

# Exercise program for weight loss strength and vitality case study examples

[Literature](#), [Russian Literature](#)



The purpose of this paper is proposing an effective exercise program for a healthy young male to lose 25 lbs of body fat, increase strength and improve endurance. The program is designed for a 20 year old subject with an average body mass of around 150 lbs. Changes in body weight during the course of this program will not be taken into consideration for calculating daily expenditure of energy, because calorie calculation is not a precise science but an approximation. We will keep in mind that the ultimate goal of losing weight should always include increasing overall health and vitality and that too rapid weight loss can endanger health of our subject. Also, due to the fact that the muscle tissue weighs more than the fat tissue, all exercise-based programs for weight loss must consider the possibility that in the earlier stages of the program no differences in body weight can be observed. However, if one maintains the exercise, an unexpectedly rapid progress can be observed in later stages.

The program only prescribes physical exercises, but it should also be important that the subject maintains a balanced intake of food and does not increase caloric value of his meals during the course of this program. An effective diet for this program would include high intake of proteins, natural vitamins and micronutrients, while maintaining a low intake of carbohydrates. An example of such a diet would be the popular Paleolithic diet.

For the purpose of this program we will presume our subject's daily caloric intake to be between 2, 000 an 2, 500 calories, which is an estimated requirement of an average male weighing 150 lbs, with light to moderate

levels of physical activity. 1 Energy value of a pound of fat is 3, 500 calories<sup>2</sup>, so to meet our goal our subject has to lose 85, 500 calories through our program. To keep the pace of weight loss on healthy levels, subject will have to spend between no less than 800 and no more than 1000 calories a day, on top of his usual daily energy requirements. One day a week will be a day for rest, in order to allow subject's mind and body to recuperate. All active days must include an hour of vigorous exercise and an hour of moderate activity. The whole program should take around a hundred days to achieve desired loss of weight. Improvements in strength and endurance should be apparent within the first month of the program.

Vigorous exercise will include cardiovascular endurance exercises and strength exercises. Those two must exchange every other day. One day will be a "cardiovascular day", and the other will be a "strength day". On the cardiovascular day subject can choose activities according to his own preferences, but should keep in mind not to combine lighter cardiovascular with lighter moderate activities (see Tables 1 and 2) too often, or it could slow down his progress. Between 15 and 30 minutes of stretching will be required on every active day, and that time can be included in the daily requirement for moderate activity.

The exercises for increasing cardiovascular and respiratory endurance are not necessarily limited to the ones listed in Tables 1 and 2. It is likely that after several weeks of program subject will want to extend the list of activities he performs during the endurance-day. That is highly desirable because it will increase subject's satisfaction and interest in the program.

Broad array of activities can be interpreted as vigorous endurance exercise. Some of the highly recommended ones are mountaineering, skiing, tennis, or different team sports. Even various forms of hard physical work can be included, but preferably only once a week. Generally speaking subject can include any activity in his daily schedule as vigorous endurance exercise if it satisfies three conditions – if it noticeably fastens his heart rate, if it induces heavy breathing, and if it makes him sweat heavily. Subject must keep in mind that activity can be useful for improving cardio-respiratory health and endurance only if it is performed in clean air. It is also important that activity is performed for a whole hour without interruptions.

Moderate exercise will also improve cardio-respiratory endurance of our subject, and can offer even broader range of possible activities. For instance walking or cycling to and from work can be included. Even strenuous sexual activity can be included in daily schedule.

Strength exercises can either include standard weight-lifting routine or bodyweight exercises. Weight-lifting should be chosen if the subject is already experienced with this form of workout or exercises under professional supervision. Otherwise, subject should apply five main body weight exercises: squats, sit-ups, back extensions (with hands behind back), pushups and pull-ups. Sit-ups and back extensions can be performed with or without fixated legs. Preferably, both versions can be used. Subject should always follow the same order of exercise, starting with legs, and finishing with arms. However, once the whole body is covered, subject can additionally perform any particular exercise. All exercises except pull-ups

should be performed in series of twenty repetitions with ten second relaxation periods between them. Series of pull-ups should consist of five repetitions. The number of series is determined by the subject's physical condition but should, if possible, increase at least every two weeks.

Stretching and warm-up are very important parts of this program as they provide protection against injuries during or after workout. Before every vigorous activity, standard warm-up of knees and joints should be performed together with dynamic stretching of arms and legs. Dynamic stretching consists of bouncing movements during which end point is not held. It increases dynamic flexibility and reduces the potential for injury. Also, every vigorous routine should be followed by static stretching of arms and legs. All workout clothes should be light and preferably made of cotton to promote normal sweating and avoid overheating.

It is important that subject follows guidelines of this program as closely as possible. During strength exercises, special attention should be directed towards sit-ups and back extensions. They promote spinal health so they should only be avoided in the event of an injury. If injured, subject should always allow his body to recuperate. Importance of stretching and warm-up exercises can never be overemphasized. High intake of water is required when body is exposed to vigorous exercise and sweating. Also, if subject feels weakness or dizziness during the program he should increase intake of food. If the problems persist, he should abort the program and consult a doctor.

## **Works Cited**

County of Los Angeles Fire Department. Wellness and Fitness Exercise Manual. Los Angeles: LACoFD, 2002. Print.

Fitness and Exercise Sourcebook, Ed. Laura Larsen, 4th ed. Detroit: Omnigraphic inc. 2011.

Weed, Geoffrey. " How Many Calories do You Burn in an Average Day" eHow.com. eHow, 02 Feb. 2011. Web. 18 Sep. 2011.

" What it Takes to Lose a Pound." naturalphysiques. com. Natural Physiques, n. d. Web. 18 Sep. 2011.