



A COMPREHENSIVE ANNOTATION ON IMPORTANCE OF RIYAZAT (EXERCISE) IN STRENGTHENING TABIYAT (IMMUNITY) ON THE BASIS OF SCIENTIFIC FACET

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ABSTRACT The four modes of treatments in the Unani system of drugs are the ilaj bil- tadbir (regimental therapy) Ilaj-bil- Ghiza (Dietotherapy) ilaj-bil-dawa (Pharmacotherapy) and ilaj bil yad (surgery). As far as possible, the Unani Physicians plan to use simple physical means to cure a disease. Except for certain specific and sophisticated diseases it applies special techniques. Riyazat is one of them. Exercise has great importance for the treatment of certain diseases, also as in maintenance of healthy condition of a person. It also prevents occurrence of certain diseases. In the Unani System of drugs, an in depth account of Riyazat is described by Unani Scholars on Riyazat regarding its types, modes, uses, beneficial effects, In various classical textbooks like Alqanoon by Ibne Sina, Kitabul Mukhtaraat by Ibne Hubal Baghdadi, Kitabul Murshid by Zakariya al Razi, etc. The Unani physicians have laid down rules regarding hard, moderate and lightweight exercises and have also indicated the timings and conditions for various physical exercises. Exercise from the very beginning enhances innate heat (hararat ghareeziya) and liquefies or modifies morbid matter which are deep seated and expel them through the channels of excretion. Hararat increases local temperature. As per the recent research, exercise has proven to be of utmost importance in enhancing body's immunity in fighting off infections. It has been scientifically proven that the body's immune system functions better in individuals who exercise regularly.

KEYWORDS : Riyazat, physical activity, immune system, WHO, exercise

INTRODUCTION-

Riyazat Human entity- importance of being healthy. According to Sheikh Ibne Sina, the authority on Al Qanoon fi al Tib; the three fundamentals of health preservation are- exercise, diet, and sleep. Among these, Exercise is one important Non-pharmaco-therapeutic regimen.

The basic concept of ilaj-bit-tadbeer is based upon the theory of Tabyiat, which is the ultimate healer and it may prove essential in attaining the goal of global health in community perspective.

According to O.C.Gruner, the authority on basics of Medicines, "It (Tabiyat) would aim at reasons for health and ill health far deeper than those given by microbic and cognate theory". Riyazat (exercise) is a method of treatment used as a tool to keep the body fit and sound and also help to treat various diseases, especially those caused by such humours that can be liquefied and then mobilized to elimination by innate heat. Riyazat helps to boost the innate heat, a tool of tabiyat, which then overcome disease causing matter, and thus help in treatment of diseases.

Riyazat is a series of voluntary movements, which produces deep and rapid respiration. A moderate amount of exercise taken regularly is an effective prophylactic against all (Mizaji (temperamental) and Akhlati (humoral) disturbances provided that, due attention is also paid to other essentials of health.

Unani Concept-

Most historians within the field believe that therapeutic exercise first gain popularity and widespread use in ancient Greece. Herodotus is believed to be the primary physician to write down on the topic (ca.480) and is taken into account the daddy of therapeutic exercise. Herodotus claimed to possess used exercise to cure himself of an 'incurable' disease and he developed an elaborate system for athletes.

Hippocrates the foremost famous Herodotus's student wrote of the beneficial effects of exercise and its value in strengthening muscles, improving attitude and decreasing obesity. Galen, considered by some because the greatest physician within the Rome, wrote of exercise in 2nd Century AD. He was appointed the physician for the gladiators and classified exercise consistent with intensity, duration, and frequency.

Zakariya al Razi (865AD-925AD) has described time, uses, types and

precautionary measures before and after the Riyazat in Kitabul Murshid.

Ali Bin Abbas Majoosi in his treasured compilation, Kamilus Sana'a, has stated Riyazat (exercise) as a synonym of bodily movement and it's supported 2 categories: 1. Riyazat (exercise) 2. Dalk (massage) Ali Bin Abbas Majoosi, has described specifically three sorts of harkat -e- badani (bodily movements) i.e. : (1) Harkat-e-qawiyya (2) harkat-e-zaeefa (3) harkat-e-moatadil then further detailed about them: "the effect of harkat e qawiyya is that it makes the body warm, dryness within the body, hardness within the body and produces power within the body. (6/1:pg230) "Harkat produces heat in weak body but don't produces dryness" Harkat of moatadil (moderate) nature i.e. moderate in quwa and zoaf, produces heat within the body. Majoosi afterward describe about discrepancy of amount of exercise that "amount of exercise that tons of bodily movements should be done (kaseer) do that fel (movement) that which happen through harkat e qawi. And if that movement is completed in less amount do that which is completed by harkat e zaeefa and if harkat are exhausted moatadil amount then bodily movements are to be exhausted moatadil quwa and zoaf. About Ifrat e harkat (excessive bodily movements), Majoosi has stated that, "if there's any excess in bodily movements, albeit it exceeds the traditional limit then it produces coldness within the body. Majoosi also described the varied sorts of physical movements. consistent with him, there are three (3) types which are further divided into 9 sub-types. He has further classified these 9 sub-types into 27 murakkab salasi sub-divisions.

Avicenna (980AD-1030 AD) has well discussed regarding Riyazat in his treatise, "Al qanoon fi tib". He detailed the mechanism of action, varieties, methods, special exercise for organ, therapeutic exercises, deadline and amount of Riyazat. Shah MH the overall principles of Avicennas Canon of drugs. 2nd ed. Pakistan: Naveed clinic; 1998: 208-210, 301-305. Sheikh Ibne Sina has stated about the consequences of Harkat wa Sukoon e Badani on physical body. "the effect of harkat on physical body is different on thanks to some reasons (1) harkat is shadeed or zaeef (2) Qaleel or kaseer or moatadil in amount/quantity (3) whether it's related to bodily rest or not (when it's related to rest then the movements are slow) (4) bodily movements are related to other matter or not (for e.g. bodily movements of ironsmith are related to fire and bodily movements of washerman are related to water). Horse riding is beneficial for those physically weak and persons who have

just recovered from an illness. Boating has been described as a way of cure for patients affected by leprosy and ascites. It's also good for stomach and strengthens digestion. The methods of exercises of varied organs of the body have also been described i.e. oration with raised voice is thorax exercise, whereas taking note of melodious songs and observation of lovely scenarios are good for hearing power and eyesight respectively.

Ibn-e Sina, regular exercises (riyazat) can save a person from temperamental and humoral disturbances which occur in the body. Riyazat is a voluntary movement of the body performed for Tanqiyae mawad (evacuation of wastes material).

IMPORTANCE OF RIYAZAT (EXERCISE) IN BOOSTING IMMUNITY ON THE BASIS OF SCIENTIFIC FACET:

Research shows that exercise actually benefits our immune system. In fact, acute and chronic exercise of almost any type has been found to improve the way people respond to vaccines also. There's even evidence that elite athletes who train regularly have higher antibody responses to vaccination than people who do not exercise.¹²

Epidemiological studies show that people who are active get significantly fewer upper respiratory tract infections per year than less-active people. The research agrees that exercise doesn't suppress immunity – instead, it may help the immune system function better.¹²

At a basic level, the immune system has three main lines of defence. Exercise helps maintain the normal function of each of these.¹²

The First Line Of Defence

- comprised of physical barriers, like the skin,
- Stops pathogens, viruses from entering the body.

Research has shown that skin wound healing is faster in people who exercise regularly compared to sedentary people. Faster wound healing reduces the risk of bacteria and virus entry in people who are active.

The Second Line Of Defence

- comprised of “innate” (or natural) immunity,
- mainly made up of cells like neutrophils and natural killer cells
- First immune cells to respond to infections.

During a bout of exercise, natural killer cells move into the bloodstream in vast numbers. Following exercise, these cells migrate to sites of inflammation to seek out pathogens, and damaged cells. This process might even help our immune system detect cancerous cells.

The Third Line Of Defence

- “adaptive” (or memory) immunity,
- Mainly comprised of cells called T and B lymphocytes.

It has been shown that lifelong regular exercise may help maintain healthy numbers of young T lymphocytes as we age, which help the immune system better identify pathogens and cancer as the age advances.

Research shows the following key ways in which *riyazat* (exercise) boosts the body's immune system to help it fight off illness.¹³

1. Promote Flow Of Lymph, Immune Cells And Antibodies:

Mild exercises, normal body motion, muscle contraction and manual manipulation such as massage, are required to move the lymph along the lymph vessels. Deep breathing with stretching (e.g., yoga or tai chi) is another effective exercise for circulating lymph.¹³

2. Improves Blood Flow Through The Cardiovascular System:

Moderate exercise help to flush toxins and germs from the body through the excretory system via urine and sweat. Increased blood flow also keeps the antibodies and white blood cells needed to fight infection circulating rapidly as a possible early defence against foreign invaders.¹³

3. Exercise Causes Change In Antibodies And White Blood Cells (WBC):

WBCs are the body's immune system cells that fight disease. Scientific studies have recorded a temporary increase in phagocyte activity and function immediately following exercise. It may also help to boost the fight against an active infection.¹⁴

4. Enhances Oxygen Supply In The Bloodstream:

Immune function is impaired in conditions of insufficient oxygen at high altitude, diminished breathing or hypoxia, etc. Moderate exercise increases oxygen delivery through the bloodstream, thereby potentially improving the body's resistance.¹³

5. Exercise Slightly Raises The Body's Temperature:

The brief rise in body temperature during and right after exercise may prevent bacteria from growing. Although the increase is not nearly as dramatic as running a fever (one of the body's natural reactions against many types of infection). This temperature rise may help the body fight infection better.¹³

6. Regular Exercise Help The Lungs To Rid Of Airborne Viruses And Bacteria Associated With Respiratory Tract Infections:

Moderate exercises have a beneficial effect on both the humoral and the cellular immune function.¹⁵ Primarily physical activity stimulates the immune system and strengthens the infection defence. There are indications that untrained people who start exercising regularly get a progressively stronger immune system and become less susceptible to infections.¹⁶

There is evidence that exercise can protect the host from many other viral infections including influenza, rhinovirus (another cause of the common cold) and herpes viruses such as Epstein-Barr (EBV), varicella-zoster (VZV) and herpes-simplex-virus-1 (HSV-1).¹⁷

7. Exercise Has An Anti-inflammatory Effect On The Body:

A certain group of cytokines are produced as a consequence of muscle contraction during exercise. One of these cytokines, IL-6, initially promotes inflammation (an important first response of the immune system against infection), but is shortly followed by an increase in anti-inflammatory cytokines. Turning off the inflammation phase is just as important as turning it on; otherwise, tissue and organ damage can occur.¹⁸

8. Exercise Relieves Mental And Emotional Stress:

Even relatively low levels of aerobic exercise can help to boost the immune system. Exercising helps release endorphins, which play a vital role in elevating mood and keeping a positive attitude. Stretching exercises and yoga also help keep the body fit and the mind calm.¹⁹ Resistance exercise such as weight-lifting also has clear benefits for health and wellbeing in general – such as alleviating psychological distress, and reducing the risk of chronic diseases – and in particular maintaining strength, balance and coordination.²⁰ Exercise slows down the release of stress hormones. Some stress increases the chance of illness. Lower stress hormones may protect against illness.²¹

According To World Health Organization, For People Living With Chronic Conditions

(hypertension, type 2 diabetes, HIV and cancer survivors) physical activity recommendations are as follows:

- at least 150–300 minutes of aerobic physical activity with moderate-intensity;
- or at least 75–150 minutes of aerobic physical activity with vigorous-intensity;
- or an equivalent combination of moderate- and vigorous-intensity activity throughout the week²²

DISCUSSION-

Research shows that exercise actually benefits our immune system. Epidemiological studies show that people who are active get significantly fewer upper respiratory tract infections per year than less-active people. There are key ways in which *riyazat* (exercise) boosts the body's immune system to help it fight off illness. It improves blood flow through the cardiovascular system. Exercise causes change in antibodies and white blood cells (WBC). Enhances oxygen supply in the bloodstream. Regular exercise help the lungs to rid of airborne viruses and bacteria associated with respiratory tract infections:

Promote flow of lymph, immune cells and antibodies. Exercise slightly raises the body's temperature. Exercise has an anti-inflammatory effect on the body. Exercise relieves mental and emotional stress.

CONCLUSION-

riyazat (exercise) is an important mode of ilaj-bil-tadbeer (regimenal therapy) which is quite effective in dealing with both prevention and management of many disease conditions. Unani literature contains a

rich knowledge about riyazat (exercise). various Unani Scholars has described its concepts, modes, varieties, timings, indications and beneficial effects in their valuable treatises. The various beneficial effects of riyazat (exercise) have been scientifically proven. In the contemporary scenario, regular physical exercise is very effective in fighting off infections as it enhances the body's immunity by affecting on the different physiological functions pertaining to the immune system of the body.

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