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## The Relationship Between Fitness Diet, Exercise And Academic Success

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### Fitness:

If you are under 35 and in good health, there is generally no need to consult a doctor before starting an exercise program. However, if you are over 35 and have been inactive for several years, it is advisable to seek medical advice. Your doctor may recommend a graded exercise test if needed. Other conditions requiring medical clearance include:

- High blood pressure
- Heart issues
- Family history of early stroke or heart attack
- Frequent dizziness
- Severe breathlessness after mild exertion
- Arthritis or other bone problems
- Serious muscular, ligament, or tendon issues
- Any other known or suspected health concerns

Engaging in vigorous exercise poses minimal risk for healthy individuals or those following medical advice. The greater health risks stem from habitual inactivity and obesity. Physical fitness is comparable to fine-tuning an engine—it helps us perform at our best. It enables daily tasks to be performed energetically, leaving room for leisure and emergencies. Fitness is also a cornerstone of good health and well-being, encompassing the performance of the heart, lungs, and muscles. Moreover, fitness influences mental alertness and emotional stability, reflecting its holistic impact.

Fitness is a personal attribute influenced by age, sex, heredity, habits, exercise, and diet. While the first three factors are beyond control, the others can be improved. Physical fitness is better understood by examining its four basic components:

**Cardiorespiratory Endurance:** The ability to sustain oxygen delivery and waste removal during prolonged activities like running and swimming. Cardiovascular endurance refers to the ability of the heart, lungs, and circulatory system to work together efficiently to deliver oxygen and nutrients to the muscles during sustained physical activity. It measures the body's capacity to perform prolonged, moderate-to-high intensity exercises such as running, swimming, cycling, or brisk walking without becoming overly fatigued. This type of endurance indicates the health and efficiency of the cardiovascular system, playing a crucial role in overall physical fitness and reducing the risk of heart-related illnesses. High cardiovascular endurance allows individuals to perform activities for longer periods, recover more quickly, and maintain higher energy levels.

**Muscular Strength:** The capacity of muscles to exert force briefly, measurable through weightlifting.

**Muscular Endurance:** The ability to sustain muscle contractions or repeated force application, tested with activities like push-ups. This aspect of physical fitness is essential for performing tasks that require lifting,

pushing, or pulling. Muscular strength can be improved through exercises like weight lifting, resistance training, and bodyweight exercises that focus on building and strengthening specific muscle groups.

**Flexibility:** The capacity to move joints through their full range of motion, measured by exercises like the sit-and-reach test. Flexibility refers to the ability of a joint or a group of joints to move through their full range of motion without restriction or pain. It involves the elasticity of the muscles, tendons, and ligaments that surround the joints. Flexibility is an essential component of physical fitness, allowing for efficient and effective movement, reducing the risk of injury, and enhancing performance in physical activities. It can be improved through regular stretching exercises and activities that promote a wide range of motion.

### Designing a Workout Schedule

Your workout plan should align with your fitness goals, current level, age, health, skills, interests, and convenience. A general fitness program should include all four components mentioned above and incorporate:

**Warm-Up:** 5–10 minutes of low-intensity activities like walking or slow jogging. Increase heart rate, improve blood flow, and prepare muscles for workout. Begin with a 5-minute dynamic warmup to prepare the body for exercise. Include light jogging or brisk walking to elevate the heart rate, followed by dynamic stretches like arm circles, leg swings, and torso twists. Incorporate mobility exercises such as lunges with a twist and high knees to loosen joints and muscles, reducing the risk of injury.

Routine:

**Muscular Strength:** At least two 20-minute weekly sessions focusing on major muscle groups through weightlifting. Dedicate 20 minutes to exercises focused on building strength. Perform compound movements like squats, deadlifts, bench presses, and pull-ups with moderate to heavy weights. Aim for 3–4 sets of 8–12 repetitions, ensuring a rest period of 1–2 minutes between sets. Adjust weights to maintain proper form and achieve muscle overload for optimal strength gains.

**Muscular Endurance:** Three 30-minute weekly sessions with exercises like push-ups, sit-ups, and calisthenics. Allocate 30 minutes for endurance training, targeting lighter weights with higher repetitions. Engage in exercises like push-ups, bodyweight squats, or kettlebell swings, completing 3–4 sets of 12–20 repetitions. Incorporate circuit training to maintain intensity and minimize rest, building stamina and improving muscular efficiency.

**Cardiorespiratory Endurance:** Three 20-minute sessions of aerobic exercises such as jogging or cycling. Spend 20 minutes on aerobic activities like running, cycling, or swimming. Maintain a steady pace within 65–85% of your maximum heart rate. Alternatively, opt for high-intensity interval training (HIIT), alternating between 1–2 minutes of intense effort and 1–2 minutes of recovery to boost cardiovascular fitness.

**Flexibility:** Daily 10–12 minutes of slow, static stretching, included in the warm-up or cool-down. Conclude the workout with a 10–12-minute cool-down emphasizing flexibility. Perform static stretches, holding each stretch for 20–30 seconds. Focus on major muscle groups, such as hamstrings, quads, chest, and shoulders. Incorporate yoga poses like Downward Dog or Cobra Pose to enhance flexibility, promote relaxation, and aid recovery.

**Cool-Down:** 5–10 minutes of light exercise and stretching to relax the body.

Exercise Principles

**Specificity:** Choose activities that target specific fitness components.

**Overload:** Push your body beyond its resting level to stimulate improvement.

**Regularity:** Maintain a minimum of three balanced workouts weekly.

**Progression:** Gradually increase exercise intensity, duration, or frequency.

### Heart Rate Monitoring

Monitoring heart rate is an effective way to measure workout intensity. Heart rate monitoring is the process of measuring the number of heart beats per minute, often used to assess cardiovascular health. It can be done manually by checking the pulse at the wrist or neck or with devices like fitness trackers and heart rate monitors. Monitoring helps track fitness levels, detect irregularities, and optimize exercise intensity. Normal resting heart rate ranges from 60–100 beats per minute for adults. Advanced technologies, such as wearable

ECG devices, provide continuous and accurate heart rate data for medical and fitness purposes. The target heart rate can be calculated using the formula:

$$(220 - \text{Age}) \times 70\%.$$

For instance, a 40-year-old's target heart rate is 126 beats per minute. Adjusting for individual differences, subtract your resting heart rate from the maximum heart rate, calculate 70% of this reserve, and add it to the resting rate.

### **Weight Control and Diet**

Exercise aids weight control by increasing calorie burn during and after workouts. Aerobic activities burn fat, and a combination of exercise and proper diet provides the most effective approach to weight management. Muscle tissue weighs more than fat, so body composition is a better indicator of fitness than weight alone. Sedentary lifestyles often lead to "creeping obesity," where inactivity and unchanged food habits result in fat gain. Weight control and diet are essential for maintaining a healthy body and preventing obesity-related conditions. A balanced diet includes adequate portions of carbohydrates, proteins, fats, vitamins, and minerals. Calorie intake should align with energy expenditure to prevent weight gain or loss. Regular physical activity complements dietary efforts by boosting metabolism and burning excess calories. Avoiding processed foods, sugary drinks, and unhealthy fats helps promote weight control. Portion control and mindful eating prevent overeating and help sustain a healthy weight. Consulting nutritionists can provide personalized plans for effective weight management.

### **When to Exercise**

Exercise timing depends on personal preferences, job and family responsibilities, facility availability, and weather. Common times are early morning or late afternoon. Avoid strenuous exercise in extreme heat or within two hours of eating, as these conditions stress the circulatory system. The best time to exercise for fitness depends on individual preferences, goals, and schedules. Morning workouts can boost metabolism, improve focus, and create a consistent routine. Midday exercises help break long sedentary hours and improve energy levels. Evening workouts may enhance performance as body temperature and strength peak later in the day. Avoid exercising late at night if it disrupts sleep. Consistency is key—choose a time that aligns with your lifestyle and ensures regularity. Listen to your body and adapt the timing based on how you feel during and after workouts.

### **Conclusion**

While various factors contribute to success in life, good eating and exercise habits remain within one's control. The factors contributing to success in college are many and confounding. Elements beyond good diet and regular exercise may certainly play equally powerful if not even more influential roles. Yet, learning good eating and exercising habits is within the student's control. Students who establish these habits during college will not simply improve their academic performance but also establish a solid foundation for their future.

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