

## **The effect of aerobic exercise on some physical variables and respiratory functions for patients with chronic bronchitis**

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The decrease in physical activity is closely related to the peripheral muscle mass in patients with emphysema, which indicates the need for early therapeutic interventions in this category of patients. Aerobic exercises and some resistance exercises help to improve the quality of life and increase the functional efficiency of the heart and lungs, in addition to developing the various elements of physical fitness. The experiment was applied to 12 patients with emphysema, their ages ranged from (40:50) years, and the duration of the disease ranged between (6:10) years and for a period of 12 weeks, with 3 training units per week, the unit time was 60 minutes, and the intensity of the training load ranged between 50 to 75%. One of the most important results of the research was a significant improvement in most of the elements of physical fitness in question, such as muscular strength, respiratory periodic endurance, flexibility, balance, and some respiratory functions such as FEV<sub>1</sub>, V.C

As a result of the great industrial intervention in our lives and the spread of pollutants and exhausts, as well as the great spread of smoking in all its forms and the recent virulence of viral and bacterial diseases. There have been many serious health problems that threaten human life on this earth. At a

time when sport seeks to form a suitable individual in terms of physical, mental, social, psychological and health. We find that the goal of smoking contradicts those goals in addition to the unhealthy air left by smoking and various pollutants, which in turn causes many diseases, especially respiratory diseases.

And sports training as one of the comprehensive sciences does not stand idly by in front of those problems facing man, but rather strives to solve them on sound scientific foundations.

Therapeutic sport is one of the areas that sports training attaches special attention to. This is evident through the therapeutic and rehabilitative training programs developed by specialists to treat many health problems facing modern man

**Niazi Ayyad Al-Dabaa 2000** notes that during the past years and with the rapid progress in the march of science, knowledge and amazing discoveries in the field of diagnosis and treatment, respiratory diseases have occupied an important place at the top of the list of diseases that trouble the whole skin. New unprecedented horizons opened in the race for research and diagnosis in a way that had not happened before. For example, from the reality of all local and international statistics, chest diseases conferences are held all over the world to discuss the latest research

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in this field. Diseases resulting from smoking have increased and the number of patients suffering from disease has doubled. As a result of environmental pollution, these diseases have taken on new dimensions, such as emphysema (Nyazi: 12) Ford ES, Murphy sees that smoking and exposure to pollutants, as well as recurrent viral infections, are common factors among most cases of chronic bronchitis and emphysema and exacerbate the development of the disease. The problem also lies not only in the great suffering that these patients face, but also in the size of the material cost and the great losses resulting from contracting this disease, as statistics issued by the Center for the Control of Chronic Diseases in the United States of America indicate that the cost of medicines, vaccines, and health care for emphysema patients amounted to about 49 billion Dollars in 2020 AD and it will be the fourth cause of death in the world by 2030 AD (22: 137)

**Chris Gravey (2016)** states that chronic bronchitis causes severe difficulty in breathing accompanied by weakness in the skeletal muscles, which requires appropriate rehabilitation exercises in order to restore some lost respiratory functions, as recommended by the American College of Sports Medicine and the European Thoracic Society. (17:2)

**Rochester et al. (2013)** see that the pulmonary rehabilitation program has shown many benefits in patients suffering from chronic lung diseases such as chronic bronchitis and chronic bronchitis. In the case of these patients undergoing pulmonary rehabilitation

before and after lung volume reduction surgery. There was a significant improvement in mortality or lung function compared to those who did not attend the pulmonary rehabilitation program. The use of targeted programs such as exercise tolerance, reduced symptoms of shortness of breath, tolerance and quality of life have changed the perception of the importance of pulmonary rehabilitation

**Mpatino 2018** states that chronic bronchitis is one of the most prevalent forms of obstructive pulmonary disease. Emphysema is a lung disease that destroys the air sacs in the lung over time, making breathing difficult. As chronic bronchitis progresses, the inner walls of the alveoli form Air holes cause holes in the lungs, impairing lung function and the elasticity of the lung walls. This limits the amount of oxygen entering the bloodstream. According to 2014 statistics provided by the Centers for Disease Control and Prevention (CDC), 3.4 million adults were diagnosed with chronic bronchitis, which is what A total of 1.4 percent of people in the United States (25: 112)

Garber et al. 2011 emphasize that exercises that focus on elements of physical fitness such as endurance, flexibility and strength are the cornerstone of the pulmonary rehabilitation program for patients with chronic bronchitis, where stationary bike exercises and walking on a treadmill remain the most common forms of endurance exercise with an intensity not exceeding 60% of the limit In addition, resistance training is a preferred option for those who want

to get the most out of their pulmonary rehabilitation program. (23: 8)

Since the efficiency of the vital organs in the body or their functional fitness is related to the individual's activity and is also linked to the presence of this individual in a healthy environment free of pollution or exhaust from cars, factories and others, which negatively affects the safety of the air that the individual breathes, and it is noted that most of the respiratory diseases that he suffers from The human being is currently the result of the pollution in which he lives, and the most important pollutants that affect the safety of the respiratory system are the gases, dust and fumes that surround us everywhere, in addition to the individuals not practicing any sports activity for the sake of health in different leisure times, which negatively affects their fitness general physical or at the general health level.

**Research problem and its importance:**

Respiratory problems are closely related to sports. The most important of which is chronic emphysema, which has been increasing alarmingly in recent times, as Kumar & Clark mention some statistics of cases of chronic lung disease COPD, which is diagnosed through a decrease in the volume of exhaled air from the normal volume, as it occurs for 18% of men and 17% of women smoke and in 7% and 6% of non-smokers in the United States of America, and the same picture of prevalence has been found in developing countries, but there is an increase in the percentage of smokers This spread in most of these countries.

This requires great health care for these patients, in addition to the high cost of treatment, and the great loss of the number of working days, as this disease spreads widely among individuals who have crossed the forty-year barrier, and these represent the element of expertise and efficiency in many fields of work and production.

Through the reference survey and previous readings within the limits of the information that the researcher reached and what was obtained from the information network, it was found that there is a significant lack of these researches related to respiratory diseases in general and chronic chronic bronchitis in particular, which prompted the researcher to conduct such a study, perhaps the beginning For research in this field and to contribute, even in a small way, to the suffering of these patients, and perhaps it may also be a new scientific addition in the field of treatment through sports activities. From the above, it becomes clear the importance of this research in developing a codified training program to raise the functional efficiency of the heart and lungs with aerobic exercises on the stationary bike and moving walk, in addition to putting some exercises to strengthen the muscles that help in the breathing process (neck, chest, arms, back, abdomen) which contribute to deep breathing in addition to strengthen the breathing muscles, which may contribute to the improvement of patients with chronic bronchitis.

**Research hypotheses:**

1- There are statistically significant differences between the pre and post

measurements of the experimental group in the vital capacity and the rate of exhaled air in the first second in favor of the post measurement.

2- There are statistically significant differences between the pre and post measurements of the experimental group in (the component of respiratory cyclic endurance, strength, flexibility, and balance) in favor of the post measurement

**Search terms:**

**Pulmonary rehabilitation program:-**

-  
The US National Institutes of Health defined it as a continuous, multi-dimensional service provided to individuals suffering from lung diseases and their families, and is often carried out by a homogeneous regular team of specialists, and its goal is to achieve and maintain the maximum possible level of independence, freedom and functional performance in society. (20n: 825)

**chronic bronchitis -**

Barnes and others define it as a chronic lung disease that leads to the destruction of the small air sacs in the lungs (alveoli). As the walls of the alveoli continue to be damaged, the alveoli become large in the shape of a bubble, which leads to an increase in the size and expansion of the lung, giving a large space inside the rib cage and trapping air and no effective gas exchange between Alveoli and blood, and consequently, difficulty in getting rid of exhaust gases and shortening of the breathing process. (12: 165)

**(THR) Target Heart Rate -**

It is the target heart rate that you want to reach during your training,

based on your fitness level, and the goal to be achieved. The time depends on the goal you want.(1 : 94)

**Vital Capacity:** It is the amount of air that can be exhaled after the maximum inhalation. (6: 92)

**The rate of exhaled air in the first second :( FEV1 ) -**

- It is a rate that accurately measures the shortfall in air flow that results from narrowing of the air passages and a loss in the ability to remove air easily. (24: 774)

**Respiratory circulatory endurance:** It is the ability to continue muscular work for as long as possible within the framework of aerobic energy production, which exceeds 4 minutes. (Baha Physiology: 369) Search procedures

**Research Methodology**

The researcher used the experimental method using the experimental design of one experimental group, before and after, due to its relevance to the nature of the research.

**Research community:**

The research community consists of individuals with chronic bronchitis

**Sample volume:**

The sample size was (12) patients with emphysema who were deliberately selected from Sadr El Manzala Hospital, their average age ranged from 40-50 years, and the duration of the disease ranged between 6: 10 years. The following table shows the classification of the research sample.

Table No.(1)

the exploratory sample	, the main sample	Number of members of the sample
3	12	12

**Sample selection conditions:**

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All members of the research sample should be in the age group of 40-50 years.

-All sample members should be infected with chronic bronchitis, taking into account that there are no other pathological cases, provided that the degree of disease is moderate to severe.

That he has a functional deficiency due to the presence of the disease.

-To be under good medical care and to be treated with people's expanders regularly.

-To be motivated to participate seriously in the rehabilitation program and take responsibility for taking care of his health.

With the consent of the research sample members to participate in the research parts and to be regular in all its stages.

Has none of them had corona cases before?–

**Means and tools for all data:**

The researcher used a number of tools and devices that enable him to make measurements related to the subject of the research, as well as the application of the proposed mathematical program, where the following was used:

- 1- Rest meter to measure the length of the body in centimeters.
- 2- A medical scale for measuring body weight in kilograms.
- 3- A sphygmomanometer for measuring arterial blood pressure.

4- Spirometer-capacity 7Liters to measure vital capacity.

5- A Beak Flow-meter to measure the rate of exhaled air in the first second.

6- A stethoscope to measure the pulse rate.

7- Stop Watches.

8- Medicine balls.

9- Balls (football - basket - volleyball - hand).

**The survey:-**

The researcher conducted an exploratory study on a sample of (3) individuals from the same original research community and from outside the basic research sample, with the same specifications as the research sample in order to identify the following:

The suitability of the proposed program for the research sample, as well as determining the degree of its difficulty and the number of repetitions of groups for each form of exercise, as well as the suitability of the tools used and available to achieve the goal of the research, as well as training the sample members on the tools and devices used. Determining the intensity of the program to ensure its suitability for application to the basic sample. This study was conducted in the period from Saturday, corresponding to 2/6/2020, until Thursday, 7/6/2020 AD.

**The study resulted in:**

- Exclusion of some exercises that he found difficult to perform.
- Discard some tools that he found difficult to use.
- Training on the tests used in different measurements.
- Training the assistants to perform the various measurements of the study sample. As for determining the intensity and appropriateness of the exercises:

The researcher was able to determine the intensity of the exercises and their relevance to the research group so that the maximum target pulse ranges between (118-145) z/s in the treadmill and wheel devices (Annex No).

**Rationing the intensity and volume of the aerobic work of the research group:**

The intensity of the aerobic work for the proposed exercises was determined according to an expert opinion poll, the reference survey between (50-75%), where this intensity was determined according to the maximum pulse rate on the two treadmills and the ergonomic wheel, as well as determining the intensity according to the maximum repetition in a time between 30: 60 seconds According to the type of exercise for the exercises of the neck, arms, chest, back, abdomen, breathing as follows: Calculate the intensity of the exercises according to the maximum rate of the pulse:

**Where the researcher used the Karvonen equation as follows:**

- $THR = 50\% (Max\ HR - Rest\ HR) + Rest\ HR$
- Whereas (Rest HR) is calculated by measuring the resting pulse through

different pulse measurement methods according to the instructions of a specialist doctor.

- Also, Max HR is calculated through the equation  $(220 - age)$ .
- Subtract the number of resting heartbeats from the product of the second step.
- Multiplying the result of the third step  $\times 0.5$  (50% exercise intensity score) = limits of the minimum intensity of aerobic work.
- Add the result of the fourth step to the number of heart beats at rest
- Multiplying the result of the third step  $\times 75\%$  (75% exercise intensity) = limits of the maximum intensity of aerobic work.
- Add the result of the sixth step to the number of heart beats at rest.
- The result of the fifth step is the minimum target heart rate during the effort per minute and the result of the seventh step is the maximum target heart rate during the effort per minute and the target pulse rate range is between the minimum and maximum.

(1: 47, 46)

**Tribal measurement:**

The tribal measurement of the research sample was carried out for the selected measurements under consideration in the period from Saturday 13/6/2020AD until Thursday 18/6/2020 AD, where the different research variables were measured according to the following dates:

- Saturday 13/6/2020 AD  
Measurement (height - weight - age - pulse - pressure).
- Sunday 14/6/2020 AD  
Measurement of physical variables.

- Monday 15/6/2020 AD Measurement (vital capacity - rate of exhaled air in the first second - respiratory rate).
- Tuesday 16/6/2020m Chest x-ray for all sample members.

#### Basic study:-

The researcher applied the basic study for a period of (12) weeks, from Saturday, 20/6/2020 until Thursday 17/9/2020 AD, where the proposed training program was applied to the research sample (٣) times a week on Saturdays, Mondays and Thursdays for a period An hour and a half from five to six thirty in the evening in the exercise hall and the triple court of the Asafra Youth Center.

#### Dimensional measurement:

- After completing the implementation of the basic study on Thursday 17/9/2020 AD, the

researcher made the dimensional measurements of the research sample in the period from Saturday 19/9/2020 until Monday 22/7/2020AD, where the different research variables were measured according to the following dates: Saturday 19/9/2020 AD Measurement (weight- pulse-pressure).

- Sunday 20/19/2020 AD Measurement of physical variables.
- Monday 9/21/2020 Measurement (vital capacity, rate of exhaled air in the first second and respiratory rate)

#### Statistical manipulations:

- SMA.
- standard deviation.
- Mediator.
- Man Whitney

Table No (2)

The significance of the differences between the pre and post measurements For physical variables in terms of (z) NS Unit of Measure Value Z Value Y Change Percentage %

	Variables	Unit of Measure	Median	Sum of Ranks	Value Z	Value Y	Change Percentage %
1	Balance	the second	10.00	78.00	144.00	-4.11*	55.65
			16.00	222.00	0		
2	Flexibility	several/second	11.00	78.00	144.00	-4.11*	52.16
			18.00	222.00	0		
3	Arm strength	the number	8.00	78.00	144.00	-4.11*	73.43
			14.00	222.00	0		
4	Abdominal muscle strength	the number	7.00	78.00	144.00	-4.11*	87.83
			12.00	222.00	0		
5	Back muscle strength	the number	10.00	78.00	144.00	-4.11*	57.49
			16.00	222.00	0		

) (z) NS Unit of Measure Value Z Value Y Change Percentage % Significance at 0.05 \* (1.96 ± Z قيمة ذ )

It is evident from Table (2) that there are statistically significant differences at the level of 0.05 between the values of the pre and post measurements in all the physical variables under study, which indicates an improvement in all the physical variables under research, and the highest percentage of improvement was in the abdominal muscle strength variable, whose value reached (87.83%), while it was the lowest value for the improvement in the elasticity variable as its value reached (52.16%). "There are statistically significant differences at the level of 0.05 in the physical variables under study (muscular strength, flexibility, balance) between the pre and post measurements of the research sample

in favor of the post measurement." It is evident from the table (2) that there are statistically significant differences between the four measurements in the physical variables under discussion, as well as the presence of statistically significant differences at the level of 0.05 between the first, first, second, and posterior measurements in all the physical variables under discussion, as evidenced by the tables (2) There are statistically significant differences at the level of 0.05 between the two measurements of the first and second follow-up and the first and the remote and the second and the remote in all the physical variables under the second follow-up research in favor of the post measurement.

**Table No. (3)**  
**The significance of the differences between the pre and post measurements In physiological variables in terms of (j)**

	Variables	Unit of Measure	Median	Sum of Ranks	Value Y	Value Z	Change Percentage%
1	pulse		80.00	215.00	7.00	-3.71*	2.32
			78.00	85.00	137.00		
2	systolic pressure		115.00	123.00	99.00	-1.54	3.57
			120.00	177.00	45.00		
3	diastolic pressure		70.00	116.00	106.00	-1.94	6.98
			80.00	184.00	38.00		
4	Forced expiratory volume in one second		2.40	78.00	144.00	-4.11*	47.23
			3.50	222.00	0		
5	vital capacity		1.45	85.50	136.50	-3.69*	55.32
			2.10	214.50	7.50		
6	breathing rate		21.00	219.50	2.50	-3.97*	8.79
			19.00	80.50	141.50		
7	endurance		923.50	79.00	143.00	4.06*	8.90
			1001.0	221.00	1.00		

y value (Z) = +1.96

\*Significance at level 0.05



It is evident from Table (13) that there are statistically significant differences at the level of 0.05 between the two measurements before and after in all the physiological variables under discussion in favor of the post measurement except for the variable (systolic and diastolic pressure), where their values reached (-1.54), (-1.94), respectively. The highest percentage of improvement in the vital capacity of the lungs was (55.32%).

It is clear from the results of Table () that there is a significant significant correlation between the pre and post measurements of the heart rate, where its value reached (0.686), as it is clear from the results of Table (3) that there is a significant significant correlation at the level of 0.05 between the heart rate and both balance and endurance of the muscles of the arms Where its value reached (0.408), (-0.467), respectively. Where these results indicate that the improvement in the heart rate was in favor of the dimensional measurement of the research sample, which indicates the effect of the proposed program for the rehabilitation of chronic obstructive pulmonary patients and the exercises it contains that led to an improvement in the heart rate of the research sample. Where **Abu El-Ala Abdel-Fattah, Ahmed Sayed (1993)** agrees with **Brian Sharky (2002)** that the exercise of aerobic activity increases the elasticity of the heart muscle (according to Starling's law of the heart), and with the increase in the intensity of aerobic activity, the improvement is more for the heart muscle, its chambers increase The

ventricles widen and thus pushes a greater amount of blood with each beat of the heart, and since the heart pumps the blood in the body once every minute during rest, so this improvement that occurs to the heart muscle, which is accompanied by dilation in the ventricles helps to lower the heart rate during rest. Where the time of diastole of the heart is prolonged to reach more than 0.07 of a second, especially with those who practice aerobic activity at an intensity rate that approaches the upper limit of aerobic activity, as the force of contraction and diastole of the heart increases, which affects the heart rate and thus the pulse rate decreases more. (1: 90), (12: 236) This explains the results reached by the researcher regarding the decrease in the pulse rate among the members of the research sample. **O. Donnell (1997 AD) (18), Fiona (1990) (19) and others**, all of these studies agree that continuing the standardized training programs leads to a decrease in the heart rate resulting from the strength of the heart muscle for individuals participating in those programs., Systolic and diastolic blood pressure:

The results also indicate that there are statistically significant differences in the diastolic blood pressure variable for the research sample in favor of the post-measurement, while there are non-statistically significant differences in the systolic blood pressure variable for the research sample in the post-measurement. The athlete leads to the occurrence of different responses that appear when measuring blood

pressure, as high blood pressure during training is affected by different factors, including age, type of physical training and the development of muscles involved in muscle work. And with the increase in the intensity of the training load, the effect of the pre-push on increasing the systolic pressure is more than its effect on the diastolic pressure, and just as the blood pressure at rest is greater than in the elderly than in the young, this phenomenon is observed when performing a physical load where the blood pressure in adults reaches 0 5 - 60 years from 140/85 while at rest to 180/90 mm Hg when performing a heavy physical load above the average. (53: 261-264)

The results of the measurements show the improvement in the rate of exhaled air in the first second, FEV1, in favor of the dimensional measurement of the research sample, where the rate of exhaled air in the first second increased from (2.35) to (3.46), and the researcher attributed this to the subjection of the research sample to the proposed training program to improve the functions of the device Respiratory, where **Jamal Fares (1997)** indicates that the commitment to sports training leads to the widening of the air passages and thus the absorption of a greater amount of oxygen, which leads to an increase in the efficiency of lung functions. (7: 144)

The researcher attributes this to the proposed sports program to improve the functions of the respiratory system, which led to an improvement in the physical fitness of the research sample members as a

result of their regularity in sports training, which led to the widening of the air passages in addition to an increase in the elasticity of the lung tissue and an increase in the size of the rib cage and the flexibility and strength of the breathing muscles, as Muhammad Khalil points out. (1994 AD) that increasing the strength of the breathing muscles reduces the resistance to air flow to the air passages and increases the amount of air entering the lungs and gas exchange, which results in the efficiency of the respiratory system. (15:44) It is evident from the results of Table (17) that there is a significant correlation at the level of 0.05 between the pre and post measurements in the physiological and physical variables under study, where it was found that there is a correlation between balance and each of the heart rate, the rate of exhaled air in the first second, and the respiratory rate, where the values of Correlation (0.408), (-0.404), (0.728) as shown in Table (3) that there is a significant correlation between flexibility and cyclic respiratory endurance, as well as clear from Table (3) that there is a significant significant correlation between muscle strength endurance and heart rate Its value was (-0.467), the rate of exhaled air was (0.635), the systolic pressure was (-0.428), and the respiratory rate was (-0.448).

**The abstractions and recommendation:**

From the research's aims and its expositions also from the sample of the research and through the statistics treatment enables the researcher to abstract the following:

1- There is improvement in a heart rate for the research sample after achieving the training program, a heart rate was (80 beats .min) before achieving the training program and (78 beats .min) after achieving the training program , and by studying the differences between them we found statistics differences in a level 0.05, and there is dipositive correlation in a heart rate before and after achieving the training program and it's value was (0.686).

2-There is improvement in a vital capacity for the research sample after achieving the training program, a vital capacity was (1.45 l.min) before achieving the training program and (2.10- l.min) after achieving the training program, and by studying the differences between them we found statistics differences in a level 0.05, and there is a positive correlation in a vital capacity before and after achieving the training program and it's value was (0.889).

3- There is improvement in a respiratory rate for the research sample after achieving the training program, a respiratory rate was (21 a count) before achieving the training program and (19 a count) after achieving the training program, and by studying the differences between them we found statistics differences in a level 0.05, and there is a positive correlation in a respiratory rate before and after achieving the training program and it's value was (0.023).

4- There is improvement in a cardio respiratory endurance for the research sample after achieving the training program , and the

distances which a patient can achieve it in (12 min)was (923.50 meter) before achieving the training program and (1001.0 meter) after achieving the training program ,and by studying the differences between them we found statistics differences in a level 0.05, and there is a positive correlation in a cardio respiratory before and after achieving the training program and it's value was (0.793) .

8 - There is improvement in a balance for the research sample after achieving the training program, the tense of a stand on one leg was (10 seconds) before achieving the training program and (16 seconds) after achieving the training program, and by studying the differences between them we found statistics differences in a level 0.05, and there is a positive correlation in a balance before and after achieving the training program and it's value was (0.260).

9- There is improvement in a flexibility for the research sample after achieving the training program, the tense of bend, twist, and touch test was (11 touch.30seconds) before achieving the training program and (11 touch.30seconds) after achieving the training program, and by studying the differences between them we found statistics differences in a level 0.05, and there is a positive correlation in a flexibility and after achieving the training program and it's value was (0.449).

10- There is improvement in arm muscles strength endurance (push- up test) for the research sample after achieving the training program, it was (8 a count) before achieving the

training program and (14 a count) after achieving the training program, and by studying the differences between them we found statistics differences in a level 0.05, and there is a positive correlation in arm muscles strength endurance before and after achieving the training program and it's value was (0.669).

11- There is improvement in abdomen muscles strength endurance (sit — up bent knees test) for the research sample after achieving the training program, it was (7 a count) before achieving the training program and (14 a count) after achieving the training program, and by studying the differences between them we found statistics differences in a level 0.05, and there is a positive correlation in abdomen muscles strength endurance before and after achieving the training program and it's value was (0.293) .

12- There is improvement in back muscles strength endurance ( reverse sit-up test) for the research sample after achieving the training program , it was(10 a count) before achieving the training program and (16 a count) after achieving the training program ,and by studying the differences between them we found statistics differences in a level 0.05, and there is a positive correlation in back muscles strength endurance before and after achieving the training program and it's value was (0.761) .

#### **The recommendations:**

From the research's aims and depending on the statistics and the results which he arrives at and at the research sample's limits.

The research recommends:

1- Using the suggested training program to qualify the patients with COPD as a mean of curing those patients.

2- Training at the middle intensity from (50% - 75%) for air training to work to increase the functional efficiency for cardio respiratory system and to raise the physical fitness for COPD patients.

3- The necessity of the caring this aged stage especially the patient of them.

4- The necessity of doing some researches on a lot of samples in numbers and has various aged stages and on another chest diseases.

5- supporting hospitals and public and private healthy clubs with laboratories and private modernists by functional and physical measures and benefiting From it in acute at valuing and modifying the sportive program, which is imposed according to the aim which 's wanted to be achieved

6- Increasing the interest from the various mass media and the responsible people in the role of sportive programs. And curing a lot of Patients to increase. The awareness of the importance of the vital sides of the Curative sides.

7 - Fighting the smoke habit in all the Public and Private Places and boning with intensive laws for wrong actions.

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