

EXERCISE AND HAPPINESS

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Part – 1

SCIENCE BEHIND EXERCISE AND HAPPINESS

Regular exercise helps the body to release chemicals that boost our sense of well-being and suppress hormones that cause stress and anxiety. Among the chemicals released are endorphins, serotonin, and dopamine neurotransmitters which are related to pain and depression or other emotions.

Exercise induces good blood flow to deliver all the nutrients required by the brain, as well as it also increases production of molecules important to brain function, including memory.

MOTIVATION

A serious behaviour change is needed and for others, a modification to current behaviour is more appropriate. Unless motivated to do exercises, the entire process will not be of sustainable benefit.

MOST EFFECTIVE EXERCISE IN THE WORLD

Walking is simple, yet powerful. It can help stay trim, improve cholesterol levels, strengthen bones, keep blood pressure in check, lift mood, and lower risk for a number of diseases (e.g. diabetes and heart disease).

Aim for 150 minutes per week of moderate-intensity activity. Try brisk walking, swimming, jogging, cycling, dancing, or classes like step aerobics.

DIFFERENCE BETWEEN PHYSICAL ACTIVITY AND EXERCISE

Physical activity refers to the contraction of skeletal muscle that produces bodily movement and requires energy.

Exercise is a physical activity that is planned and is performed with the goal of attaining or maintaining physical fitness.

Physical fitness is a set of traits that allows an individual to perform physical activity.

PURPOSE OF PHYSICAL ACTIVITY

Physical activity is one of the most important things that people can do for their health, according to CDC and Prevention recommendation. Their findings provide more detail on the benefits of physical activity:

Helps control weight: For weight management, people vary in how much physical exercise they need. A good standard for many people is about 150 minutes of moderate-intensity activity a week. More is needed to lose weight and keep it off.

Reduces the risk of cardiovascular disease: Meeting the 150-minute standard of activity reduces the risk of heart disease and stroke. Exercise can also reduce blood pressure and improve cholesterol levels.

Lessen the risk of type 2 diabetes and metabolic syndrome: The risk of type 2 diabetes and metabolic syndrome is reduced with physical activity.

Cut down the risk of some cancers: Research shows that physically active people have a lower risk of colon cancer, and in women, breast cancer as well as for endometrial and lung cancer.

Strengthens bones and muscles: Exercise can slow the loss of bone density that comes with age. It also helps with arthritis specially those related to aging.

Improves mental health and mood: Physical activity keeps thinking, learning, and judgment skills sharp as people age. It also reduces the risk of depression and helps improve sleep quality.

Enhances ability to perform daily activities and prevent falls: Physical activity helps people, especially middle-aged and older adults, do everyday tasks like climbing stairs, grocery shopping or playing with children.

Increases Chances of Living Longer: Exercise and physical activity reduces the risk of dying at a young age from the leading causes of death.

Part – 2

EXERCISE PROGRAMMING

Practicing the basic exercise principles is crucial for developing an effective fitness training program. The principles of exercise apply to everyone at all levels of physical training.

Basic principles of exercise the term called is F.I.T.T factors, where FITT stands for:

1. Frequency,
2. Intensity,

3. Time, and
4. Type of activity.

Frequency:

Exercise should be carried out 3-5 days a week. Training three times a week produces significant training effects.

However, training 5 days a week at a lower-intensity exercise may be more manageable for some people.

Intensity:

Intensity can vary between light, moderate and vigorous intensity activities.

A total of 20-60 minutes of continuous or intermittent aerobic activity a day should be performed. The activity can be divided into a minimum of 10-minute bouts throughout the day. The duration of training is dependent on intensity. Individuals starting at the lower end of the training band need to sustain exercise longer (30-60 minutes) to achieve training effects.

Type:

Refers to the sort of activity to complete e.g., Aerobic activities like walking, jogging, biking, swimming or dancing or strengthening activities such as exercises using exercise bands, weight machines or hand-held weights.

1. Anaerobic exercises:

Anaerobic high intensity interval training (HIIT) is a highly desirable workout, because it engages all muscle fibres, the fast twitch as well as the slow twitch. This makes anaerobic good for a complete training effect. The benefits from anaerobic exercise depend on the effort put in.

Maximum "effort" by a large muscle mass, such as the legs, produces optimum benefits for the whole body.

2. Aerobic exercise:

Aerobic exercise, which speeds up heart rate and breathing, is important for many body functions. It gives the heart and lungs a workout and increases endurance. Aerobic exercises mainly show an effect in health-related components of fitness especially cardiovascular endurance and body composition.

This type also helps relax blood vessel walls, lower blood pressure, burn body fat, lower blood sugar levels, reduce inflammation, boost mood, and raise "good" HDL cholesterol. Combined with weight loss, it can lower "bad" LDL cholesterol levels, too. Over the long term, aerobic exercise reduces risk of heart disease, stroke type 2 diabetes, breast and colon cancer, depression, and falls.

3. Balance exercises:

Improving balance makes feel steadier on feet and helps prevent falls. It's especially important as we get older, when the systems that help us maintain balance—our vision, our inner ear, and our leg muscles and joints—tend to break down.

Typical balance exercises include standing on one foot or walking heel to toe, with your eyes open or closed. The physical therapist may also have you focus on joint flexibility, walking on uneven surfaces, and strengthening leg muscles with exercises such as squats and leg lifts.

4. Strength training:

Strength training (also known as resistance exercise) increases muscle strength by making muscles work against a weight or force. Resistance exercise is an anaerobic exercise.

As we age, we lose muscle mass. Strength training builds it back

Strengthening muscles not only makes one stronger, but also stimulates bone growth, lowers blood sugar, assists with weight control, improves balance and posture, and reduces stress and pain in the lower back and joints.

A physical therapist can design a strength training program that can be done two to three times a week at a gym, at home, or at work. It will likely include body weight exercises like squats, push-ups, and lunges, and those involving resistance from a weight, a band, or a weight machine.

It's important to feel some muscle fatigue at the end of the exercise to make sure proper working or training the muscle group effectively.

5. Stretching:

Stretching helps maintain flexibility. We often overlook that in youth when our muscles are healthier. But aging leads to a loss of flexibility in the muscles and tendons. Muscles shorten and don't function properly. That increases the risk for muscle cramps and pain,

muscle damage, strains, joint pain, and falling, and it also makes it tough to get through daily activities, such as bending down to tie shoe laces.

Likewise, stretching the muscles routinely makes them longer and more flexible, which increases range of motion and reduces pain and the risk for injury.

The Aim in the program should include stretching every day or at least three or four times per week.

GOALS

When adopting or modifying a physical activity routine, it is important to set realistic goals. Too often, individuals expect to lose unrealistic amounts of weight, run faster and longer and start seeing drastic body composition changes instantly. Instead, it's wise to use the acronym S.M.A.R.T.

*Specific is the what, where and how of the goal.

*Measurable is how to evaluate whether or not the goal is met.

*Achievable is setting a goal that you can accomplish.

*Realistic is setting a goal that is challenging, but attainable.

*Timely relates to when one wants to achieve the goal by, and what time frame to reach the goal.

Putting the FITT principle together, one can effectively plan an exercise routine and set a S.M.A.R.T. goal.

Part -3

SCIENTIFICALLY THE BEST WORKOUT

- . Barbell Bentover Rows. ...
- . Dumbbell Split Squats (each side) ...
- . Dumbbell Chest Presses on Swiss Ball. ...
- . Wide-Grip Pullups (assisted if needed) ...
- .Dumbbell Step-Ups. ...
- .Medicine Ball Floor Slams. ...
- .Barbell Hip Thrusts. ...
- .Decline Pushups.

Barbell squats

Barbell squats are called the king of all exercises because the entire body gets worked by this exercise. But first its wise to learn to do the bodyweight squat. Then, to add load and reap the benefits. As renowned strength coach, Dan John, says – movement, volume and finally, load.

BEST TIME TO EXERCISE

Ongoing studies suggest that afternoon or evening exercise may improve athletic performance. One very small study found that muscle fatigue is lower during evening workouts than morning workouts. This can help build endurance by exercising for longer periods.

TIMING OF EXERCISE AT NIGHT IS FEASIBLE

A. Traditionally, experts have recommended not exercising at night as part of good sleep hygiene. Now a new study, published in Sports Medicine, suggests that exercise in the evening as long (avoiding vigorous activity) for at least one hour before bedtime can be done.

STEPS AFTER EXERCISE

*Bath after workout

Showering after a workout does helps muscles to recover, and boosts body's ability to bounce back and be ready for next workout. That's because showering can get the lactic acid, the natural chemical reaction that causes soreness, out of muscles.

*Food before a workout

Most people can eat small snacks right before and during exercise.

Good snack options include:

An energy bar.

. A banana, an apple or other fresh fruit.

.Yogurt..

- .A fruit smoothie.
- .A whole-grain bagel or crackers.
- .A low-fat granola bar.
- .A peanut butter sandwich.
- .Sports drink or diluted juice.

*Food avoided after a workout

Avoiding pure protein right after the workout, because body will just use it as energy again. Also, steer clear of foods that are mostly sugar (cookies, candy and the like) or mostly fat like a handful of nuts (without yogurt or fruit to balance the fat) or fried foods are to be avoided.

*When not to do exercise

Signs not to Pushing Through a Workout

- . Sick Below the Neck.
- .Running on Less Than 5 Hours of Sleep. ...
- .Still Sore from Monday's Workout on Thursday. ...
- . Lightheaded or Dizzy. ...
- .Chest Pain or Pressure.

*Too much exercise

The Centers for Disease Control and Prevention (CDC) recommends a minimum amount of exercise—150 minutes of moderate-intensity physical exercise per week, plus muscle-strengthening activities two days per week.

But there's no recommended upper limit.

*Effect of doing same exercises daily :

Performing the same routine every day can lead to excess soreness or strain. Using the same muscle groups over and over again doesn't leave any time for muscles to repair and grow. It's recommended as alternating days training of different muscle groups so that body gets time to recover.

Strengthening, stretching, balance, and aerobic exercises will keep one active, mobile, and feeling great.

However, without putting a stretch into the painful range, that tightens the muscle and is counterproductive, is good.

SUMMARY

Benefits of exercises

Helps control weight, Reduces the risk of cardiovascular disease, Lessen the risk of type 2 diabetes and metabolic syndrome, cut down the risk of some cancers, strengthens bones and muscles, improves mental health and mood, enhances ability to perform daily activities and prevent falls, Increases Chances of Living Longer.

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