient's body, mind, and personality. During this time, it was illegal and against religious doctrine to dissect human bodies in order to study them, so patient observation was how disorders were diagnosed. This practice stayed in place for hundreds of years as the basis for Western Medicine.

However, in the 16<sup>th</sup> century, physicians were given permission to dissect executed criminals which allowed them to see, handle, and understand physical body structures and their functions. This gave way to viewing human physiology as the mechanized interaction of organs, rather than as a holistic system of body, mind, and spirit. As technology improved, physicians were able to analyze organs, muscles, tissues, and cells at a much more detailed level which gave them the specialized knowledge that could allow them to take an active role in treating disease. Pathological anatomy, or a branch of anatomy concerned with structural changes at the microscopic or molecular level that accompany disease, was born. It was at this point where the voice of the patient, which had been so integral to Hippocratic doctrine, was silenced by the growing medioscientific dialogue in which the patient was unable to take part. Power of the body was transferred from the patient to the physician, which was a significant and divergent path from how medicine had been practiced to this point.<sup>10</sup> The 19<sup>th</sup> century in the U.S. saw the advent of the American Medical Association and stricter guidelines about who could practice medicine and who could not, which led to the closing of many of the eclectic schools that were teaching Western herbalism and keeping alive the Hippocratic-Galenic tenets. Formulas made from whole plants still formed the basis of medicines being prescribed by these physicians until the second half of the 19<sup>th</sup> century,

when companies such as Merck and Pfizer were created to begin manufacturing pharmaceuticals that physicians could prescribe.

During the formation and evolution of Western medicine, many lay people still continued to practice Western herbalism. Often called “wise women” or “wise men”, they were individuals who often were the keepers or carriers of medicinal herbal tradition, knew plants and their actions, and applied this knowledge to the care of people in their families, villages, and communities. Although there were times when these individuals were forced underground or faced persecution for their practices (e.g. the Inquisition and Salem Witch Trials), they kept the tradition alive and passed it to future generations of herbalists.

In the late 20<sup>th</sup> century, the patient rights movement began to allow people to begin to reclaim their voices and consequently power over their bodies where their health was concerned. People were interested in a more holistic and natural approach to health care as they experienced a rise in illnesses and diseases. In response to this movement, medical schools began to revisit holistic medicine, and the number of western herbalism schools (as well as other traditional herbalism practices such as Chinese and Ayurvedic medical systems) and herbal practitioners grew significantly to resuscitate and use those herbal traditions that had gone the wayside in the 19<sup>th</sup> and 20<sup>th</sup> centuries. Supplement companies began to manufacture herbal capsules, pill, and extracts, and marketed the medicinal values and benefits of these herbs to the masses. Herbs such as Echinacea, Saw Palmetto, Aloe, and Kelp are well known and highly used plants that anyone can buy and take without a prescription, and that can be found in many herb, natural, grocery, and pharmacy stores. People have also moved to address diet and lifestyle as well as taking herbal supplements – many people follow diets designed to improve health, and exercise and stress-reduction practices such as yoga and tai chi have become much more popular.

Although medical education has begun addressing the need for holistic medical care, Western medicine continues to focus on pathological anatomy and holds a specialized view that depersonalizes the diagnosis and treatment of illnesses and diseases – for example, a physician may see five people with eczema and prescribes the same medicine to each of them and does so without a thorough analysis of the individuals' inherent constitutions and the possible underlying causes for the eczema. He does this because the medicine treats the symptom of eczema on the skin, but it may not treat the underlying reason or cause for the eczema, which will likely be different for each of the five people. Western herbalism aligns more closely with the Hippocratic-Galenic philosophy of an integrated approach that looks at a person's body, mind, and personality to understand root causes and determine a strategy for improving an individual's health.

There is a place for both approaches to work in concert with each other, as there are disease states that absolutely require Western medicinal intervention and where western herbal practices can be used to support and complement medical treatments. For example, someone receiving radiation treatments for



prostate cancer can benefit from herbs and diet/lifestyle changes that can help that person cope with the side effects of the radiation treatments and boost their overall physical and mental health in order to deal with the cancer. Western herbalists can provide this support.

## 8 Western Medicine Approaches

Since the focus of this paper is on the Western herbalism approach to managing workplace stress and its effects, this section will provide a brief overview of Western Medicine's approach to treating the initial, common symptoms and illnesses that are associated with this stress.

As a system that looks at illness from the lens of pathological anatomy, Western medicine is more specific and organ, body system, and symptom based. A physician, who often times have only 15-20 minutes with a patient during a visit, will perform an intake whereby she asks the patient about: 1) the chief complaints/symptoms, 2) the history of the present complaints, 3) other problems or symptoms that the client is experiencing, and 4) the past medical and surgical history if she does not already have that information on file. Sometimes the physician will follow this intake with a physical exam of the area related to the chief complaint to gather additional information or confirm or deny her suspicions as to what the illness is. Once a diagnosis is confirmed, the physician will then determine treatment, which in many cases will include pharmaceutical prescriptions. It may also include ordering various medical tests to further clarify what is going on in the patient's body. The physician may recommend some diet or lifestyle changes, although this is not always considered and provided. Also, it is important to note that, as an impatient, "pill popping culture" of people seeking instant gratification or cures for their ailments, we are not always satisfied with a physician's direction to change diet or lifestyle in lieu of a miracle drug that will eradicate our symptoms right away. A patient with a cold is not going to get a pharmaceutical prescription to make the cold go away, because there is not a pill to get rid of the common cold. The physician will recommend rest and possibly taking over-the-counter medications to help ease the symptoms, but because it isn't a panacea, the patient might say "What a waste of time that was – she didn't help me. Why did I bother going to the doctor?", when in fact the physician's prescription is exactly what the patient needs to do. We often expect our physicians to prescribe drugs that will immediately resolve our health issues.

When a prescription is made, the patient is generally advised to contact the physician's office if the patient experiences any side effects or problems with prescribed medication, or if the complaints/symptoms do not go away. The physician likely will not advise the patient to return after the illness has passed for any type of wellness check or to confirm that the illness or disorder is indeed gone.

A big driver in this approach is the fee structure, which often drives the practice of medicine. Many western physicians belong to health care networks and provide services to patients with health insurance. The fee-for-service pay structure incentivizes shorter visits, as the physician's pay increases by the more

patients she can see. Even though the physician may want to spend more time with her patients, her hands are tied by the expectations of the health care networks and this incentivized pay structure. In general, Western herbalists do not have this restriction, and therefore are able to spend more time with their clients discussing health issues and working towards optimal health. People seeking advice and support from herbalists may be more likely to accept a longer treatment cycle because they understand that the approach is more holistic in nature.

Pharmaceuticals, as the “heavy hitters” of the medicine world, can be prescribed for specific stress-related conditions. While they can have an overall effect on the body, they generally target a very specific organ or body system with a specific condition. Selective Serotonin Reuptake Inhibitors (SSRIs) work on the nervous system and are a type of medication used as an anti-depressant for depressive or anxiety disorders. They increase the levels of serotonin (one of our “feel good” hormones) in the body by limiting its reabsorption back into the presynaptic cells. Commonly prescribed SSRIs are Prozac, Zoloft, Paxil, and Lexapro. Benzodiazepines are medications that act on the brain and nerves to produce a calming effect by enhancing the effects of gamma-Aminobutyric acid (GABA), which plays a principle role in reducing neuronal excitability in the nervous system. These medications, such as Xanax, Ativan, and Valium can be prescribed for anxiety and insomnia. Sometimes more mild medications can be used for anxiety or insomnia, such as hydroxyzine (Atarax) which is an antihistamine. For significant insomnia, a physician may recommend over-the-counter solutions such as Benedryl (also an antihistamine) or Melatonin, or the physician may prescribe a sedative-hypnotic such as Ambien or Lunesta. These drugs are usually limited to shorter treatment periods to try and get the body to adjust to a more normal sleep pattern. Prescriptions for digestive complaints such as heartburn and acid reflux (GERD) can be: over-the-counter medications, such as Tums; acid reducers (i.e. H2 blockers) such as Tagamet, Zantac, or Pepcid; or Proton pump inhibitors (PPIs) – such as Achiphex, Prilosec, and Prevacid – which greatly reduce acid in the stomach and reduce irritation so the stomach lining heal (commonly used when ulcers or the Helicobacter pylori bacteria are present). A physician who diagnoses Irritable Bowel Syndrome (IBS) may prescribe: over-the-counter laxatives such as Dulcolax (bisacodyl) to aggressively stimulate the intestine or may even prescribe something like Amitiza which is prescribed for constipation in females; tricyclic antidepressants such as Elavil and Pamelor to relieve symptoms and which are gentler on the digestive system than other antidepressants like Prozac; Linzess, which helps bowel movements to occur more often; antidiarrheal medications such as Imodium; antispasmodics to reduce muscle cramping and spasms in the digestive tract. Diet is often also part of an IBS discussion, as food and fluids can play a key role in treating the disorder.

Pharmaceuticals can have interactions with each other and can cause side effects. Care must be taken by the physician and the patient to ensure that the patient is not taking medicines or substances that interfere or interact with each other, and that the side effects are identified and managed appropriately.

This may mean having to try different drugs to achieve the desired state, which could delay the reduction or elimination of symptoms or imbalance the body and cause additional side effects.

## 9 Western Herbalism Approaches

As an integrative and holistic approach, Western herbalism looks at the whole body, mind, and spirit of the affected individual in order to not only understand the symptoms being experienced, but to also identify the causes of the symptoms. This approach focuses on the use of herbal, dietary, exercise, and lifestyle protocols to achieve balanced, optimal health. In this way, an herbalist finds the root of the problem and develops holistic strategies to fix that underlying problem while also offering relief for the symptoms.

This approach becomes critical when thinking about assisting someone with workplace stress conditions because herbs, just like pharmaceuticals, are not the sole answer to improving someone's physical and mental health. People under a great amount of workplace stress, especially chronic stress, will begin to exhibit health problems or issues that they may or may not associate directly with the stress. It is the herbalist's job to look at the whole person and analyze all of the body system states to identify what might be amiss and develop an overall strategy to heal the person. Steps in this process include:

- Identify the stress triggers/stressors
- Identify the individual's unique constitution and needs
- Formulate and implement a wellness strategy consisting of herbs, dietary changes, exercise protocols, relaxation therapies, lifestyle and environmental changes, and other healing modalities

## 10 Find Out More

This paper is a part of a larger document that details the various approaches and strategies discussed here. If you are interested in finding out more about the Western Herbalism Approach to managing and healing workplace stress effects and how it can work for you, please feel free to contact me. I provide one-on-one consultations as well as presentations and workshops to organizational groups and teams on the different ways that stressed out people can feel healthier and happier.

Lisa-Marie Maryott  
[lisamarie@healing-leaves.com](mailto:lisamarie@healing-leaves.com)  
[www.healing-leaves.com](http://www.healing-leaves.com)  
925) 364-4336

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