



Age group : 7-9

Team : *Stress Beaters*

Title : *Stress, Exercise and Cancer*

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Abstract

Background

Stress and Exercise have been studied by scientists for their direct impacts on cancer

Aim

The goal of this presentation is to share some of the information from certain studies.

Methods

We have shared some evidences that have been identified in some of the studies conducted.

Conclusion

Studies indicate that stress increases cancer risk and that exercise helps to prevent and/or help with healing cancer.

So better NOT stress and GET active!

Psychological Stress

- Psychological stress is what people feel when they are under mental, physical or emotional pressure. [1]
- People who experience high levels of psychological stress or who experience it repeatedly over a long period of time may develop health problems (mental and/or physical). [1]
[2]

Distress

- When people feel they are unable to manage or control changes caused by cancer or normal life activities, they're in distress.
- Distress has become increasingly recognized as a factor that can reduce the quality of life of the cancer patients.
- There is some evidence that extreme distress is associated with poorer clinical outcomes.

Body's response to Stress

- The body responds to physical, mental, or emotional pressure by releasing stress hormones
- These hormones increase blood pressure, speed heart rate and raise blood sugar level.
- Research has shown people who experience intense and/or long term (i.e., chronic) stress can have digestive problems, fertility problems, urinary problems and a weakened immune system.

Psychological Stress and Cancer

- Although stress can cause a number of physical health problems, the evidence that it can cause cancer is weak. Some studies have indicated a link between various psychological factors and an increased risk of developing cancer, but others have not. [1]
- Apparent links between psychological stress and cancer could arise in several ways, for example, people under stress may develop certain behaviors such as smoking, overeating, or drinking alcohol, which increase a person's risk for cancer. [1]

Psychological Stress affecting Cancer patients

- People who have cancer may find the physical, emotional and social effects of the disease to be stressful.
- Those who attempt to manage their stress with risky behaviors such as smoking or drinking alcohol or who become more sedentary may have a poorer quality of life after cancer treatment.
- Evidence from experimental studies does suggest that psychological stress can affect a tumor's ability to grow and spread. [1]

Cancer – Life Threatening disease ?

- Cancer can be life threatening.
- The major cause of death from cancer is metastasis that is resistant to conventional therapy. The outcome of cancer metastasis depends on multiple interactions between metastatic cells and homeostatic mechanisms that are unique to a given organism's micro-environment. [2]
- The treatment of metastasis should be targeted not only against cancer cells but also against the host factors that contribute to and support the progressive growth and survival of metastatic cancer cells. [2]

Exercise & Healthy Lifestyle



Lifestyle and Cancer

- A sedentary lifestyle raises the risk of cancer while physical activity, even moderate exercise can reduce the risk not only of developing cancer but having a recurrence following treatment.[4]
- *"The exact reason of WHY exercise helps in reducing cancer is unknown."*
 - JJeffrey MeyerHardt, MD, MPH (Co-director of Dana-Farber's colon & rectal cancer center) has studied the relationship of exercise and colorectal cancer risk.

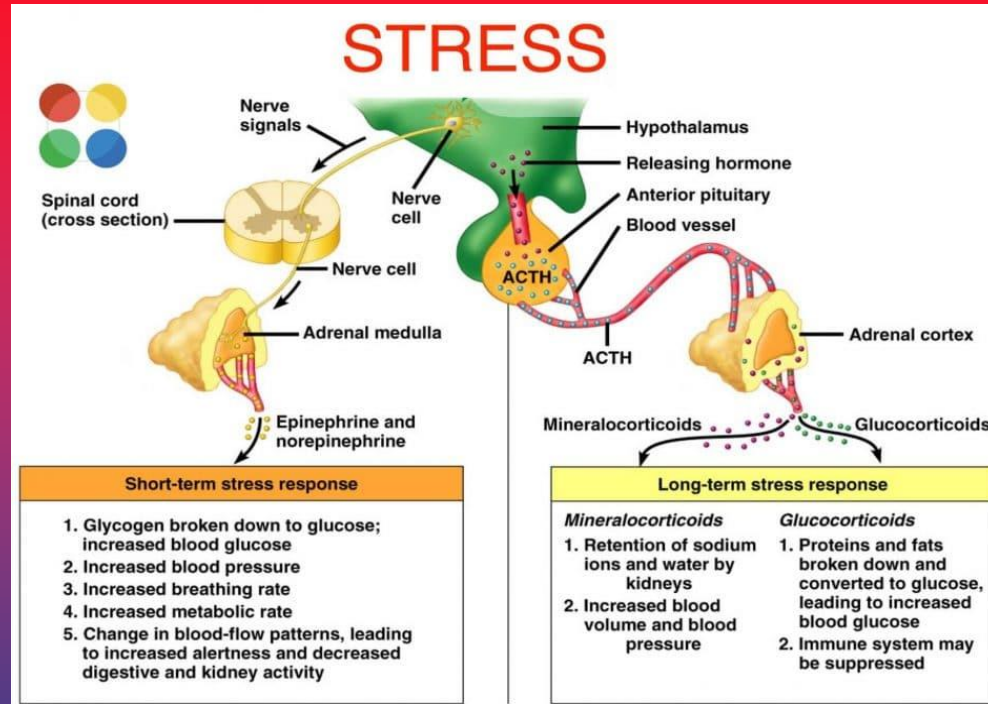
Stress and Cancer

- While a little stress is nothing to fret about, the kind of intense worry that lingers for months and weeks can have adverse affect.
- It makes it hard for you and your body to stay healthy with long term stress. Health experts are still sorting out whether stress actually causes cancer.
- Yet there's little doubt that it promotes the growth and spread of some forms of the disease.

“Stress makes your body more hospitable to cancer”

- Lorenzo Cohen, PhD **[3]**

Chronic stress & cancer are directly linked



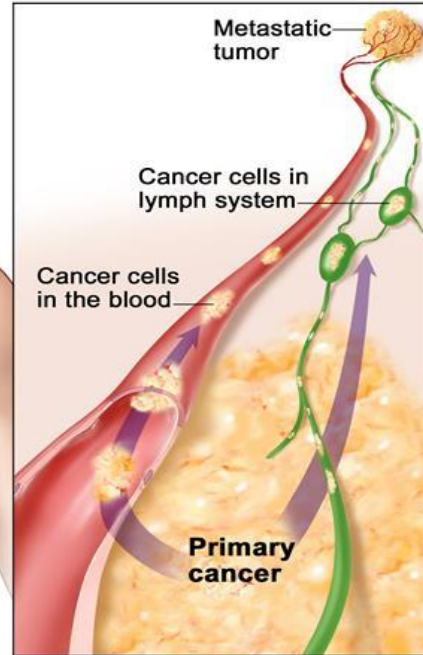
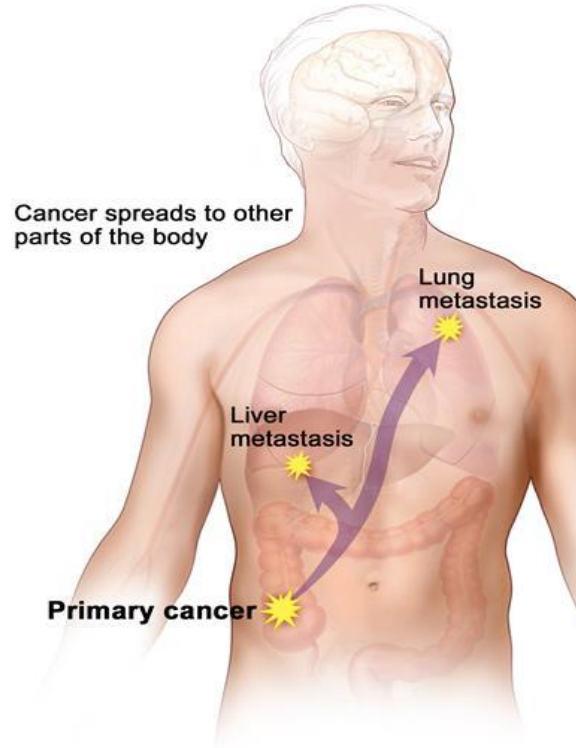
Yoga & Meditation – A cure ?

- There is no scientific evidence to prove that yoga can cure or prevent any type of cancer.
- Some studies suggest that it might help people with cancer cope with symptoms and side effects.
- In March 2010, a review of studies into yoga for patients with cancer was published. It included 10 trials. [6]



Metastasis

[9]



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Exercise and Healthy Lifestyle

- Exercise can reduce inflammation, an acute or chronic immune response that can contribute to cancer risk.
- Recent study by Danish researchers suggests that exercise wards off cancer by activating specific immune system defenders called natural killer cells. **[4]**



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