Health Sciences E-Bulletin

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The Stresses of Motherhood

Mothers are the world's best jugglers: arranging family schedules from soccer to band practice to doctor's appointments, planning meals, and dealing with money issues, childcare and work — they seem to do it all. There is a price to pay, however—the evidence is mounting that women today are experiencing more stress at every stage of their lives than ever before. With all that responsibility, many moms are left feeling tired and stressed out. That stress contributes to poor sleep habits which in turn can contribute to emotional issues, job issues and weight gain. According to a 2006 survey by the American Psychological Association, women are more affected by stress than men and report engaging in unhealthy behaviors such as comfort eating, poor diet choices, smoking, and inactivity to help deal with stress. The same survey showed women report feeling the effects of stress on their physical health more than men. So, in honor of Mother's Day this month, it's a good time for moms and their families to recognize the importance of addressing stress and learning to manage it in healthy ways.

The Stress Response

The stress response, often referred to as the "fight-or-flight" reaction, is an inborn part of your autonomic nervous system, and, as such is a rapid and automatic response to a physical (or emotional) threat. It provides you the energy, speed and concentration you need to protect yourself or to run as fast as possible. When you encounter such a threat, a tiny region of the brain (the hypothalamus) sets off an alarm system in your body. Through a combination of nerve and hormonal signals, this alarm stimulates your adrenal glands to release the stress hormones, adrenaline and cortisol. Adrenaline increases your heart rate, elevates your blood pressure and mobilizes energy nutrients (glucose, amino acids and fatty acids) from body stores to meet energy needs. Cortisol, your body's primary stress response hormone, increases blood sugar, enhances the uptake of sugar into the brain and increases the availability of amino acids for repairing body tissues. Cortisol also works to inhibit body functions that are nonessential during times of acute stress, like the body's immune response, digestive processes, reproductive system and growth processes.

Ordinarily, the stress response is self regulating and once the crisis has passed, hormone levels drop, heart rate and blood pressure normalize and other systems resume their regular activity. However, acute physical threats aren't the only events that trigger the stress response. Chronic psychological threats, such as stress at work or home, conflicts with family and friends and major life changes (divorce, death in the family) can all activate the same alarm system. Even the typical demands of daily life such as driving in traffic and normal parenting demands can contribute to your body's stress response. It is this chronic activation of the stress response that's problematic and can be exceedingly detrimental to your health.



Stress and Your Health

Digestive Function– When you're feeling stressed, it's not uncommon to develop a stomach ache, diarrhea or constipation. That's because when you're under stress, blood flow to the digestive system is reduced, stress hormones slow the release of gastric acid and slow gastric emptying. These same hormones can also speed up the action of the intestines. In fact, stress appears to play a role in the development of Irritable Bowel Syndrome (IBS), a cluster of symptoms, consisting of abdominal discomfort, bloating, constipation, and/or diarrhea. IBS is among the most common gastrointestinal disorders for which women seek medical attention. While the disease itself is not inherently different in women than in men, it is much more common among women by a ratio of 3 to 1.

Immune Response— The immune system is a complex balancing act between systems that respond to a physical or emotional threat as well as the more specialized components that deal with responding to infection or cellular damage. To deal with acute physical threats, like let's say a puncture wound or cut, the immune system reacts quickly by creating inflammation around the wound. However, when you experience chronic stress the same acute immune responses may not be beneficial in the long run. In fact when you're under chronic stress, some features of your immune system are actually suppressed, increasing your susceptibility to infections. Other features of the immune system are permitted to run unchecked, increasing the risk of autoimmune disorders, conditions where your own immune system attacks your body's own cells. Autoimmune diseases (i.e. lupus, rheumatoid arthritis, multiple sclerosis, and thyroid diseases) occur more often in women, usually striking in the child-bearing years. For example, compared to men, two to three times as many women get multiple sclerosis and rheumatoid arthritis each year, and when it comes to lupus, women outnumber men 9 to 1.

Cardiovascular and Nervous System Effects– Chronic activation of stress hormones also raises your heart rate, increases your blood pressure and blood lipids (i.e. cholesterol, triglycerides), all of which can increase your risk of having a heart attack or stroke. Remember that heart disease is the number one killer of women. If your "fight and flight" response never turns off, the by-products of cortisol may contribute to feelings of depression or anxiety. Forget where you parked the car, or set your keys down? Chronic stress also affects the operation and structure of brains cells involved in memory functions.

Sleep Deprivation – Sleep is essential to good health but unfortunately, chronic stress and feelings of anxiety can often lead to sleep disturbances. This is especially true for moms with young infants and children, who already experience sleep challenges due to "middle of the night infant feedings" or disruptions in sleep due to young children waking in the middle of the night. According to the National Sleep Foundation, 60 percent of adults report having sleep problems a few nights a week or more. In addition, more than 40 percent of adults experience daytime sleepiness severe enough to interfere with their daily activities. Studies also suggest that women are also at greater risk for developing insomnia than men.

Obesity and Weight Gain – Another major down side chronic stress and sleep deprivation is the effect both of these can have on your weight. Cortisol levels appear to play a role in the accumulation of abdominal fat (central obesity) which gives some people that "apple" body shape. Carrying excessive weight around your middle appears to increase the risk of both heart disease and diabetes. Sleep deprivation may also have a direct effect on metabolic hormones that control hunger and satiety. In a 2004 study, researchers at Stanford University and the University of Wisconsin found that subjects who consistently slept for 5 hours compared to those who slept for eight, had a 15% increase in ghrelin, a hormone produced in the stomach that triggers appetite, and a 15.5% decrease in leptin, another hormone produced by fat cells, which serves as a signal indicating insufficient energy stores and the need for consuming more calories. Lack of sleep also appears to increase the risk of weight gain. Data collected from the Nurses Health Study, revealed women who slept for five hours a night were 32% more likely to experience major weight gain (an increase of 33 lbs or more) and 15% more likely to become obese over the course of the 16-year study compared to women who slept seven hours. Scary!

Find Healthy Ways to Manage Stress

While motherhood has its challenges, the rewards definitely make it well worth it—right, Moms? Think of those adorable Mother's Day cards or the very special breakfast in bed served by your 8-year-old—who wouldn't sign up for this? So, be the best mom you can be by finding healthy ways to deal with whatever stresses you have in your life.

What you can do:

1) Identify the stressors in your life. These may be marital problems, conflicts at work, family illnesses or just the day-to-day schedule you keep. Once you've identified what the primary causes of stress are for you, you can begin to figure out how to either change your stressors or learn to manage them better.

2) Schedule personal relaxation time. Although the demands of your "juggling act" place major obstacles to finding some "down time", setting a side a few minutes a day just to breathe, collect and organize your thoughts, can work wonders. Start small. Schedule 10 minutes a day to simply do nothing but sit and breathe. Deep breathing can help bring your heart rate and breathing back to normal, so you can clear your mind. Once you've accomplished that on a regular basis, consider taking up yoga or meditation.

3) Good nutrition through healthy food choices plays a crucial role in your ability to withstand times of extra stress. Carbohydrate, protein, fat, vitamins and minerals are all important for energy, mental concentration, and emotional stability. Along with the stress induced effects on digestion and your immune system, stress may increase your body's need for certain nutrients so you may need an extra healthy diet to stay focused, alert, energetic and to ward off colds and flu. So choose a variety of foods and be sure to eat complex carbohydrates from whole grain breads and cereals, beans and legumes and fresh fruits and vegetables, lean protein from fish, chicken, soy and nonfat or low-fat dairy and select heart-healthy omega-3 fats from fish, avocado, nuts, olives and seeds. Cut back on junk foods, sodas, alcohol and caffeine-containing beverages.

4) Get some extra sleep. Sleep deprivation not only contributes to weight gain and feelings of fatigue, it can also increase medical expenses, sick days and accidents. When you sleep well, you wake up feeling refreshed, alert and ready to face your daily challenges. To help you get a better night's sleep try to maintain a regular bed and wake time schedule, even on the weekends; establish a regular, relaxing bedtime routine; create a sleep conducive environment (dark, quiet and comfortable); and try not to eat a meal, drink alcohol and caffeinated beverages or exercise within a few hours of bedtime.

5) Although exercise right before bed time can disrupt sleep, an active lifestyle can actually help control stress and improve sleep patterns. Exercise can not only help reduce anxiety and increase productivity which can help you handle stress better, but also helps control your appetite and burn calories which can help you maintain a healthy weight. And let's not forget about the cardiovascular benefits of exercise – it not only strengthens your heart, it can help lower blood pressure, blood cholesterol and triglycerides which in turn reduces your risk of heart disease and stroke.

6) Supplement your diet. Fill in nutritional gaps with a well-balanced, high-quality multivitamin/mineral supplement. Look for one that provides at least 100% of the daily value for 21 essential nutrients including the B vitamins folic acid, B12 and B6 to help promote heart health, the antioxidant nutrients, vitamin C and E which support immune function and protect against free radical damage and key bone health nutrients like calcium, vitamin D and magnesium. Supplement the omega-3s in your diet with a top quality, pharmaceutical grade fish oil supplement. For digestive health, take a probiotic supplement to help maintain healthy intestinal microflora and for additional stress relief, try botanical ingredients like L-theanine from green tea and ashwaganda. L-theanine has been shown to facilitate the generation of alpha brain waves, which are associated with a relaxed yet alert mental state, and ashwaganda is an Ayurvedic herb traditionally used in India to enhance the body's ability to adapt to stress. And lastly, if getting to sleep remains a challenge, occasionally try herbal ingredients like valerian which can help you maintain a calm state and promote restful sleep.

We all know that being a mom takes an extraordinary amount of patience, love and discipline. That's what makes moms so special! But juggling family, finances and work commitments can really be stressful, so remember this Mother's Day to keep things in perspective –prioritize wherever you can, delegate responsibilities, eat right, stay active and TAKE YOUR SUPPLEMENTS! But, most of all, make time for what's really important – taking care of yourself, so you can be the best mom ever!

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