

Health Beat

A Division of Student Services, Student Health Services, Health Resource Center

Stress Prevention Continued...

A universal example of stress: it is 9:00 A.M. and there are a million things to do. First, breathe deeply and begin to relax while making a list to prioritize what must be done today. Limit the list to what is realistic and then begin. Remember to reward yourself after each goal is accomplished, either with a healthy bowl of blueberries or just taking a moment to call a friend. Remember, stress can never be completely eliminated, but by following the above listed suggestions, one can navigate around or through it more effectively.

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Tossing Stress Continued...

Relaxation breathing, PMR, and guided imagery are effective because they decrease the heart beat, slow and deepen breathing patterns, lower and/or stabilize blood pressure, and relax muscles.⁴ Relaxation responses bring the body into balance by reducing stress hormones, slowing muscle and organ activity, and increasing blood flow to the brain. Thus through relaxation, the body efficiently tosses stress.

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2. University of Illinois at Urbana-Champaign. "Relaxation techniques." *McKinley Health Center*. Retrieved on January 3, 2008 from http://www.mckinley.uiuc.edu/Handouts/relax_techniques.html
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Body Response Continued...

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2. National Institutes of Health. "Stress system malfunction could lead to serious, life threatening disease." *National Institute of Child Health and Human Development*. Retrieved on December 11, 2007 from <http://www.nichd.nih.gov/news/releases/stress.cfm>
3. The Nemours Foundation. "Stress." *Nemours' Kids Health*. Retrieved on December 11, 2007 from http://www.nemours.org/eservice/business/kidshhealth.html?4if_ps=202 American Psychological Association, "The different kinds of stress." *APA Help Center*. Retrieved on December 11, 2007 from <http://www.apahelpcenter.org/articles/article.php?id=21>
4. American Psychological Association, "The different kinds of stress." *APA Help Center*. Retrieved on December 11, 2007 from <http://www.apahelpcenter.org/articles/article.php?id=21>

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CSULB SHS
ATOD

Alcohol, Tobacco, & Other Drugs Program

The CSULB office of Alcohol, Tobacco, & Other Drugs would like to wish the students of CSULB a relaxing and safe Spring Break. To find out about safe and alternative ways to party, and much more, visit our website:

www.csulb.edu/atod

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Physiology of the College Student's Stress

By Samantha Kunemoto

Deadlines, jobs, relationships, and campus parking are just a few of the daily stressors that CSULB students face. Although the physiologic response to stress can be incredibly useful to complete tasks, long-term exposure can be detrimental to the student's health. First of all, what is stress? Although students will describe their perceptions of stress differently, stress can be defined as the "body's non-specific response to any demand made on it."¹ From physiological to psychological effects of stress, it's important to be aware of its various pathways and repercussions.

How does our body react to stress? The autonomic, or involuntary nervous system, is divided into two parts: sympathetic and parasympathetic. The sympathetic nervous system is responsible for our stress response, providing that extra "oomph" or energy to complete the tasks at hand. In 1936, Dr. Hans Selye developed the "General Adaptation Syndrome" theory that explains the three stages of stress:

1. **Alarm** – Reaction, in which the central nervous system is aroused and the body's defenses are mobilized (ie: "Fight or Flight").² Stress-activated energy (in the form of glucose) is released and stimulates the muscular, circulatory and respiratory systems.
2. **Resistance/Adaptation** - If the stressor persists, other systems including digestion, immunity, excretion and reproduction are inhibited, and resources are gradually depleted.² Therefore, it becomes necessary to attempt some means of coping with the stress.
3. **Exhaustion** – Continuous stress causes the progressive breakdown of compensatory mechanisms (acquired adaptations) and homeostasis, marking the onset of certain diseases.²

Long-term exposure to stress can significantly affect a student's psychological and physical health. Stress may lead to poor eating habits, low self-esteem, sexual dysfunctions, and sleep disturbances among many other consequences. According to the University of Maryland Medical Center, major adverse effects of prolonged exposure to stress include:

1. **Mental Health Problems**- Depression and anxiety may be the result of chronic stress, and if left untreated, may develop into serious mental illnesses. Studies suggest that the inability to adapt to stress is associated with the onset of depression or anxiety. In one study, two-thirds of subjects who experienced a stressful situation had nearly six times the risk of developing depression within that month. Furthermore, from memory to concentration, any psychological problem greatly interferes with a student's ability to perform well in school.³
2. **Cardiovascular Disease**- Stress can activate the nervous system's autonomic component, negatively affecting organs, such as the heart. Although stress, in relation to heart disease continues to be researched, preliminary evidence suggests that stress may contribute to the development of heart disease, arrhythmias, inflammation, hypertension and even stroke.³
3. **Immune System**- Chronic stress inhibits the immune system's response to infections, leading to further vulnerability to opportunistic infections as influenza (the flu). Furthermore, those infected with herpes may be at higher risk for viral activation (breakouts) following exposure to stress.³

As college students, we must incorporate various things in our lives to deal with everyday stressors. However, alcohol and drugs are not effective stress releasers. From stimulants to alcohol and other drugs, substance misuse leads to unwanted effects and may cause further stress. In order to combat stress, invest in your health whether nutritionally or with counseling. On campus, the CSULB Health Resource Center (HRC) offers free, peer nutrition counseling, and CAPS (Counseling and Psychological Services) provides free psychological counseling. Both of these assistance techniques are excellent and offer positive action steps towards improving all students' levels of stress.

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The Body's Response to Stress and Relaxation By Rogelio Martinez

Stress causes physical and emotional changes in the body.¹ Interestingly, due to students' individualities, what might be stressful to one, such as weekly deadlines, might prove beneficial to another. However, most agree public speaking causes stress. So what physically occurs in a person prior to making their speech?

When a person begins to experience stress, the hypothalamus (located in the brain) is activated, causing body temperature to rise and fall, and corticotrophin (CRH) is released. In a domino effect, CRH stimulates the pituitary gland, triggering the release of hormones that stimulate the adrenal gland. Through this rapid and complex process, three types of hormones are released from the adrenal gland: norepinephrine (noradrenaline), epinephrine (adrenaline) and cortisol. In combination, these hormones cause physical changes.²

The feeling of stress is a result of cortisol increasing metabolism. It is this metabolic rise which causes the body to experience the strength to encounter the challenge. Therefore, when preparing for a speech (acute stress), there is a release of adrenaline and cortisol, causing a rise in metabolism, heart rate, breathing, and blood pressure. Blood flow to large muscles rises, pupils dilate to maintain alertness, and sweat is produced to lower body temperature. Some view this stress as positive, because a rise in metabolism grants them an energy boost that enables them to finish a research paper (acute stress).³

However, long exposure to stress is harmful. The American Psychological Association identifies three forms: **Acute Stress**, **Episodic Acute Stress**, and **Chronic Stress**. **Acute Stress** is most often experienced by students, resulting "from demands and pressures of the recent past and anticipated demands and pressures of the near future." **Episodic Acute Stress** develops as the frequency of acute stress increases, causing students to experience difficulty in prioritizing daily tasks. Those suffering appear to always be in a rush, but are always late. Often they blame others for their difficulties and view most tasks as obstacles. **Chronic Stress** is caused by long-term troubles that seemingly have no end or solution such as war, starvation, divorce, or a loved one's death. This type of stress can lead to violence, heart attack, stroke, or death.⁴

For students who are experiencing more than acute stress levels, it is suggested to seek medical assistance and/or counseling. For CSULB students with questions about stress, come to Student Health Services (SHS) or Counseling and Psychological Services (CAPS). Having completed extensive stress research, Dr. Herbert Benson, Harvard Medical School, emphasizes the importance of being able to lower one's own stress level through self-imposed techniques, rather than through the use of medications.³ Due to stress, students can learn to take care of themselves in a healthy and positive manner.

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Stress Prevention By Gerri Duru

STRESS!! A six letter word that's unavoidable to all students. From school, to work, to friends and family, it is almost impossible to balance college life without feeling the pressures of stress. Everyone goes through stress; it is a natural part of life. However, ongoing stress is unpleasant and can lead to negative health conditions. So when we get stressed, what can we do? Remember, the best medicine is prevention, and while it is impossible to prevent all stress, one can control and limit its extent. Let's take the stress out of that six letter word.

There are many ways to prevent and limit stress. Exercise is a great activity that reduces tension and improves your physical and emotional being. The healthier a person is, the easier it becomes to deal with stress. Also, simple actions such as asking for help when you need it, reduces stress.¹ Always guard against taking on too much responsibility, in school, at work, or at home, and always set limits. Other prevention techniques are laughing and crying. Sometimes, just a good laugh or cry helps relieve stress by reducing tension in the body.¹ And maintaining a positive attitude assists in stress prevention and reduction, causing problems to seem less challenging.

A major contributor to academic stress is **procrastination**. Waiting until the last minute to write that 20-page paper, or study for tomorrow's final can induce major waves of anxiety. To avoid "crunch anxiety," make a list of goals and tasks and stick to them.¹ Use a calendar and a planner for noting important things to be done and prioritize. While focusing on studies, be sure to incorporate time to relax and have fun. Relaxation prevents stress build up and allows the body to better cope with daily problems. Use relaxation as a reward for completing scheduled tasks. And remember, one can say "no" to distractions, such as requests from friends and family. Keep life simple by just following through on the next indicated step towards completing your list.

Don't turn to sugar as a relief remedy because consuming junk food increases stress as much as life's negative events and illness. Brie Turner-McGrievy, a dietician, advises that "upping your intake of antioxidant-rich fruits and vegetables boosts your immune system," particularly blueberries which are considered to be a great source of antioxidants.² Ginger aids in reducing stress by increasing digestive fluids that soothe stomach queasiness as result of tension and anxiety.² Food to avoid are those that can increase stress. Therefore, eat higher fat foods such as ice cream, cake, cookies, and pizza in moderation. These foods slow down the blood from delivering oxygen quickly to your brain, resulting in one dealing less effectively with stressful situations.² Beverages to monitor are beer and coffee. Beer can cause more anxiety from just dealing with the hangover and weight gain. Caffeine from coffee is linked with high blood pressure.

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Tossing Stress By Linda Peña

Remember the childhood game "Hot Potato" played with a bean bag? The game's goal is to hold onto the bag for the shortest amount of time. And similar to a "hot potato," no one desires to hold stress for any amount of time. But unlike the game, it is far more difficult to toss it away. Therefore, the solution for ridding oneself of stress is relaxation and positive stress management.

Important stress management factors are the ability to re-focus negatives into positives, and to always leave space in one's life for having fun.¹ Also, physical activity is significant and experts recommend twenty minutes of aerobic activity 3 times per week.¹ Maintaining good health not only contributes to effective stress management, but supports a sense of well-being. By eating a well balanced diet and socially interacting with others, students can reduce their stress levels.

However, even with a positive plan, a student can develop stress. So it is important to know how to alleviate and cure this emotional discomfort. Some rely on **Relaxation Breathing**. It is a process that cleanses and refreshes the body and can be done anytime and anyplace. Sit or stand up straight; inhale through the nose, expanding the diaphragm; hold the breath briefly; slowly exhale through the mouth, allowing your stomach to fall.² Do relaxation breathing in intervals, repeating the cycle several times.³

Another technique is **Progressive Muscle Relaxation (PMR)** in which specific muscle groups are tightened, held, and then released, while sitting or lying down. This exercise concentrates on specific muscles as highlighted in the chart below.

HEAD	THIGHS, CLAVES, ANKLES & FEET
1. Wrinkle the forehead.	6. Tighten thigh muscles, trying not to involve abdominal muscles.
2. Squint eyes tightly.	7. Tense the calf muscles.
3. Open the mouth widely.	8. Point toes under, as if to touch the bottom of the feet.
4. Push the tongue against the roof of your open mouth.	9. Bring toes up as if to touch the knees. ²
5. Clench the jaw tightly. ²	

Guided Imagery can be an effective relaxation tool. While lying down with your eyes closed, imagine a favorite, peaceful place. In this vision, be conscious of soothing sounds, the warmth of the sun, and/or the freshness of a soft breeze. Some students report imaging a particularly boring professor lecturing, brings relaxation and deep sleep.³

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Workout for Your Body, Not your Wallet Intramural Sports & Wellness Fitness

BOOT CAMP

February 29th - May 2nd
Fridays 12 PM - 1PM
\$15

Yoga

February 28th - April 24th
Thursdays 4PM - 5PM
\$15

Pilates

February 27th - April 23rd
Wednesdays 5PM - 6PM
\$15

Butts & Guts

February 26th - April 22nd
Tuesdays 5PM - 6PM
\$15

Cardio Kickboxing

Session One: February 18th - March 26th
Session Two: April 7th - May 14th
Mondays & Wednesdays 6PM - 7PM
\$10 per session for one class a week
\$15 per session for two classes a week

Ab Burner

Session One: February 18th - March 26th
Session Two: April 7th - May 14th
Mondays & Wednesdays 5:30PM - 6PM
\$10 per session for one class a week
\$15 per session for two classes a week

Night Walking

February 26th
Tuesdays & Thursdays 6PM - 9:30PM
Free

Faculty/Staff add \$5.00 per session for classes. Sign up in PE 1 Building Room 20 or call (562) 985-4668. For more information, www.csulb.edu/intramurals