Exercises Can Cure Cancer (1)

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In this article, we will prove that exercise can kill cancer cells and cure cancer completely, notwithstanding the contrary assertion. we will prove my point by using methodology used in Health Optimization Engineering, which is based upon Chinese Medicine, system optimization method, basic medical sciences and massive life miracles.

A. Requirements for Being A True Cure

Every true cure must be compatible with all (estimated 20412) protein-encoding genes, their encoded proteins and their regulated compounds in the human body. Natural substances can affect biological processes by relatively different degrees. Thus, different natural substances can be selected or blended to restore required balance, with the lowest risk to cause damages to cells.

Based upon the failure of medicine and the complexity of human biochemistry, we make a presumption that all true cures for chronic diseases must effectuate its cure by influencing existing biochemical processes in the human body. The cure must be delivered by changing relative speeds and directions of various existing biochemical processes. Such a cure must came from evolution and must be compatible with the genes. Any substance introduced into the body must not clash with any of the encoded proteins and all intermediate compounds in the body.

The first class of cure is food/nutrition/natural compounds (including herb formulations, air, water, soil and stone). The second class of cure is exercises which are inherent activities of all animals. The third class of cure is healing measures of using certain intensive properties such as pressure, temperature, and mechanical vibrations, all of which are inherent in human activities. The last class of cure is mind regulation, emotional adjustment, meditation, etc.

In treating cancer, mind regulation is very difficult. Food and natural compounds are slow and difficult to use correctly. Exercise is the only fight method that can be used to achieve relatively fast and predictable results. One big advantage is that exercise is very flexible and can be tailored for any type of cancer in any stage in any patient. Its curing power depends upon many factors that a cancer patient can control.

B. A Kinetic Model For Cancer Cell Progression

Cancer cells divide once in every 24 hours and keep dividing uncontrolled. The damages of cancer to tissues are mainly caused by excessively large number of cancer cells. When cancer cells invade an organ, they replace functional normal cells and thus impair the organ's function. For a given cancer confined to a given location, the total number of cancer cells depends upon two counter-processes: cancer cell proliferation speed and cancer cell destruction speed.

1. The speed of cancer cell proliferation in each time interval (e.g. each day):

Proliferation speed: Sp = dNp/dt.

2. Cancer cell destruction speed (cancer cells die in each time interval):

Necrosis speed (mainly inner cancer cells): Sn= dNn/dt

Apoptosis speed (mainly in boundary region): Sa=dNa/dt

Killing speed (cancer cells killed by immune responses): Si = dNi/dt

3. Net changing speed = dNp/dt – (dNn/dt + dNa/dt + dNi/dt)

4. Final cancer cell number is the initial cancer cell number adjusted by net changes for all time intervals. It can be viewed as the initial cancer cell plus addition or minus reduction for each day for the entire time period.

Exercise programs vary considerably. Their curing power depends upon MET value, relaxation, deep breath, mind regulation, action mode number, induction, agitation/internal massage/external massage, temperature rise, total exercise time in each day, duration of individual session and timing, and duration of whole program, etc. Each of those factors can affect reaction direction and speed of one or more biological processes. Since cancer cell number depends upon the cancer proliferation speed and cancer cell destruction speed, each of those factors must the final result by influencing the speeds of the biological processes.

Based upon a simple simulation, one single cancer cell can divide to become nearly 10 cm spherical tumor in about 41 days. However, most cancer patients can survive for half a year to five years or more. So, one should infer that cancer cell proliferation must meet with substantial resistances.

Exercise can slow down cancer cell proliferation speed. Exercise can increase necrosis speed, apoptosis speed, and the immune system's killing speed. It must work for all kinds of cancer and all kinds of people to various degrees (see further discussion below).

Exercises can be performed with varying parameters and the “fire intensity”, etc. When exercise is done so that net changing speed is zero, the total cancer cell number will remain unchanged. The patient can live with cancer in-

definitely (as many cancer miracles). If more exercises with stronger healing power are used so that net changing speed is negative, more cancer cells die than new cancer cells that generate. As long as time is sufficiently long, cancer cells will slowly disappear. If little exercise with little fire intensity is used, the net changing speed is positive. The patient will eventually die if other measures are not used.

Cancer panic plays a critical role, it shortens the deep-breath phase of sleep. Sleep deprivation will reduce oxygen getting into cancer cells mitochondria and thus reduce energy necessary for starting cell checks and apoptosis. Sleep deprivation also reduces the the amount of oxygen getting into the immune cells' mitochondria, impair their energy metabolism, and thus impairs immune system's killing power. This results in a positive net speed (dNp/dt >(dNn/dt+dNa/dt+dNi/dt). So, panic is the main factor of killing cancer patients. My advice is that taking deep breath and relax if one cannot fall asleep. Many cancer drugs may be responsible for killing cancer patients by bringing dI/dt down. When a patient loses the body' defense ability or suffers organ failure, the God cannot help.

We will focus general health benefits and specific cancer fighting mechanisms below.

C. Exercise Working Mechanisms For Fighting Cancer

Cancer cell proliferation is mainly fueled by energy generated by glycolysis, which is completely different from normal cell cycles, which are fueled by oxidative metabolism. Exercise can affect cancer cell life by cell apoptosis (cell programmed death), cell necrosis, immune responses, hormone processes, transportation processes, signals processes, and other signal processes such as Channel Effects or inner signal paths, etc.

1. Mind regulation. Doing exercise can change the attention of focus, and help the brain get inhibitory rest. Even at the lowest level of exercise, the person can effectively regulate mind. For cancer patients, diversion of attention from the cancer panic is critically important. Mind regulation can diffuse panic which can decrease apoptosis speed, Sa, and increase the immune system's killing speed, Si, by influencing immune system. It also affects stem cells differentiation behaviors.

2. Most exercises can force the body to improve oxygen intake as a result of deep breath component. We found that oxygen is a limiting factor in generating usable energy in cells. Improved oxygen delivery to T-cells, help B-cells, memory cells can improve their energy state and their ability to kill cancer cells. Exercise can increase immune cell formation, migration, and immune responses. When

cancer cells in the tumor boundary region are destroyed by activated T-cells, killer cells, macrophases, etc., they are replaced by normal cells differentiated by stem cells. Exercise increases the immune system's killing speed, Si.

3. Exercise can improve blood volume delivered to the cancer cells in the border region by 200% while deep breath can increase oxygen by up to 30%. The 30% increase in oxygen carried by the blood attributable to deep breath can force mitochondria to transform from an abnormal state to a normal state. Some of the cells will have sufficient energy to conduct cell checks and start programmed cell death if they do not have sufficient spaces, or reform themselves if they have sufficient space. Enlarged blood flow and enhanced oxygen concentration raise cancer cell apoptosis speed, Sa.

4. Exercise can slowly reduce the glucose level in the blood. The physical activities consume glucose in the blood and slowly bring down glucose level. Doing exercise in multiple sessions in each day will divert blood glucose to muscles to be used for muscle contraction activities. Exercise can reduce glucose available to cancer cells in the inner tumor. Exercises also use up some of ammino acids and lipids as energy. Thus, cancer cells will suffer energy deficiency in G1, S and G2 stages, and have less essential materials for making proteins, enzymes, cell membrane, etc. This can increase inner cancer cell necrosis speed, Sn. The reduced glucose supply will also impair cancer cells in the border region: they will undergo programmed cell death and over-crowded cancer cells may stay in an inactive state. Exercise raises cancer cell necrosis speed, Sn.

Due to cancer geometry, restricting energy and nutrients can effectively destroy cancer cells inside a tumor. The inner cells get glucose and nutrients by diffusion, which is a very slow and inefficient process. Those cells are in an unfavorable condition for getting energy and nutrients. Normal cells require energy in much lower amounts due to very low cell division frequency (two out of a thousand in a day on average), but cancer cells divide continuously on 24 hours per cycle. Thus, energy competition is the worse nightmare for cancer cells inside the tumor. Eventually, energy deprivation and lack of nutrients will cause the tumor structure to collapse.

5. Exercise can raise temperature by 1.5 to 5 degrees easily, depending upon exercise intensity and location of tissues. Cancer cells are very sensitive to temperature. Even just a two degrees rise can make cancer cells miserable. This term reduces cancer cell proliferation speed, Sp.

6. Most of exercises can generate physical agitation or vibration. Agitation can disturb cancer cell proliferation. Even birds in hatching eggs need quietness. This term reduces cancer cell proliferation speed, Sp.

7. Most exercises can be tailored to work on specific limbs, muscle groups, and nerves connected to internal organs. That is why exercises have both holistic effects and local effects. For example, hand motion will have stronger impacts on

the lungs and the heart; leg motion has stronger impacts on organs in abdomen; neck motion directly affects both the brain and the heart; jogging is the most powerful cure for prostate cancer, rectal and colon cancer, bladder cancer; deep breath, sound uttering, and hand exercises are powerful cure for lung cancer; exercises with complex body forms and limb motions are best for brain cancer. This determines how different exercises should be designed to cure different types of cancer. Those correlations can be seen from anatomy and “Channel Theory” of Chinese Medicine.

8. Mechanism for colon rectal cancer. Patients lacked CTNNB1 expression (β-catenin) with tumors observe a reduction in colorectal cancer mortality by doing 18 MET hours exercise. Survivors with tumors that expressed p27 and performed greater and equal to 18 MET hours per week were found to have reduced colorectal-cancer mortality compared to those with less than 18 MET hours per week. This study shows the overall benefits of doing TRIVIAL exercises.

Other mechanisms may be involved in immune surveillance and inflammation pathways, oxidative balance, metabolic hormone, sex-steroid hormones, etc. Exercise is the biggest “killer” to cancer cells.

D. General Health-promoting Mechanisms

The overall health condition of cancer patients is a vital factor in a fight against cancer. Exercise is absolutely the best mean to strengthen holistic health and the body strength.

1. Exercise, when it is done in a long term, can burn out stored fats on blood vessels, reduce terminal blood flow resistance, and increase the number of capillaries in tissues, and thus dramatically improve the body inflammation fighting ability.

2. Exercise can slowly improve blood supply to the brain and thus improve nutritional supply condition in the brain. Thus, exercise can correct the brain's regulatory functions that are essential to immune functions and healthy stem cell differentiation behaviors. Exercise is critically important in restoring cancer fighting ability. It affects immune system performance.

3. Exercise can force the body to raise temperature and relax blood vessels. By doing a long term exercise, it can help reduce overall blood flow resistance and improve blood circulation. Improving blood circulation can improve the body ability to remove metabolic products and wastes from killed cancer cells, and reduce inflammation force in the body.

4. Exercise can help get a better and longer recovery phase by promoting sleep. It extends the period for repairing the body each day. It helps the body get rid of toxic metabolic products more completely. This improves the ability to re-

move wastes from killed cancer cells and reduces inflammation force in the body.

5. Exercise can stimulate the production of endorphins and serotonin, which can improve mood, reduce stress, and improve sleep. Long term exercise can strengthen the body ability to fight cancer.

6. Exercise helps patients to diffuse attention focus and thus release stress. It is the most important cancer-fighting tool for patients who must bear high stress.

7. Exercise can improve the body's energy-utilization efficiency. After more capillaries are generated and plaques are removed, blood can get into tissue more easily. The body can use energy more efficiently. Thus, the person can handle daily stress better.

8. Exercise can promote neurons usage balances. It allows overused neutrons to recover from fatigue, but activates inactive neurons. The restored balance helps fight cancer by improving the brain's regulatory functions for all organs and all body parts.

9. Exercise can improve cardiac dynamic properties. In a high output condition, the body will sustain less damages to blood vessels and tissues.

10. Exercise can gradually reduce peak blood pressures near blocked or narrowed blood vessels by bigger margins. When a portion of an artery is narrowed or blocked, blood pressure in this section will increase significantly due to backup local blood pressure. Exercise help remove plaques and lower blood pressure.

11. Exercise can make the body stronger and healthy and reduce the chance of getting common illnesses including cold, flu, headache, and fever. Reduced chances of getting common illnesses are important to cancer patients in fighting cancer.

12. Exercise can generate heat that causes the body to sweat. What sweating brings out is different from what is in urine. Regular exercise can remove toxins more fully and thus changes the body fluid compositions.

13. Combining exercise with breath regulation can make exercise more effective in controlling adrenaline release. This is a powerful tool for fighting stress.

14. Some exercises contain relaxation, deep breath and induction components, but can be reinforced by other components. Such special exercise can improve holistic health, increase stress-bearing capacity, shorten the time for recovery from fatigue and injury, increase the body ability to fight diseases, and increase energy.

15. Exercise can change muscle load distribution to allow overused muscles to recover from fatigue and to make lazy muscles to work more. It will make the

whole body stronger. Strengthening body is important for fighting cancer.

16. Exercise can raise pH toward more basic. Humans must maintain pH at about 7.4 (from 7.35 to 7.45). Exercise can generate more acid during exercise. In response to exercise, the body increases its breathing rate to counteract the pH-lowering effects of exercise by removing more carbon dioxide, a component of the principal pH buffer in the blood. However, the change in breath will continue after the end of exercise. After exercise is over, the body has a better ability to remove carbon dioxide, thereby making the body fluid more basic.

E. Final Remarks

Exercise's power in fighting cancer developed in billions of years of evolution and can be viewed as a product of human genes. Exercises can also tune all biochemical processes by influencing all proteins-enzymes by different degrees. A chemical compound cannot be more powerful than exercise unless all genes in the human body have been redesigned. Our method actually uses air to generate more biological energy, which is used in various biological processes in the human body.

If exercise is so powerful, why so few people have cured cancer by doing exercises?

The main reason of failure is that patient is not taught to fight cancer by using the kinetic model. Final result from doing exercise depends upon patient's emotional distress, willpower, persistence, and a large number of exercise details. Fighting cancer is a speed contest, and a contestant cannot win unless he knows how to race. Emotional distress is caused by failure of medicine.

Second, the medical community refuse to recognize exercise as cure. To the contrary, the medical community consistently denies exercise's power by a statement like “there is no evidence” to show that exercises can kill cancer cells.

“No evidence” is a legal excuse manufactured by the medical framework. The U.S. patent law prevents anyone from patenting anything from nature or any natural phenomenon; Food Drug and Cosmetic Act precludes exercises, human activities and mind regulations, as cure, and the population-based research standard and peer review practices discriminate against clinic research directed to mind regulation, physical activities, and mental exercises. No body can do study to show how exercises affect cancer progression kinetics. “No evidence” is just a lame excuse.

To cure cancer by doing exercises, a patient must disregard such lame excuses, reject modern medicine's standard of care, binary population medicine, etc., understand this caner progression kinetic model, and use your own wisdom to win a fight against cancer.

