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BODY IMAGE, PROPORTIONS, BEAUTY AND HEALTH

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Summary

In the current article, a literary review is done, which describes the evolution of human ideas about body image and its relationship with notions of beauty, fashion and health.

Rezumat

Proporțiile corpului: moda, frumusețea și sănătate

În articol de față este prezentată analiza literaturii de specialitate pe această temă și descrisă evoluția ideilor umane despre imaginea corporală și relația sa cu noțiunile de frumusețe, modă și sănătate.

News theme

Currently, in human society throughout different countries two harmful extremes are observed: there are a growing number of people suffering from obesity and those who, with the aim of achieving body perfection, come to anorexia. The problem of propagation of a healthy lifestyle has become one of the most current medical activities.

Aim

The purpose of this article is to contribute to healthy lifestyle propagation. To better understand the body's ideal proportions for healthier living, as well as, to eliminate common body image problems, and progress toward a healthier body as a whole.

Materials and methods:

Perform an analysis of literature that focuses on illuminating the evolution of proportionality of the human body. Using a performed anthropometric study of 200 women, develop tips on raising a healthy lifestyle and promoting self-evaluations in light of the principles that are not detrimental to health.

Body image problems and associated health complications

The term *body image* is defined as; a person's perception of the aesthetics and sexual attractiveness of their own body. Throughout history, human society has placed great value on the beauty of the human body, but a person's perception of their own body may not correspond to the cultural ideal of the time.

Problems of distorted self and body image occur, because of this. Distorted body image is when one's image of oneself is considerably different from that of actuality, or from the way others perceive him/her. A person's perceived body image can be influenced by a variety of different factors; the media, fashion industry and pop culture, as well as, family standards, peer groups, and personal experiences. This distorted view of one's body can have effects on both psychological and physical health. "A 2007 report by the American Psychological Association found that a culture wide sexualization of girls (and women) was contributing to increased female anxiety associated with body image." Nonetheless, both men and women may have problems with self image. Men tend to perceive themselves as being too thin, and not muscular enough. Whereas, women tend to perceive themselves as being overweight and full figured. However, self-image problems are not limited to these views.

An influx in this self image problem happens during puberty, when the body goes through rapid changes in a short period of time. However, this imprecise view of oneself can continue on into adulthood. One of the physical health risks of a distorted image is Anorexia nervosa (Fig.1a). This is an eating disorder that involves an inability to stay at the minimum healthy body weight for the person's age and height. Persons with this disorder may have low self-esteem

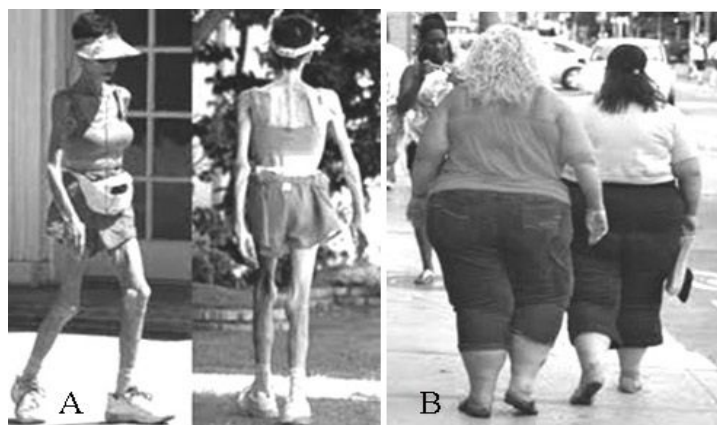


Fig.1. Eating disorders: A – anorexia; B – obesity.

as well as an intense fear of weight gain, even when they are underweight. They may use extreme dieting, excessive exercise, or other methods to lose weight. The sufferer may view themselves as overweight, even when severe weight loss has occurred.

Another eating disorder is Bulimia. (Fig.1b.) Bulimia is an illness in which a person has periods of time of restricted eating, followed by period of time of overeating or bingeing on food. This tends to leave the person with feelings of guilt, loss of self-control and fear of weight gain. To overcome

these feelings the sufferer tries to overcome these feelings in a number of different ways. The most common are; induced vomiting, use enemas, laxatives and diuretics.

Males who suffer from self image distortion, tend to focus more on body shape rather than body weight. They see the muscle mass and sculpted definition of the movie stars and body builders seen on television, as something to live up too. As a result males may develop health problems of their own. If going to the gym and working out does not satisfy their perceptions, they may turn to other, more dangerous techniques. Some males turn to anabolic steroids to satisfy their body dissatisfaction. The health consequences of steroids are well documented, according to the National Institute of Drug Abuse, these risks include a greater risk for coronary heart disease, kidney and liver damage, liver cancer, high blood pressure, and reduced immune system functioning. Side effects specific to men include shrinking of the testicles, reduced sperm count, infertility, baldness, development of breasts, and increased risk for prostate cancer.

These are just a few of the many health complications that can occur because of body-image distortion. However, to be body conscious is not such a terrible thing. With the obesity rate growing, in both adults and children, it may be a good idea to instill a positive body image in today's youth. Nonetheless, we are left with the question; what is a positive body image? If trying to look like super model Kate Moss or movie actor Vin Diesel, may promote an unrealistic self-image, then what is a realistic standard?

Body proportions of the past

Throughout History, people have been trying to find a system for an ideal body. Ancient Greeks valued the human body, and believed in the ultimate potential of a human being. They

had developed a system to figure out the ideal measurements for an athlete or a fighter. By finding out the circumference of a male's wrist, they were able to calculate the chest, waist, forearm, thigh, hip size and much more. The method of calculating was simple, the neck being twice the measurement of the wrist, and the waist being twice the measurement of the neck.



Even Leonardo Da Vinci developed a theory, that a balanced man should be 8 heads high. His theory divided the body into 8 equal portions. However, most bodies are not exact, according to this scaling. Some parts of the body will be a bit longer than a head length and some parts of the body will be a bit shorter than one head length.

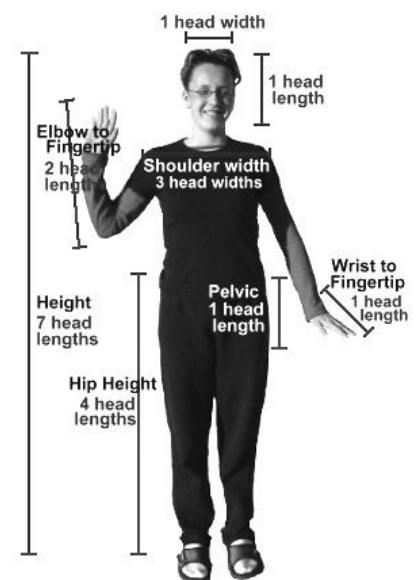
Modern Body proportions

These days there are a few different strategies in finding out if one is in fit condition. There are body weight charts that have the range for a normal body weight according to the subject's height. These charts are not always accurate, but can give a ballpark estimate.

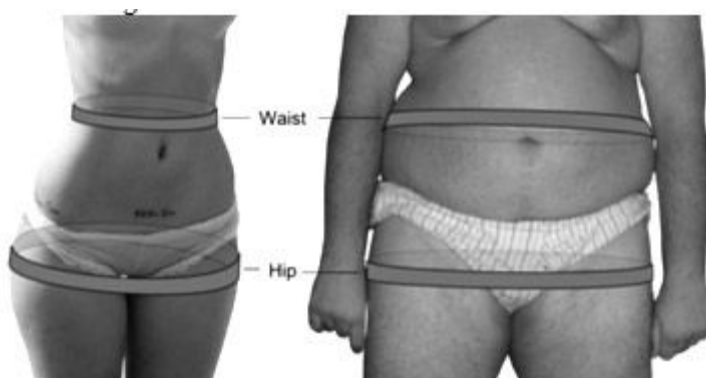
The study of the body is usually studied with relation to itself. This means taking a measurement of one part of the body and comparing it to other part. (Much like the ancient Greek method) For instance, the average adult is 7-7.5 head tall. (Very similar to Da Vinci's estimations!)

The measurements are as follows;

1. From the top of the head to the chin
2. from previous position to the nipples
3. from previous position to the navel
4. from previous position to the crotch
5. from previous position to mid-thigh
6. from previous position to just below the knees
7. from previous position to the middle of the shinbone (the tibia)
8. from previous position to the feet



Waist to Hip ratio - this ration can be used as an indication of health, physical attractiveness and even intelligence.



The waist-hip ratio in women is often considered a key feature in physical attractiveness. Measured directly from this image, the frontal WHR of the model in this image is approximately 0.68.

Men generally have much less pronounced hips, relative to waist size. Measured directly from this image, the frontal WHR of the model in this image may be somewhere around 0.85.

Women's measurements.

Some important facts about measurements must not be overlooked. A woman who has vital stats of 36-24-36 and is 5 ft 2 inches tall (1.57 m) will look different from a woman who has the same 36-24-36 vital stats but stands 5 ft 8 inches (1.73 m) in height. Because the taller woman's body figure has a greater distance between measuring points, she will appear (and be perceived) as thinner, and less curvy than her shorter counterpart with the exact same vital stats measurements. Thus, even though both of them have the same BWH (bust-to-waist-to-hip) ratio and the same weight, the taller woman is thinner because of her height.

Measurements

Female	Wrist (cm)	Neck (cm)	Waist (cm)	Hips (cm)
	15.87	32.1	67.5	96.4

Male	Wrist (cm)	Neck (cm)	Waist (cm)	Hips (cm)
	17.2	37.5	88.3	104

Results

The results found were very interesting. If it is taken into consideration that the neck must be twice the size of the wrist, and the waist twice the side of that, then on average females are not so far off. Women were off by an average of only 3.3cm and had a mean value of .70 Hips to waist ratio- Considered to be very healthy.

Men on the other hand were off by quite a few cm in the waist area, indication that there is storage of fat. On average males were off by a whopping 13.3cm! in this area. However, the rest of the measurements fit into there guidelines. Even the Waist to hip ratio was .84- considered to be within healthy limits.

What is an Ideal Body Weight?

Nowadays, both men and women seem to be obsessed with the need to know what their ideal body weight is. The need arises for two reasons - Firstly, being overweight can lead to various disorders and diseases like type II diabetes, heart diseases, osteoarthritis and back pain. Secondly, a fat person may develop a negative self-image leading to various psychological disorders like depression. A number of factors determine the 'ideal weight'. Medically your height, muscle weight, bone density, fat weight and genetic make-up determine the ideal weight. However, television commercials and movies have generated an unrealistic narrow range of 'ideal weight'. This is an unhealthy trend because you can't fit everyone in the same mould.

However, some wise methods can be used to determine whether you are overweight in order to prevent its harmful effects. These can be your waist to hip ratio or a pinch test. Another quick and easy way is to refer to an **ideal body weight chart**. It is a good benchmark to test where you stand in the comparison to the standards set forth. If your weight exceeds 5 kilos or more than the standard set in the chart then you are overweight.

Four combinatorial structures

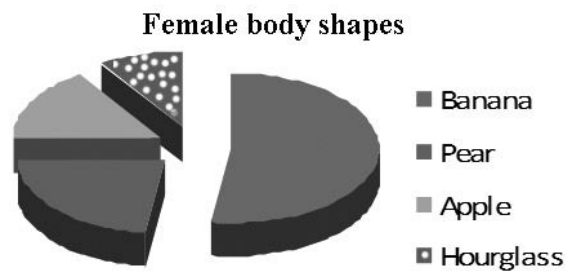
Independent of fat percentage, weight or width, most female bodies have one of four elementary geometries, ordered by their commonality in western society.

Banana or Straight - the waist circumference is at least 75% of the chest or hips circumferences, which are virtually the same.

Pear or Spoon or Bell (Triangle upward) - the waist circumference is at least 75%of the chest circumference, and the hips circumference is at least 110% of the chest circumference.

Apple (Triangle downward) - the waist circumference is at most 75% of the chest circumference, and the chest circumference is at least 110% of the hips circumference.

Hourglass shape (Triangles opposing, facing in) - the waist circumference is less than 75% of the chest or hips circumferences, which are virtually the same. Due to the preferable reputation that physical symmetry has, many celebrities falsely claim hourglass measurements but actually rate closer to a straight figure or apple.



A study of over 200 women carried out by a sewing workshop that 46% were Banana (rectangular), just over 20% Pear, just under 14% Apple, and 8% Hourglass.

Impact of body shape on health

According to the Heart and Stroke Foundation of Canada, those people with a larger waist (apple shaped) have higher health risks than those who carry excess weight on the hips and thighs (pear shaped). People with apple shaped bodies who carry excess weight are at greater risk of high blood pressure, Type 2 diabetes and high cholesterol.

New research suggests that hourglass women may live longest, and apple-shaped the shortest.

Weight and fat distribution

Shape is affected by fat distribution due to sex hormone levels, the concentrations of estrogen influences where body fat is stored. Before puberty both males and females have similar WHR. Normal pre-menopausal female estrogen levels will cause the body to store fat in the buttocks, thighs, and hips. Hence, pre-menopausal females generally have fat distributed around their hip section but not around their waist. This causes their waist-hip ratio (waist measurement divided by hip measurement) to be lower than males. When women pass menopause, the estrogen produced by ovaries reduces, causing fat to redistribute from their buttocks, hips and thighs to their waist. Fat stored during subsequent weight gain is primarily concentrated in the abdomen.

Body Mass Index, which considers only height and total mass, is an approximate method for calculating whether an adult is overweight, underweight, or of a healthy weight. Some recent research indicates that the waist-hip ratio is a better measure of obesity than body mass index, particularly for the purpose of determining risk of heart attack. The ideal ratio for women is about 0.7. The body fat percentage is considered to be an even more accurate measure of obesity. Of these three measurements, only the waist-hip ratio uses dimensions that will vary depending upon the body structure. Hence, it is possible for two women to have vastly different body mass indices but the same waist-hip ratio, or to have the same body mass index but vastly different waist-hip ratios.

The ideal female body size and shape varies among cultures; however, the preference for a small waist has remained fairly constant throughout history. A low waist-hip ratio has often been seen as a sign of good reproductive potential, but recent research suggests that attractiveness is more correlated to body mass index than waist-hip ratio, contrary to previous belief.

Body image and health.

In the 19th century, the fashionable middle- or upper-class woman artificially constricted her waist with a corset to meet the standard of beauty of the time. The stiff corset was reinforced with whale bone or metal and laced as tightly as possible to create an unreasonably narrow waist. It wreaked havoc on the health and natural physique of the women who wore it, causing shortness of breath, muscle atrophy, deformed ribs, limited mobility, indigestion, and the distortion and displacement of internal organs.

During the 1920s, the fashion standard did away with curves, calling for a slim and straight look exemplified by the flapper. Both dress styles and popular silent movie stars embraced a new emancipated look. Women cut their hair short and revealed their arms and legs for the first time.

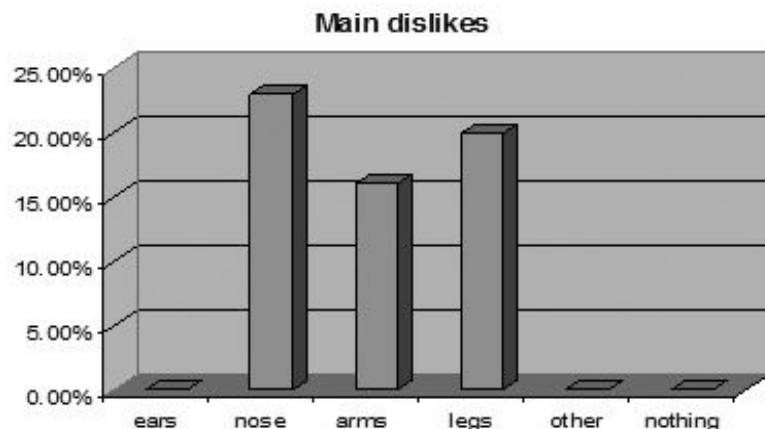
The 1930s saw the return of the fuller bust and slender waist. By the 1940s and 1950s, women were wearing girdles and push-up bras or foam “falsies” to enhance their breast line. Slender legs also became fashionable in the 1940s as hemlines rose to save fabric during World War II. Following the war, women returned from jobs supporting the war effort to their domestic lives. Fuller shapes became the accepted norm for housewives and mothers. Actresses like Jayne Mansfield and Marilyn Monroe, with their full busts and rounded hourglass figures, epitomized a voluptuous female ideal of the 1950s.

From the late 1970s on, a new, more athletic look became popular as increasing numbers of women began to participate in sports and regular exercise.

During the 1980s and 1990s, new role models appeared among world-class female athletes. They included figures such as track and field Olympian Florence Griffith Joyner, tennis stars Venus and Serena Williams, and soccer champion Mia Hamm. Female film and music stars, such as Madonna, also began to present a slender but muscular build.

However, in spite of the popularity of the athletic body type, the prevailing look among top fashion models not only remained ultra-thin, but it became increasingly anorexic in the last decades of the century. By the late 1980s, the average model looked like a waif and weighed 23 percent less than the average American woman.⁶⁶ In comparison, in the mid-1960s, she weighed only 8 percent less.

Personal dislikes



After some interviewing, it is clear that almost everyone has some sort of dislike toward their own bodies. The biggest categories for the so called “defects” were; Nose, Arms, Belly, and Legs. Interestingly enough, there were almost no people who did have any dislikes toward their bodies.

The defects are advantages

Defects are not always what they seem - that which is seen as bad, can sometimes have hidden

unexpected benefits. Here are some findings that might console those who daily look in the mirror and sighs, and wish for a bigger bust or more slender legs

The way women are- Women with small busts, want a bigger one. Well endowed women complain of the problems of the "dowry" in question.

In terms of health, a large nose is definitely an advantage to the possessor who will inhale approximately 7% fewer chemicals and particles that can cause infection and, probably, allergies. A big nose is a more effective barrier in the way of pathogens, so that its owner is less exposed to respiratory colds which are transmitted.

To remain in the same area of interest: short legs and thick legs, although completely and totally out of fashion (which require long and slender legs reaching to the neck) are also not without advantages.

Given the propensity of women to osteoporosis and fractures associated with bone rarefaction, it's better to have shorter and thicker bones – simply because they are harder to break.

As for full thighs, which have a predisposition to gain weight, and are so hated by women - They are shown to prolong life a few years. When thigh circumference measures at least 60 cm, there is a lower risk of heart disease and premature death, found a study conducted in Denmark. The 12 year study was done on 3,000 participants, both women and men.

And big ears have an advantage – they can counteract actual hearing loss associated with aging. In old age, people equipped with pavilion like ears have a better chance of better hearing.

Conclusion

Through our study of human body proportions, we have deduced that there are many versions and body type. Measurements of the human body have found that the ideal waist to hip ratio for a woman is around 0.70 and below, and 0.90 for a man. Data has been found that these are the optimal results for avoidance of certain cancers and diseases, and are also considered to be the most attractive. We have found that throughout history people have been trying to alter their bodies to appear more “acceptable” for the time period. However, these methods can cause harm to the body and can actually be dangerous. The ideal human body, is a smart human body, and every “body” is smart. The human body has ways of making things that are esthetically undesirable, be physiologically obliging.

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