

## INFLUENCE OF BODY WEIGHT REGULATION ON THE PHYSICAL CONDITION OF SAMBO WRESTLERS

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**Annotation.** This article highlights the results of a study on the weight loss of sambo wrestlers in the pre-competitive periods and their effect on the body. The introduction of the main methods of regulating the body weight of sambo wrestlers, which used by coaches without any specific consideration, turned out to be the least effective according to the results of the study. The diet for sambo wrestlers in the pre-competition microcycle has tested, which showed an effective result with a positive effect on the body of sambo wrestlers.

**Key words:** sambo, weight, sport, wrestling, competition, coach, nutrition, diet, functional state.

**Аннотация.** В данной статье освещены результаты исследования по сгонки веса борцов самбистов в предсоревновательные периоды и их влияние на организм. Внедрение основных методов регулирования массы тела самбистов, которые применялись тренерами без определенного учета, оказалось наименее результативным по итогам исследования. Апробирован рацион питания для самбистов в предсоревновательный микроцикл, который показал эффективный результат с положительным влиянием на организм самбистов.

**Ключевые слова:** самбо, вес, спорт, борьба, соревнование, тренер, питание, диета, функциональное состояние.

**Аннотация.** Ушбу мақолада самбочиларнинг мусобақадан олдинги даврларда вазн йўқотиши ва уларнинг танага таъсири бўйича тадқиқот натижалари ёритилган. Самбочиларнинг тана вазнини тартибга солишнинг асосий усуллари жорий этиш, улар мураббийлар томонидан ҳеч қандай аниқ эътиборга олинмасдан қўлланилган, тадқиқот натижаларига кўра энг кам самарали бўлган. Мусобақа олдида микроциклда самбочилар учун махсус парҳез синовдан ўтказилди ва самбочиларнинг танасига ижобий таъсир кўрсатган ҳолда самарали натижа кўрсатди.

**Калит сўзлар:** самбо, вазн, спорт, кураш, мусобақа, мураббий, озикланиш, парҳез, функционал ҳолат.

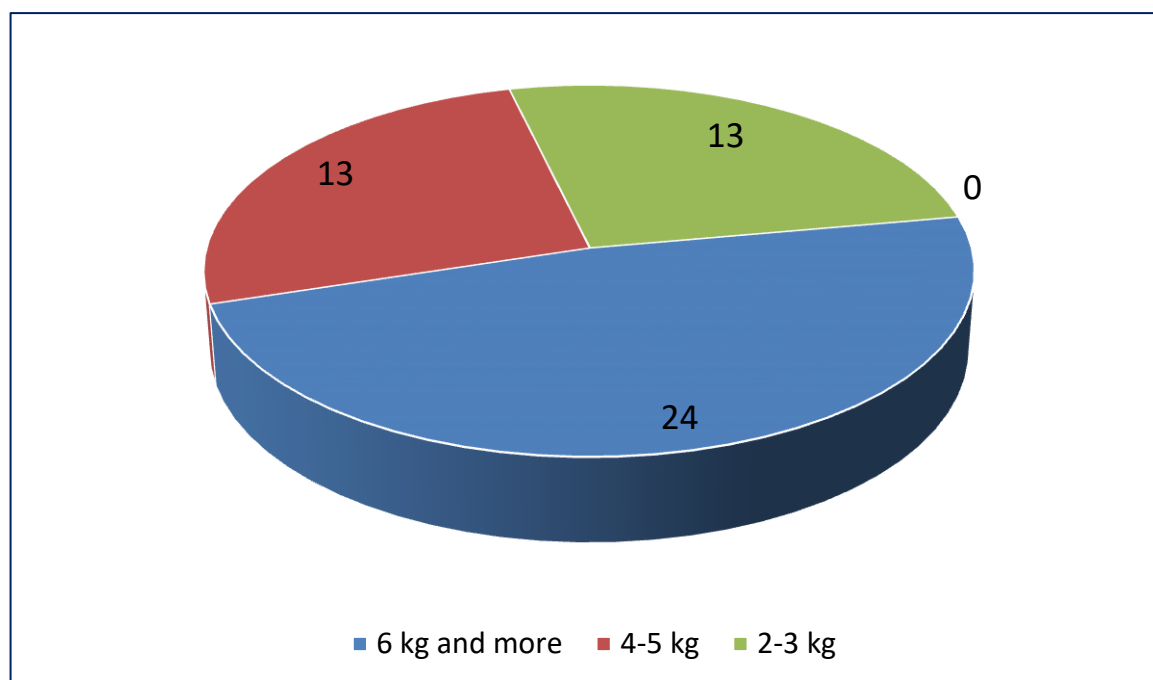
For successful performance at competitions at the stage of direct preparation, the work of an athlete should be aimed at ensuring that the wrestler successfully solves a number of important tasks, one of which is the improvement of special performance, taking into account the sportsmanship of specific opponents. However, first you need to choose the weight category in which the athlete prefers

to compete, because the composition of future rivals depends on this. Thus, the choice of weight category for participation in competitions is a significant aspect of sports training. The next important step is to bring the weight to the norm of the weight category in which the wrestler intends to perform in this competition. [1]

The most difficult task is the system of pre-competitive regulation of body weight, since athletes currently have to exist in rather difficult conditions, among an abundance of temptations and factors that contribute to the disruption of hormonal levels and metabolic processes. With all this, if he is a teenager, due to his age, he is in a state of growth phase, which is accompanied, on the one hand, by an increase in metabolism in general, and on the other hand, requires a large amount of nutrients to maintain the growth phase. [2]

Many athletes artificially reduce weight before competitions. This gives them the opportunity to compete in a lighter weight class where they can have an advantage in strength. Proper weight cutting for athletes of all weight categories does not adversely affect the achievement of results. But if athletes start to lose too much body weight or do it wrong, then disturbances in the body's activity may appear, especially if such weight cutting is practiced too often. Before cutting weight, it is necessary to take into account the morphological features of the body structure and consult a doctor. Because weight is driven mainly due to the removal of fluid from the body, since water is the most mobile structure, but vitamins and minerals are removed from the body along with water, which negatively affects the performance of athletes and their functional state [3].

In order to identify the result of athletes who used weight loss to perform in martial arts competitions, we conducted an observation in which 50 sambo athletes took part. Age observed from 18 to 33 years. Sports qualification from the 1st category to the master of sports (Fig. 1).



Rice. 1. The number of kg reduced by athletes

On this graph, we see that the majority - 24 athletes before the competition reduce weight by 4-5 kg. We also note that 13 people out of 50 observed reduce 2-3 and 6 or more kg each.

So, we conducted an observation in order to identify the result of athletes who used weight loss to compete in martial arts. We found out that athletes who had reduced from 2 to 3 kg before the competition felt good at the competition. Athletes who reduced from 4 to 5, in most cases, after 2 meetings, were very tired. The exception was for high-class wrestlers. Athletes who have lost 6 or more kg of weight have observed severe swelling of the arms and legs. If the meeting took place the entire fight, some could not stand the pace of the fight and gave up.

We conducted a pedagogical experiment in which we took part 6 active sambo athletes of the control and experimental groups according to 3 persons.

Table 1

Data of athletes of the control group

F.N.	Year of birth	Weight category	Qualification	
M.H.	1997	68 kg	CMS	
C.T.	1986	68 kg	MS	
X.И.	1997	52 kg	CMS	

Table 2

Data of athletes of the experimental group

F.N.	Year of birth	Weight category	Qualification	
O.B.	1994	100 kg	MS	
K.M.	1993	82 kg	CMS	
M.X.	2000	62 kg	CMS	

All athletes reduced weight to prepare for the competition, which contributes to the loss of strength, thereby adversely affecting the result of the performance. Before the experiment, we weighed the

wrestlers (Table 3). Таблица 3

Weighing data of athletes of the experimental group before the experiment

N.S. of athlete	Weight before the experiment
1.O.B.	106 kg- Weight to 100 kg
2.K.M.	87,5 kg- Weight to 82 kg
3.M.X.	66,3 kg- Weight to 62 kg

We see from the table that all athletes are overweight, on average 3.3 kg. That is, the first athlete needs to reduce weight to the weight limits - 6 kg, the second - 5.5 kg, the third - 4.3 kg.

*Table 4*  
*Weighing data of athletes in the control group before the experiment and during*

N.S. of athlete	Weight before the experiment
1.M.H.	74 kg- Weight to 68 kg
2.C.T.	73,3 kg- Weight to 68 kg
3.X.H.	56,8 kg- Weight to 52 kg

During the experiment, we developed recommendations for nutrition and the diet that the athletes ate. At the same time, they monitored the training - how much kg goes per training and how the weight changes during the time of the experiment, they also monitored the performance of athletes in competitions. By the end of the experiment, we again weighed the athletes and looked at the change in the data, we also found that you can do without weight loss, but simply by following certain recommendations for weight loss and a certain diet, you can approach significant competitions at the peak of your form while not losing strength at the same time. weight loss process.

Recommendations and diet: When adjusting the weight, the caloric content of the diet is gradually reduced to 30-45 kcal per 1 kg of the athlete's body weight per day. The composition of the daily diet: 1-2 g of fat, 4-4.5 g of carbohydrates and 2.4-2.5 g of protein (per 1 kg of body weight per day). The norm of fats decreases even below the indicated figures, but at the same time, the consumption of vegetable oils remains within 10-15 g in the daily diet.

Diet menu for the week

Monday. 7:00-9:00 first breakfast: 200 g of oatmeal cooked in 0.5% milk with 50 g of fresh or frozen berries; tea or coffee without sugar and milk.

11:00-12:00 second breakfast: 2 peeled carrots.

14:00-15:00 lunch: 200 g of boiled buckwheat and 150 g of boiled breast, a portion of vegetable stew or fresh vegetable salad seasoned with a tablespoon of olive oil.

16:00-17:00 afternoon snack: chopped fruit (pear, apple, nectarine, kiwi), tea without sugar or water. 19:00-20:00 dinner: A small portion of boiled turkey or chicken, a salad of fresh vegetables dressed with a spoonful of olive oil.

Tuesday. 7:00-9:00 first breakfast: 0-2% fat cottage cheese, 1 banana.

11:00-12:00 second breakfast: 2 peeled carrots seasoned with a tablespoon of olive oil, 1 orange or grapefruit.

14:00-15:00 lunch: 100 g of cooked rice, a portion of salmon or other steamed fish, 300 g of warm vegetables (carrots, broccoli, cauliflower), seasoned with 1 tsp. vegetable oil.

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16:00-17:00 afternoon snack: sandwich from a piece (30 g) of Borodino bread with 50 g of fat-free cottage cheese, a pinch of salt, pepper and tomato slices.

19:00-20:00 dinner: vegetable omelette, 200 g of vegetable salad, seasoned with 1 tablespoon of olive oil.

Wednesday. 7:00-9:00 first breakfast: 200 g of oatmeal cooked in 0.5% milk with 1 medium apple and 1 tsp. cinnamon.

11:00-12:00 second breakfast: Half a grapefruit, 20 g nuts (walnuts, cashews, almonds, hazelnuts).

14:00-15:00 lunch: Portion of vegetable soup (it had allowed to use any soup cooked in a non-greasy broth, strictly without meat).

16:00-17:00 afternoon snack: Berry smoothie: grind in a blender a mixture of 100 g low-fat cottage cheese, half a glass of berries (blueberries, raspberries, or strawberries), half a glass of milk 0.5%.

19:00-20:00 dinner: 200 g of light cottage cheese casserole without sugar, with cinnamon, cottage cheese should be 0.2% fat, a glass of kefir 0-2% fat, and cranberry juice without sugar.

Before bedtime: Fruit or herbal tea without sugar and milk.

Thursday. 7:00-9:00 first breakfast: 200 g of muesli with berries or fruits in 0.5% milk, medium apple or grapefruit, tea or coffee without sugar and milk.

11:00-12:00 second breakfast: two peeled carrots seasoned with a tablespoon of olive oil.

14:00-15:00 lunch: Portion of vegetable soup (it had allowed to use any soup cooked in a non-greasy broth, strictly without meat).

16:00-17:00 afternoon snack: sandwich from a piece (30 g) of Borodino bread with 50 g of fat-free cottage cheese, a pinch of salt, pepper and tomato circles.

19:00-20:00 dinner: Boiled or baked chicken fillet (100 g), 300 g of vegetables stewed in the oven (zucchini, turnips, onions, carrots) with herbs, seasoned with 2 tablespoons of olive oil, 200 ml 0.5 % milk or kefir.

Before bed: Fruit or herbal tea without sugar and milk.

Friday. 7:00-9:00 first breakfast: a slice (30 g) of rye bread, 1 boiled egg, lettuce. 11:00-12:00 second breakfast: 2 peeled carrots seasoned with a tablespoon of olive oil, 1 orange or grapefruit.

14:00-15:00 lunch: Portion of vegetable soup (it had allowed to use any soup cooked in a non-greasy broth, strictly without meat).

16:00-17:00 afternoon snack: 2 slices of dark chocolate, freshly squeezed orange juice.

19:00-20:00 dinner: A small portion of boiled turkey or chicken, a salad of fresh vegetables dressed with a spoonful of olive oil.

Saturday. 7:00-9:00 first breakfast: 200 g of oatmeal cooked in 0.5% milk with 50 g of fresh or frozen berries; tea or coffee without sugar and milk.

11:00-12:00 second breakfast: 200 g low-fat natural yogurt.

14:00-15:00 lunch: 100 g of boiled buckwheat, 100 beef, 200 g of lettuce and vegetable salad dressed with a tablespoon of olive oil. 16:00-17:00 afternoon snack:

Berry smoothie: grind in a blender a mixture of 100g low-fat cottage cheese, half a glass of berries (blueberries, raspberries, or strawberries), half a glass of milk 0.5%.

19:00-20:00 dinner: A small portion of steamed fish with boiled vegetables, 1 glass of tomato juice, 1 rye bread seasoned with fat-free cottage cheese with herbs and garlic.

Sunday. 7:00-9:00 first breakfast: 200 g of muesli with berries or fruits in 0.5% milk, medium apple or grapefruit, tea or coffee without sugar and milk.

11:00-12:00 second breakfast: Half a grapefruit, 20 g nuts (walnuts, cashews, almonds, hazelnuts).

14:00-15:00 lunch: 100 g of cooked rice, a portion of steamed fish, 300 g of warm vegetables (carrots, broccoli, cauliflower), seasoned with 1 tsp. vegetable oil.

16:00-17:00 afternoon snack: 100 g of grain cottage cheese (up to 4% fat content), a glass of chopped fruit.

19:00-20:00 dinner: vegetable omelets, 200 g of vegetable salad, seasoned with 1 tablespoon of olive oil.

Water, freshly squeezed juices, mineral water and herbal tea could be drunk in any quantity, you need to drink 20-30 minutes before a meal and not earlier than 40 minutes after a meal.

At the end of the pedagogical experiment, we analyzed the results obtained.

The figures below show the weighing data of the athletes of the experimental group during the experiment.

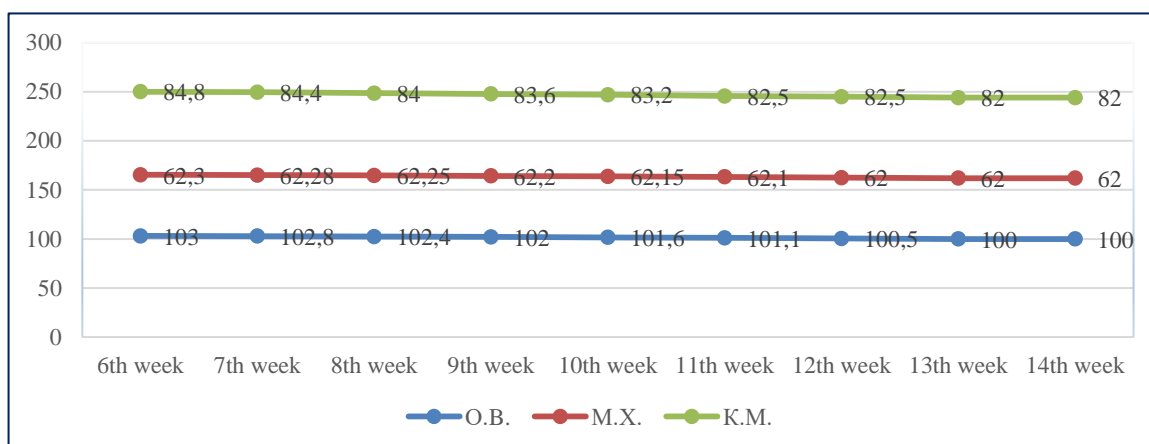


Pic. 2. Weighing data of athletes of the experimental group during the experiment

Therefore, in this graph, we see that, on average, the wrestlers lost 3.1 kg of weight in the first five weeks.

1. O.B. reduced 2.7 kg.
2. M.Kh. reduced 4.0 kg.

3. K.M. reduced 2.6 kg.



*Pic. 3. Weighing data of athletes of the experimental group during the experiment*

Therefore, on this graph, we see that the wrestlers reduced 5.3 kg on average by the end of the experiment. We also found out how many kg the wrestlers reduced in general over the entire period of 14 weeks:

1. O.B. reduced 6 kg.
2. M.Kh. reduced 4.3 kg.
3. K.M. reduced 5.5 kg.

**Conclusion.** We have studied the sources on the regulation of the body weight of an athlete, the analysis showed that the problem of regulating the body weight of a sambo wrestler is very relevant at the present time. Athletes for performance in competitions have to apply weight loss, often forced, to enter the boundaries of the chosen weight category. Proper weight loss for athletes of all weight categories does not adversely affect the achievement of results. But, if athletes start to reduce too much body weight or do it incorrectly, then disturbances in the functioning of the body may appear, especially if such weight loss is practiced too often.

Overall, it should be noted that a young athlete must be fully aware of all the features of weight cutting. The cutting process itself should not be carried out in a hurry and at a fast pace. The athlete should achieve the most optimal weight through certain exercises over a relatively large range of time. Particular attention should be paid to the diet.

### Literature

1. <http://journals.tsu.ru/uploads/import/835/files/322-218.pdf>
2. Лопатина А.Б. “Предсоревновательная регуляция массы тела юных дзюдоистов // Современные наукоемкие технологии.” – 2016. – № 3-1. – С. 162-166;
3. М.Г.Магомедов Теоретические основы снижения веса перед соревнованиями и удержание его в пределах весовой категории у борцов. -2019. ISSN: 1995-0659; Vol.3. № 3.