

Exercise has many benefits

Exercise programs improve muscular strength, endurance, and flexibility. Exercise also improves cardiorespiratory endurance. The heart rate and capacity increase, and the air passages dilate so that the heart and lungs are able to support prolonged muscular activity. The blood level of high-density lipoprotein (HDL), the molecule that prevents the development of plaque in blood vessels, increases. Also, body composition (the proportion of protein to fat) changes favorably when you exercise.

Exercise also seems to help prevent certain kinds of cancer. Cancer prevention involves eating properly, not smoking, avoiding cancer-causing chemicals and radiation, undergoing medical screening tests, and knowing the early warning signs of cancer. Studies show that people who

exercise are less likely to develop colon, breast, cervical, uterine, and ovarian cancers.

Physical training with weights improve the density and strength of bones and the strength and endurance of muscles in all adults, regardless of age. Even persons in their eighties and nineties can make substantial gains in bone and muscle strength that help them lead more independent lives. Exercise also helps prevent osteoporosis.

The stronger the bones when a person is young, the less chance of developing osteoporosis as he or she ages. Exercise helps prevent weight gain, not only because the level of activity increases but also because muscles metabolize faster than other tissues.

Exercise relieves depression and enhances the mood. People report that exercise actually makes them feel more energetic, and that after exercising they sleep better that night. Self-esteem rises because of improved appearance, as well as other factors that are not well understood. For example, vigorous exercise releases

endorphins, hormonelike chemicals that are known to alleviate pain and provide a feeling of tranquility.

A sensible exercise program is one that provides all of these benefits without the detriments of a too-strenuous program. Overexertion can actually be harmful to the body and might result in sports injuries, such as lower back strain or torn ligaments of the knees. The beneficial programs suggested in the **table** are tailored according to age.

ANSWER

Why a more muscular body has more intense metabolism than a more adipous body?

Activities aspects	Children (7-12 years)	Teenagers (13-18 years)	Adults (19-55 years)
Amount	Vigorous activity 1-2 hours daily.	Vigorous activity 1 hour, 3-5 days a week; otherwise, 1/2 hour daily moderate activity.	Vigorous activity 1 hour, 3 days a week; otherwise, 1/2 hour daily moderate activity.
Purpose	Free play.	Build muscle with calisthenics.	Exercise to prevent lower back pain: aerobics, stretching, yoga.
Organized	Build motor skills through team sports, dance, swimming.	Do aerobic exercise to control buildup of fat cells.	Take active vacations: hike, bicycle, cross-country ski.
Group	Encourage more exercise outside of physical education classes.	Pursue tennis, swimming, horseback riding-sports that can be enjoyed for a lifetime.	Find exercise partners: join a running club, bicycle club, or outing group.
Family	Initiate family outings: bowling, boating, camping, hiking.	Continue team sports: dancing, hiking, swimming.	Initiate family outings: bowling boating, camping, hiking.

Table Suggested activities for staying fit according to age.