

Some Anthropometric Variables and Their Relationship to the Degree of Pain in the Lower Back for Overweight People

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Abstract

The aim of the research is to study the relationship between some anthropometric variables and the degree of pain in the lower back. The researchers said that the correlations were not that strong that indicate the existence of the relationship, but the researchers concluded that an unhealthy lifestyle affects physical changes, which in turn indirectly affect lower back pain. Therefore, following a good healthy lifestyle works to give the individual a healthy, positive life away from pain and makes him able to perform his daily duties with vitality, thus reviving the economic and vital aspect of the individual.

Keywords: anthropometric , pain and lower back

1. Introduction

The health aspect has an important role in people's lives to live normally, far from annoying pains, and as a result of the development in all areas of life and the emergence of modern scientific inventions, huge changes have occurred in all of our modern lives, as this development opened new horizons for research and knowledge and entered our life field where education is no longer Physical medicine today is limited to educational and sports sciences that are concerned with teaching and training sports activities, as sports medicine has become a great place among the various other sciences, and low back pain is one of the diseases that needs a standardized and accurate study of its causes and identification of its areas, as it is the most common disease, and most people are exposed to it at some point in their lives.

Food is either troubles and diseases.. As for health and medicine.. you have the choice.. as Hippocrates, the pioneer of modern medicine, said "more than two thousand years ago: Make food your medicine, and your medicine is food.. Therefore, the appropriate diet is one that provides sufficient energy and All the essential nutrients and calories needed to maintain good health and an acceptable body weight, and that food is your source of strength, what you eat will greatly affect your ability to maintain and improve your general fitness as complete fitness is not only limited to exercises, but also includes good nutrition and discipline Reasonable diet: Maintain a healthy weight and body fat percentage through proper diet and exercise to ensure optimal health, fitness and physical performance.

Where a person should eat food in moderation and not overeat in order to avoid weight gain and obesity, as weight increases when food intake exceeds energy expenditure, and this means that the

intake has increased over the body's need for it, and what confirms the importance of not overeating is that the Holy Qur'an that was revealed to (our master) Muhammad - may God bless him and grant him peace) - more than fourteen centuries ago included many verses related to not overeating. In addition to many honorable hadiths that dealt with the same goal.¹

Overweight and obesity are among the permanent health problems of the age that have become a heavy burden on people affected by them and a source of constant concern for them. Weight gain and obesity are often accompanied by diseases (back and joint pain, heart and arterial blockages, high blood pressure, high cholesterol and type 2 diabetes).) and other health problems facing societies, including the Iraqi society, which suffers from this problem, and the reason is due to the diet followed in the daily life of the Iraqi family, which is characterized by its high content of saturated fats and carbohydrates, and this is offset by the lack of daily activity as a result of the technological development taking place in our societies from the means of communication, transportation and distance Excessive exercise and healthy dietary approaches, as excess weight causes back pain, especially in the lower back areas, and this occurs due to the accumulation of fat in the abdominal area, as each additional pound of weight adds stress to the muscles and ligaments of the back. 2To compensate for the extra weight, the spine tends to tilt and compress unevenly. In order to reduce the weight of individuals who are overweight and increase the percentage of fat stored in the body and try to reduce it, this process must be done by reducing the number of calories entering the body through food through following an organized diet (Dietary Regime) and consuming the appropriate number of calories. Hence the importance of the research in using an approach that was codified on sound scientific bases

consisting of a diet to lose weight by reducing the fat mass of the research sample and reducing the risk of diseases associated with weight gain and its impact on some variables of the circulatory system and body measurements.

2. Research Methodology

The descriptive approach was used in the method of correlational relations for its suitability to the research procedures.

The research sample

The research sample included (15) patients suffering from lower back pain caused by weight gain and some physical changes in the lower back area. The cases were diagnosed after being presented to a specialized medical staff.

Pilot study

The exploratory experiment was conducted on a sample consisting of (2) patients suffering from weight gain and lower back pain. The purpose of the exploratory experiment was to identify the obstacles that the sample might encounter at the time of the tests, as well as to determine the time required for the measurements.

The measurements used in the research

First ,Measurement of body circumferences³

1. Measurement of the humerus circumference in centimeters:

1. The importance of measurement: it can be used as an indicator of the energy stored in the body and the amount of protein in it, and it is used in the sports field as an independent measure when analyzing performance in many sports activities and it is often used with the thickness of the skin folds to calculate the circumference of the arm as revealed (Blackburn et al. (1977) The measurement can be used as an indicator of malnutrition. The circumference of the upper arm is measured in most cases with the muscles relaxed and the arm in full extension. Therefore, it is known as the circumference of the upper arm when it is relaxed.

1. Used equipment's:
2. Measuring tape.
3. Camera .
4. Registration Form.
5. Auxiliary work team.
6. Unit of measure: centimeter and its parts.

1. Measurement method: The subject stands of moderate stature and the arms at the sides so that the palms are facing the thighs, noting that the upper part of the body is completely naked. 90 degrees) so that the arbitrator stands behind the subject and then determines the end of the acromial protrusion of the fork of the scapula bone, then makes a mark with a pen on the outer surface of the body at a point corresponding to the acromial protuberance and the arbitrator places the beginning of the tape on the acromial mark, then extends the tape down parallel to the humerus until He reaches the maximum point

on the humerus away from the mark, where he notices that this point is located at the end of the lateral edge of the humerus bone, then he puts the third point in the middle of the distance between the two previous points, and after determining the median sign of the humerus, the examinee extends the arms down on both sides so that the palms face the thighs with necessity Keeping the arms slightly away from the torso so that the arbitrator can perform the measurement process, and the arbitrator places the measuring tape around the upper arm so that it is in contact with the skin Without pressure on the soft tissues of the humerus, noting that the measuring tape is above the mediastinal antrometric mark of the humerus in a position perpendicular to the longitudinal axis of the arm.

2. Measuring the circumference of the forearm in centimeters:

1. Used equipment's:

1. Measuring tape.
2. Camera .
3. Registration Form.
4. Auxiliary work team.
5. Unit of measure: centimeter and its parts.
6. Instructions: Wrap the measuring tape at the largest circumference of the forearm, with the arm outstretched and the palm facing up.

3. Measuring the chest circumference in centimeters:

2. The importance of measurement: the importance of benefiting from this measurement to estimate the process of muscle growth and development that occurred mainly in the chest area, as well as the development that occurs in the back shoulder muscles in a secondary way, but this measurement indicates the development that occurs directly in the chest area, so it is called the chest circumference.

4. Used equipment:

5. Tape measure.
6. Camera .
7. Registration Form.
8. Auxiliary work team.
9. Unit of measure: centimeter and its parts.

3. Measurement method: the subject stands upright and the arms are on both sides so that the palms are facing the shoulders, noting that the upper part of the body is completely naked. And the chest muscles must be measured in both cases in a relaxed state and without muscle tension, with the necessity of keeping the arms slightly away from the torso so that the arbitrator can measure.

1. Measuring the waist circumference in centimeters:

2. Used equipment:
3. Measuring tape.
4. Camera .
5. Registration Form.
6. Auxiliary work team.
7. Unit of measure: centimeter and its parts.
4. Instructions: The smallest circumference of

the abdomen is taken above the navel (2-3) cm, where the tester stands in a moderate standing position on the feet of the measurer in front of the tester, then he wraps the tape at a horizontal level of the front protrusion of the abdomen, and the reading is taken, noting that the reading is after the end of the exhalation process without Pull the tissue and record to the nearest centimeter.

1. Measuring the circumference of the pelvis in centimeters):

1. Used equipment's:
2. Measuring tape.
3. Camera .
4. Registration Form.
5. Auxiliary work team.
6. Unit of measure: centimeter and its parts.
7. Instructions: At the largest circumference of the pelvis, where the tape is wrapped from the back to the starting point.

2. Measuring the circumference of the thigh in centimeters):

1. The importance of measurement: lies in estimating body density and is used as an indicator of the amount of fat stored in body tissues and is used as an important indicator of the atrophy of the thigh muscles as a result of injury.

1. Used equipment's:
2. Tape measure.
3. Camera .
4. Registration Form.
5. Auxiliary work team.
6. Unit of measure: centimeter and its parts.

5. Measurement method: The examinee stands by placing the left foot on the seat so that the knee is bent at an angle (90 degrees), or he takes a sitting position on the seat so that the torso is in a straight position and the left knee is bent at an angle (90 degrees). Close to the buttock bone and the inguinal crease, then draw a line with a colored pen showing this point. After determining the mark that shows the point of the thigh, the examinee stands on the feet so that the distance between the heels is about (10) cm. The body weight is distributed evenly on the feet, and the arbitrator wraps the measuring tape

Around the thigh at the level of the anthropometric relationship fair to it, noting that the measuring tape is in a horizontal position, and when measuring, the measuring tape must be tightly wrapped around the thigh without pressure on the soft tissues.

3. Measuring the circumference of the leg in centimeters):

1. Used equipment's:
2. Tape measure.
3. Camera .
4. Registration Form.
5. Auxiliary work team.
6. Unit of measure: centimeter and its parts.
6. Measurement method: the largest neutral at the calves of the leg during contraction and during relaxation. From a standing position, and that the feet are slightly apart, with the body weight distributed evenly on the feet, and the measuring tape is wrapped around the maximum circumference.

Second , Measuring the degree of pain (visual analogy):4

1. Symmetry description: It is an effective and simple measurement that has been widely used in pain clinics and various researches. Where the patient is required to properly and quickly estimate the pain and have a numerical assessment. The device has two sides, the first face is defined in units and is divided into (zero: 10) every (5) cm, and the second face is a straight line, its beginning is a point (no pain) and its end is a point (severe pain).
2. How to use the optical analogue scale: When a proper and quick assessment of pain is required, the patient is given the scale and he is required to put a mark on the line, its beginning is (zero), meaning there is no pain, and its end is (10), meaning the maximum intensity of the pain, and the number given by the device indicates the severity of the pain, its decrease, or its end, and it is repeated so that The degree of pain felt by the patient is ascertained, and Figure (29) illustrates this.

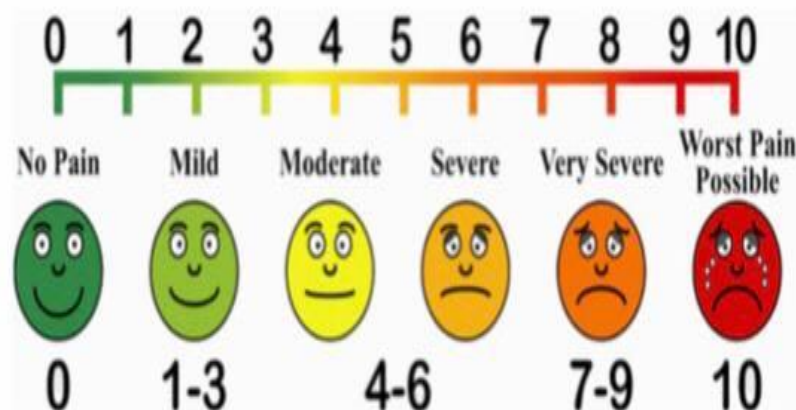


Figure 1. Show Measuring the degree of pain

3. Results and Discussion

1. Presentation, analysis and discussion of the results of some anthropometric variables and the degree of pain

Table 1. Show descriptive statistics for variables of body's circumferences and pain degree

Variables	Mean	Std. Deviation	N
Humerus circumference	37.4667	1.64172	15
Forearm circumference	29.0000	1.25357	15
Chest circumference	115.4667	2.53170	15
Waistline	119.3333	2.82000	15
Hip circumference	118.4000	2.87352	15
Thigh circumference	70.6000	1.45406	15
Leg circumference	41.6000	1.84391	15
Pain Degree	6.5333	1.24595	15

Table 2. Show the correlation between variables of body's circumferences and pain degree

Variables		Humerus circumference	Forearm circumference	Chest circumference	Waistline	Hip circumference	Thigh circumference	Leg circumference	Pain Degree
		r	1	0.208	0.056	0.134	0.345	0.323	0.123
Humerus circumference	Sig.		0.456	842	0.635	0.208	0.240	0.663	0.643
	N	15	15	15	15	15	15	15	15
	r	0.130	0.183	0.175	0.068	0.255	0.126	0.056	1
Pain Degree	Sig.	0.643	0.514	532	.810	358	654	0.843	0
	N	15	15	15	15	15	15	15	15

Through the results presented in the table (1 and 2) it is clear that there is no significant correlation between the variables of body circumferences and the degree of pain, and this is in fact a real impression of the characterization that these data embodied.

The changes that occur in body weight and physical composition result from an unhealthy lifestyle, and this interferes with large variables that affect body weight,⁵ such as general health and lower back pain in particular, so the increase in body circumferences results from an increase in body mass index, which directly affects pain. In the lower back, the circumferences of the body affect the lower back pain indirectly.⁶

The increase in the degree of measurement indicated by the waist circumference is directly reflected in the heart rate,⁷ and this is an indicator of the decrease in the amounts of blood and oxygen delivered to the muscles in particular, which affects the amount of energy connected to the muscles in the lower back, the continuation of the chronic contraction of the muscles and the increase in pressure on the lower back, and thus the pain index increases. As a result of the weakness of the heart in providing the muscles in the lower back with the necessary energy.⁸

4. Conclusions

Low back pain is a result of a poor organization of life, with which many factors interfere with each other to be a negative factor on a person's life, and lower back pain is the result of those bad habits that negatively affect a person's life, so adopting a healthy lifestyle avoids pain and gives him life Good health.

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