

Stress: A Serious Health Concern

Ofonime E Johnson*

Department of Community Health, University of Uyo Teaching Hospital, Uyo, Nigeria

*Corresponding author: Ofonime E Johnson, Department of Community Health, University of Uyo Teaching Hospital, Uyo, Nigeria, Tel: +2348161518358; E-mail: drjohnsonoe@yahoo.com

Rec date: Oct 16, 2014; Acc date: Nov 03, 2014; Pub date: Nov 05, 2014

Copyright: © 2014 Johnson OE. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

The demands of daily living have an impact on the human body, affecting its normal physiological equilibrium, many times to the extent that the individual's body succumbs to serious pathological manifestations. While efforts are being made to eradicate communicable diseases and reduce predisposing factors to non communicable ones, many are being brought down by an apparently ignored but real phenomenon called stress. This is a silent killer capable of affecting virtually every system of the body leading to very fatal consequences. In addition individuals are known to incur huge medical bills as a result of stress related ailments. Workplaces also suffer financial losses as a result of stress related reduced productivity, absenteeism or sometimes costly mistakes by staff.

The aim of this essay is to highlight the health hazards associated with stress and recommend ways of preventing their occurrences. The essay looks at the meaning of stress, its spectrum, types of stressors and an individual's response to stress. It then offers some tips on avoiding and managing stress.

It is hoped that by understanding some of the consequences of being under excessive pressure, one can begin to take positive steps towards reducing the impact on the body. In order to live a long fulfilling life, reducing stress in our day to day life is a virtual necessity.

Conclusion: The negative consequences of excessive stress on an individual are too numerous to be ignored. One should therefore make every effort to curb the menace of this silent killer.

Keywords Stress; Stressors; Silent killer

Introduction

Stress is the body's non specific physical and mental response to any demand placed on it, whether pleasant or not [1]. It is an essential stimulus for survival and active productivity. We all function best and feel at our best when we are at our own optimal physiological arousal. However, excess and too little stress are counterproductive. The aim of this essay is to highlight the health hazards associated with stress and recommend ways of preventing their occurrences.

Spectrum of stress

The spectrum of stress spans from low stress at one extreme to excess stress at the other end (Figure 1). Low Stress can lead to frustration, boredom and under involvement. Such a person cannot get the best out of life as his or her potentials are not maximally utilized.

Everyone needs a certain level of stress to function optimally. This acceptable level of stress allows one to be adequately stimulated, alert, decisive, creative and effective. However, when too much demand is placed on the body, it can no longer function maximally. This excessive demand is what is commonly referred to as "stress" by most people. Alarming experiences either real or imagined can trigger such a stress response [2]. It often results in reduced efficiency, reduced alertness, overload, difficulty in concentrating and indecision. Such a person will also become easily irritable, anxious, confused, fatigued

and exhausted. In extreme cases the person may suffer from burnout which is a state of physical, emotional and mental exhaustion caused by excessive and prolonged stress. There is usually a feeling of hopelessness, helplessness and resentment. This can lead to detachment and depression.

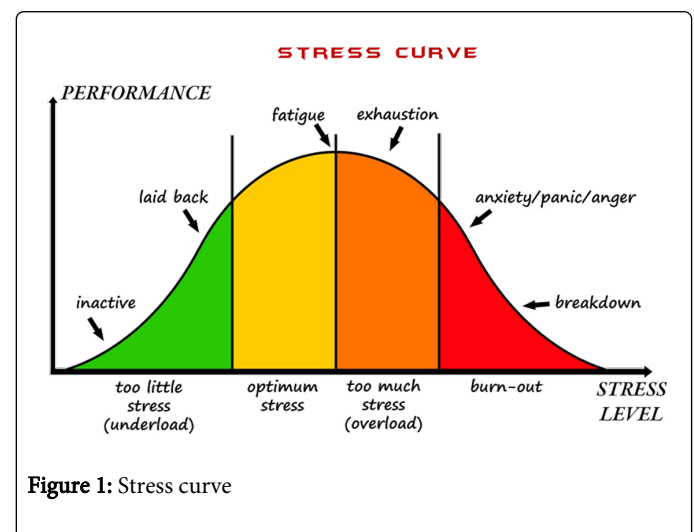


Figure 1: Stress curve

Types of stressors

Stressors are activities, events or other stimuli that cause stress. They may be internal or external. These may include starting a new job

or losing one, job demands, peer pressure, family demands, societal expectations or loss of a loved one. Other stressors may be having too big plans, interpersonal conflicts and demand during joyful situations.

In the workplace, occupational stress can occur when there is a discrepancy between the demands of the workplace and the ability of the individual to carry out and complete these demands [3]. Combining housework, childcare, shopping, cooking with an outside job and trying to do everything on time is one of the biggest factors of women being more stressed at work [4]. In an occupational setting, excessive workload can serve as a stressor for employees and has been linked with several symptoms [5]. In the educational setting, students may suffer from academic stress resulting from tests, homework and other school requirements which may exceed their abilities [6]. A study by Hamaideh reported that the highest group of stressors experienced by students were however self imposed stressors, followed by pressure [7]. A number of scientists classify these stressors in relation to their intensity, regularity or duration [6].

Individual's response to stress

Excessive stress has a profound effect on virtually every system of the body (Figure 2). It can result in numerous medical conditions [8]. Some of the effects include the following:

Physical conditions

- Cardiovascular System- Stress may lead to hypertension, stroke, heart failure. High levels of the stress hormone cortisol increase the heart rate and blood pressure. Consistently raised blood pressure over several weeks is a major risk factor in Coronary Heart Disease (CHD). Cortisol also raises cholesterol levels which increases the risk for heart attacks and strokes.
- Endocrine System- diabetes mellitus.
- Respiratory System- An attack of asthma may be triggered by stress.
- Reproductive system- Some reproductive dysfunctions which may be traced to stress include decreased libido and delayed menses.
- Musculo -Skeletal System- A stressed person may experience easy fatigability, aches, pains and injuries.
- Gastro Intestinal Tract- Stress hormones slow the release of stomach acid and interfere with how well the stomach can empty itself. They also cause the colon to work faster which may lead to diarrhoea. Adrenaline released during a stress response may also cause gastric ulcers.
- Immune system- The immune system responds to infections by releasing chemicals that aid the body in fighting infection. Stress weakens the immune system, making an individual more prone to infections. Cortisol, a hormone released during stressful situations causes a reduction in receptors on immune cells so that inflammation cannot be ended [9]. People in distressed marriages have been shown to have a decrease in immunity [10].
- Central Nervous System-Stress may produce symptoms like headache, insomnia, sleep disorders and trembling.

Mental conditions

Stress can manifest as depression, anxiety, aggression, suicidal tendencies, insomnia and apathy. Other symptoms include loss of attention, lowered self esteem, domestic violence and constant worry.

A stressed person may also experience mood swings, loss of sense of humour, anger and negative thinking.

Behavioural changes

These may include critical attitude of others, eating more or less, sleeping too much or too little and impulsive actions. Other symptoms may be withdrawal from relations, alcohol abuse, nervous habits (e.g. nail biting, pacing) and domestic violence. In the workplace, the spectrum of effects caused by occupational stress can include absenteeism, poor decision making, lack of creativity, accidents, organizational breakdown or even sabotage [11].



Figure 2: Effect of stress on body systems

Tips on the Management of Stress

It becomes very important for every individual to ensure that the level of stress he or she is exposed to falls within the level that permits optimal productivity without exceeding it. The following practical tips can help ensure that the body can handle the level of stress it is challenged with on daily basis [8,12,13].

Take charge of your thoughts, activities and emotions

Deliberately choose what to think about and what not to think about. Ensure that you plan your day. Keep to your schedule as much as possible. Also take a look at the way you deal with problems. Keep worry away. It does not solve anything.

Identify sources of stress in your life and deal with them

Stand back and look at the stressors and determine how they can be handled. They will fall into two categories, things you can change and the ones you cannot.

For the situations you can change, go ahead and change them. If it is possible to avoid what brings the stress (stressor), then do so. Learn to say 'no'. Avoid taking on other people's schedules and crowding your day with unplanned activities. Also avoid the company of people who stress you out without any meaningful contribution to your life. You can also reduce your stress level by learning to prioritize the things you need to do on daily basis. Make effort to drop unnecessary tasks and distinguish between the 'should do' and 'must do'. Learn to defer the activities that can wait to another day. Planning ahead helps you achieve better time management. It is also important to learn to delegate responsibilities to others. Also learn to balance home and work priorities [14].

Sometimes, the extent to which a particular situation causes stress can be reduced by simply talking about it. Express your feelings. Endeavour to improve communication with those you are relating with. The other party may not even be aware that you are hurting until you tell him or her.

It is important to learn how to handle the stressors you cannot change. You may need to change your attitude towards such stressors. If one strategy is not working, change to another or other strategies [15]. Dwell more on the positive aspects of a person or situation. If a task at work has you stressed, focus on the aspects of your job you do enjoy. Always look at the big picture: is this really something worth getting upset about bearing in mind the possible adverse effects? Accept things or situations you cannot change. Let go of past mistakes or occurrences. Learn to forgive people's mistakes [12].

Make time for fun and relaxation

It is important to deliberately include rest in your daily schedule. Create moments of relaxation [8]. Find time to do something you really enjoy such as singing, game, massage etc. Once in a while, you can spend some time with friends who affect you positively. Family fun time is also very relaxing. Also have a sense of humor. Laughter is a good antidote for stress. When possible organize a holiday for yourself or entire family away from your usual environment [16].

Adopt a healthy lifestyle

Ensure that you get enough sleep daily. An adult body needs an average of 7-8 hours sleep daily [17]. This allows your body to benefit from the natural periodic state of rest of the mind and body which sleep offers. Some of the health benefits of sleep such as better mood, improved concentration, improved ability to make better informed decisions and less vulnerability to illnesses go a long way to reduce stress.

Regular physical exercise is another way of reducing stress [14,18]. It has also been proven to reduce anxiety and help fight depression. Part of what happens during physical exercise is that endorphins are released which produce a feeling of well being, while the body's stress hormones such as adrenaline and cortisol are suppressed. Regular exercises reduce many of the physical and mental responses to stress previously mentioned. In a study conducted by Kranz in 2008 among students, it was reported that with regard to approaches used in

managing stress, 70.5% reported some form of active approach such as exercising, playing basketball or swimming [19].

Stress has also been linked with poor nutrition. Foods with high vitamin and mineral levels are known to actively help in reducing stress levels. A liberal amount of water, fresh vegetables and fresh fruits all help in reducing stress [13].

Several studies have also shown an association between spirituality and lower stress [20-22]. Also, a study among low income women with post traumatic stress disorder (PTSD) reported that group interpersonal psychotherapy was significantly more effective in reducing PTSD compared to the control group [23].

Conclusion

The negative consequences of excessive stress on an individual are too numerous to be ignored. It is important to avoid worry, make efforts to rest and have joy.

Limitation

The limitation of this essay is that the findings are solely from reviewed literature. No primary data were collected from any population. Further study of specific populations to determine stressors and possible therapy is recommended.

References

1. "Hans Selye" Encyclopaedia Britannica (2008) Encyclopaedia Britannica.
2. de Kloet ER, Joëls M, Holsboer F (2005) Stress and the brain: from adaptation to disease. *Nat Rev Neurosci* 6: 463-475.
3. Henry O, Evans AJ (2008) Occupational Stress in Organizations. *Journal of Management Research* 8: 123-135
4. Schultz, Duane (2010) *Psychology and Work Today*. New York: Prentice Hall 91-94.
5. Nixon AE, Mazzola JJ, Bauer J, Krueger JR, Spector PE (2011) Can work make you sick? A meta-analysis of the relationship between job stressors and physical symptoms. *Work & Stress*, 25:1-22.
6. Hussien T, Hussien S (2006) Strategies for coping with educational and psychological stress.
7. Hamaideh SH (2011) Stressors and reactions to stressors among university students. *Int J Soc Psychiatry* 57: 69-80.
8. Ahmed SM, Lemkau JP, Hershberger PJ (2011) Psychosocial Influences on Health, In: Rakel RE, *Textbook of Family Medicine*, 8th ed, Philadelphia :Saunders Elsevier.
9. Glaser R, Kiecolt-Glaser JK (2005) Stress-induced immune dysfunction: implications for health. *Nat Rev Immunol* 5: 243-251.
10. Jaremka LM, Glaser R, Malarkey WB, Kiecolt-Glaser JK (2013) Marital distress prospectively predicts poorer cellular immune function. *Psychoneuroendocrinology* 38: 2713-2719.
11. Teasdale EL (2006) "Workplace stress". *Psychiatry* 5:251-254.
12. Sood A (2013) *The Mayo Clinic Guide to stress free Living*. Da Capo Press.
13. Larzelere MM, Jones GN (2008) Stress and health. *Prim Care* 35: 839-856.
14. Cooper CL, Palmer S (2000) *Conquer your stress*. Institute of Personnel and Development
15. Aldwin CM (2007) *Stress, Coping and Development*, Second Edition. New York: The Guilford Press.
16. Butler G, Hope T (2007) *Manage your mind. The Mental Fitness Guide*. Second Edition.
17. Banks S, Dinges DF (2007) Behavioral and physiological consequences of sleep restriction. *J Clin Sleep Med* 3: 519-528.

-
18. Harvard Health Publications (2011) Exercising to Relax.
 19. Kranz P (2008) Perceived stress by students in pharmacy curriculum. *Education* 129: 71-78.
 20. Lane JD, Seskevich JE, Pieper CF (2007) Brief meditation training can improve perceived stress and negative mood. *Altern Ther Health Med* 13: 38-44.
 21. Longo DA, Peterson SM (2002) The role of spirituality in psychosocial rehabilitation. *Psychiatr Rehabil J* 25: 333-340.
 22. Sulmasy DP (2009) Spirituality, religion, and clinical care. *Chest* 135: 1634-1642.
 23. Krupnick JL, Green BL, Stockton P, Miranda J, Krause E, et al. (2008) Group interpersonal psychotherapy for low income women with posttraumatic stress disorder. *Psychotherapy Research* 18: 497-507.