A COMPARISON STUDY ON ANTHROPOMETRICS BETWEEN BODYBUILDERS' GENERATIONS IN ALBANIAN CHAMPIONSHIP

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Abstract

Monitoring anthropometric parameters in bodybuilders is with interest with regards to competition results. The purpose of this study was to compare anthropometrics between bodybuilders generations in Albania championship during years 2017, 2018, 2019 and 2021. Assessment was done in Tirana during the championship for bodybuilders category during years as mentions at the aim of the study. Assessment for shoulder, chest circumference and waist circumference were done in Tirana using usual tape measurement. Average results for shoulder circumference (2017= 123.6cm; 2018= 123.7cm, 2019= 133 cm and 2021= 126.5cm), chest circumference (2017= 109.3 cm; 2018= 108.3 cm, 2019= 107 cm and 2021= 114 cm), waist circumference (2017= 80.9 cm; 2018= 81.65 cm, 2019= 81.25 cm and 2021= 82 cm). Data obtain on this study showed that for three anthropometric parameters assessed bodybuilders had the highest circumference during year 2021.

Keywords: bodybuilders, anthropometric, shoulder, chest, waist.

1. Introduction

Success in bodybuilding is mainly determined by three components: muscularity, symmetry, and definition. Presentation or posing is not defined as a judging criterion at the amateur level, but it is a category for professional natural bodybuilding. Posing refers to how well athletes display their physique to the judges and audience.

Some bodybuilders look better in some poses than others, and certain poses fit with the strong areas of the athlete's physique. Muscularity refers to the size of the muscles, their shape, definition, and hardness. Symmetry is a measure of the balance of the development and how well the body is put together as a whole. For example, an athlete's muscularity and degree of definition can be measured not only by human observation, but it can be accurately assessed through anthropometric measurement.

Definition refers to the leanness of the bodybuilder and how well the muscles are displayed through the skin (Wilmore & Behnke, 1970; McArdle et al., 1991).

These measurements include girth and circumference measurements, skin folds which determine subcutaneous fat, breadth measurements (usually of joints), and height/weight measurements.

Aim

The purpose of this study was to compare anthropometrics between bodybuilders generations in Albania championship during years 2017, 2018, 2019 and 2021.

2. Methodology

Assessment were done in Tirana during the championship for bodybuilders category during years as mentions at the aim of the study. Assessment for shoulder, chest circumference and waist circumference were done in Tirana using usual tape measurement.

3. Results

Average results:
Shoulder circumference (2017= 123.6cm; 2018= 123.7cm, 2019= 133 cm and 2021= 126.5cm).
Chest circumference (2017= 109.3 cm; 2018= 108.3 cm, 2019= 107 cm and 2021= 114 cm).
Waist circumference (2017= 80.9 cm; 2018= 81.65 cm, 2019= 81.25 cm and 2021= 82 cm).

Table 1.

Table 2.

		N	Mean
Shoulder_Circumference	2017	11	123.591
	2018	8	123.688
	2019	6	123
	2021	7	126.5
	Total	26	123.865
Chest_Circumference	2017	11	109.336
	2018	8	108.387
	2019	6	107
	2021	7	114.033
	Total	26	109.227
Waist_Circumference	2017	11	80.891
	2018	8	81.65
	2019	6	81.25
	2021	7	81.967

4. Discussion

What is Bodybuilding? Bodybuilding is the process of building muscle through a combination of weight training, nutrition and rest. Bodybuilding, as a perfect system and method, directly stimulates the increase of strength, endurance, flexibility and of course muscle mass, therefore as such this system is increasingly finding wide use in people, regardless of age and gender. One who engages in this activity is called a bodybuilder. As a kind of sport, called bodybuilding for racing, bodybuilders display their bodily qualities before the jury, who

give points based on the aesthetic appearance of the muscles in several features that are: Mass, harmony and muscular symmetry followed by definition, relief and vascularity and finally muscle positions, which are divided into mandatory under the command of the race judge and free with music selected at the discretion of the athlete himself. Muscles are revealed or stand out more after the loss of the fat layer ie. fat, as well as reducing the amount of water in the body.

There are three main factors that help in muscle growth, Weight Loss, nutrition and rest. All three are almost equally important. When lifting weights nothing happens except the destruction of tissues and muscle cells which are later reshaped by enlarging and strengthening with much. Muscles are made up of two types of fibers (tissues). One type is put to use (destroyed) during any type of weight lifting no matter how heavy or light the weight is. It is precisely these fibers that give shape to the muscle, while the second type is destroyed only when the weight used is at least 75% -80% of the maximum that the muscle can lift. By maximum is understood the weight that can be lifted only once by the muscle. For example, if you can push 100 kg once on a bench press, the second type of "tissue" yarn comes into use only when the weight used is over 75 kg. It is these "tissues" that give strength and size to the muscle.

Bodybuilding is a sport in which competitors are judged on muscular appearance. Natural bodybuilders are drug-tested and are banned from the sport if caught using illegal substances. Appropriate preparation for a natural bodybuilding contest generally involves years of strength training followed by a "contest prep" in which the athlete focuses on dramatically reducing body fat to enhance muscular appearance. Thus, changes seen during competition preparation are not due to sudden dramatic elevations in volume, intensity, or frequency of resistance training but, rather, to a self-induced reduction in energy intake and increase in aerobic activity (Lambert et al., 2004). The final results on this study for age category comparison show that; for body weight comparison does not represent significant changes (sig = 0.8), body height does not represent significant changes (sig = 0.5), maximum drop-down strength does not represent significant changes (sig = 0.7) the maximum force per kg of drop jump does not represent significant changes (sig = 0.9), the maximum power on drop jump does not represent significant changes (sig = 0.9), the contact time does not represent significant changes (sig = 0.1), time in the air does not represent significant changes (sig = 0.4), the difference in air time and momentum does not represent significant changes (sig = 0.8). To conclude data of this study show that there is no significant changes between three age groups for anthropometric parameters and force.

The author considers that the decline in maximum aerobic strength and muscular strength with age advancement are examples of functional fall in the body that lead to aging, which can severely limit physical performance and are in a negative correlation with all mortality cases (Salvador Romero-Arenas, 2013).

5. Conclusion

Data obtain on this study showed that for three anthropometric parameters assessed bodybuilders had the highest circumference during year 2021.

References

[1]. Salvador Romero-Arenas, 2013
[2]. Lambert et al., 2004
[3]. Wilmore & Behnke, 1970; McArdle et al., 1991
[4]. Heyward VH, Sandoval WM, Colville BC. Anthropometric, body composition and nutritional profiles of bodybuilders during training. J Appl Sport Sci Res. 1989;3(2):22–29.
[5]. Hunter G, Demment R, Miller D. Development of strength and maximum oxygen uptake during simultaneous training for strength and endurance. J Sports Med Phys Fitness. Sep 1987;27(3):269-275.
[6]. Maestu J, Jurimae J, Valter I, et al. Increases in ghrelin and decreases in leptin without altering adiponectin during extreme weight loss in male competitive bodybuilders. Metabolism. 2008;57(2):221–225. PubMed doi:10.1016/j. metabol.2007.09.004
[7]. Steen SN. Precontest strategies of a male bodybuilder. Int J Sport Nutr. 1991;1(1):69–78. PubMed
[8]. Walberg-Rankin J, Edmonds CE, Gwazdauskas FC. Diet and weight changes of female bodybuilders before and after competition. Int J Sport Nutr. 1993;3(1):87–102. PubMed Natural Bodybuilding Case Study 591