

**UNIDAD EDUCATIVA PARTICULAR JAVIER  
BACHILLERATO EN CIENCIAS**

**MONOGRAPH**

**HOW SPORTS CAN AFFECT TEENAGERS AND ADULTS  
PHYSICALLY AND PSYCHOLOGICALLY**

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## **ACKNOLEDMENT**

I want to thank God for the opportunity that gave me to be in this nice family in a good school and to continue giving me strength to move forward with my life; To my family because they guide me to go on the right path to fulfill my goals and objectives, also through their efforts and dedications I can be this school “Javier” to learn and strengthen my knowledge, which I can share with my colleagues in this monograph; To the teachers because they are there day by day and to share their knowledge so that we are good people, and we can move forward despite the walls that exist in this society.

## SUMMARY

Sports have a lot of benefits that goes from Lower risk of early death to increasing the auto esteem has the ability to help develop physical skills, exercise, socialize, have fun, learn to play as part of a team, learn to play clean and improve self-esteem. Also if you don't do sports at all Hypertension, diabetes and metabolic syndrome is going to affect you, also you are becoming a couch potato and life is going to be shorter to you

We are living in a society where teenagers tend easily to insane habits (smoking, drinking alcohol, drugs ...). The problem of snuff, drugs, alcohol in adolescents should be attacked and one of the most effective solutions is to establish healthy habits in the child such as physical activity, which serve as a protective factor.

Sports promote teamwork and problem-solving skills striving for a common goal with a group of players. They are an entertainment both for those who do it and for those who see it. Each sport has its peculiarities that involve the population and make them choose which one to practice.



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## INTRODUCTION

This monograph work is about Sports or physical activity **How can it affect teenagers, adults physically and psychologically.** Sports play an important role in our society, and in our lives, they are fundamental for the support of a better quality of life for people.

Normally, young people are physically more active than adults since a healthy child, interested in physical activity, is always on the move. However, in adults it is also vital to perform some physical activity to stay healthy physically and psychologically.

There are a lot of investigations about sports, even in the university of medicine explain everything, but one research called *"Sports a new way of life"* inspires me to do this monograph, because I want to get a better knowledge of sports a physical activity that I do every day since I was a kid.

This monograph has 3 chapters, every chapter have a different topic but have the global objective, explain to people more of sports, all the anatomy, benefits, consequences in the physical and psychological way.

The first chapter is the introduction of sports, the general meaning how is also call, why Sports are highly recommended by different professionals of health, which are their consequence and benefits that it transports in the organism. This chapter is going to explain this for us.

The second is about changes in the human body for practicing sports, in the physical, and in the psychological and emotional way. The human body has an incredible capacity to experience New things, especially about exercises. In only a few week Time of exercises all your body can change and you don't even know about it.

The third chapter is an interview with two doctors in the field of sport in which they will contribute their knowledge to understand much better the anatomy of human body, all the changes it could happen and all the movements the body does.

The practice of sports greatly benefits people and even society, as it reduces the likelihood of the appearance of diseases, contributes to physical and mental formation, as well as developing and improving such training.



## CHAPTER I INTRODUCTION OF SPORTS

### 1.1 What are sports?

According to “la Real Academia Española” sports is a physical activity that could be a game or a competition which practices the needs of training and rules. We have to go back approximately to 4000 B.C for proving evidences of the classic sports, exercises even gymnastics.

Some people get confused with the terms sport and physical activity. The difference between these two words is the competitive form of the sport and in the case of physical activity is just for personal playtime and satisfaction.

Physical activity is defined as body movement produced by the contraction of the muscles that increases energy above the normal level. Categories of physical activity include occupational, household, leisure time, and transportation.

Physical fitness is the ability to do daily tasks with alertness and vigor, with ample energy. Doing physical fitness helps to: cardiorespiratory endurance, skeletal muscular endurance, skeletal muscular strength, skeletal muscular power, speed, flexibility, agility, balance and reaction time.

The term "exercise" is a form of physical activity that is planned, structured, repetitive, and with a main objective, the maintenance or the improvement of components in physical fitness.

## **1.2 Benefits of practicing sports**

Sports are highly recommended by different professionals of health as consequence of the benefits that it transports in the organism. You get better academically. Sports require memorization, repetition and learning, skillsets that are directly relevant to class work.

Sports promote teamwork and problem-solving skills striving for a common goal with a group of players. Practicing a physical activity is very beneficial for prevention, development and rehabilitation, favorably impacts in multiple health and systems outcomes of health, also in a physical way, the discipline and taking decisions in the daily life, helps to establish a mental well-being, also improving the autonomy individually, the memory, and promoting the optimism or the euphoria.

Doing exercise in midlife is associate with living more time and with a decreased risk of multiple chronic conditions such as:

1. Lower risk of early death
2. Lower risk of coronary heart disease
3. Lower risk of stroke
4. Lower risk of high blood pressure
5. Lower risk of adverse blood lipid profile



6. Lower risk of type 2 diabetes
7. Lower risk of metabolic syndrome
8. Lower risk of colon cancer
9. Lower risk of breast cancer
10. Prevention of weight gain
11. Weight loss, particularly when combined with reduced calorie intake
12. Improved cardiorespiratory and muscular fitness
13. Prevention of falls
14. Reduced depression
15. Better cognitive function (for older adults)
16. Better functional health (for older adults)
17. Reduced abdominal obesity
18. Lower risk of hip fracture
19. Lower risk of lung cancer
20. Lower risk of endometrial cancer
21. Weight maintenance after weight loss
22. Increased bone density
23. Improved sleep quality Helps older adults become stronger and better able to move about without falling
24. It improves the form and physical resistance.
25. It improves the resistance to the insulin.
26. It helps to support the corporal weight.
27. It improves the flexibility and the mobility of the joints.
28. It reduces the sensation of fatigue.
29. Promotes psychological wellbeing

And in a physiological way it helps by:

1. Increasing the auto esteem.

2. Improving the auto image.
3. Reducing the social isolation.
4. Reducing the tension and the stress.
5. Reducing the level of depression.
6. Helping yourself relax.
7. Increasing the state of alert.
8. Diminishing the number of accidents at work.
9. Minor degree of aggressiveness, ire, distress
10. Increasing the general well-being.

### **1.3 Disadvantage of practicing sports**

The benefits of physical activity far outweigh the possible associated risks in the majority of patients. But there are people that do not do sports at all, and in the disadvantages of not playing sports, we can indicate: [GT1]

1. It can create diseases as obesity
2. It decrease the elasticity and mobility articulate, muscular hypotrophies, decrease of the skill and capacity of reaction.
3. Varicose veins are caused by the accumulation of blood in one specific spot due to the lack of practicing sports.
4. Hypertension, diabetes and metabolic syndrome



A vast amount of people believes that doing exercises is good for your health and they are not entirely wrong. However, they have no knowledge that practicing any sport can cause injuries, physical wear, fatigue, fractures and in the most extreme cases your life. Also, a negative aspect about doing sports is the time you invest on it; time which could be used on other more important things.

There are a lot of characteristics that help us rule out sports that can be dangerous: the asymmetric ones, such as tennis; those of direct contact, such as professional boxing, taekwondo, jiu-jitsu-MMA or those that have a high risk of falling, such as skating, surf, skydiving. The practice of sports is related as one of the main reasons of osteoarthritis, especially in the hip and knee, due to the overexertion to which it is subjected to these joints, some other diseases that can cause the practice of sports without precaution are: scoliosis, tendinitis, and meniscal tear.

If you practice it you can create rivalry with your opponents, this in some point is very good because it helps you to strive and give more than you can. However, let's not forget that people are spiteful and immature when it comes to competition. You can become aggressive in a game and create unnecessary fights or riots. These aggressions can be physical as well as psychologically. Many times Parents get too involve or emotional when their children are playing and doing sports, they make comments that irritate the players or their parents and provoke these situations.



Practicing some sport also leads some athletes to use steroids to improve their physical appearance and give more strength. Using these pills in sports is illegal, and destroys your body.

Unfortunately, there are some athletes who engage in the use of steroids to improve their physical appearance and enhance their strength. Consuming these pills is illegal and can cause severe damages as:

1. Musculoskeletal injury
2. Arrhythmia
3. Sudden cardiac death
4. Myocardial infarction
5. Rhabdomyolysis
6. Bronchoconstriction
7. Hyperthermia
8. Hypothermia
9. Dehydration

Intense exercise can lead to amenorrhea and infertility, particularly in women with low body weight. The "female athlete triad" consists of eating disorders, amenorrhea, and osteoporosis. This is commonly seen in younger individuals, especially those who exercise regularly and intensely.

## **CHAPTER II: CHANGES IN THE HUMAN BODY**

### **2.1 Physical changes.**

In the beginning when we begin an exercise program by measuring the intensity the effects are quicker, but as the body goes under an adaptation period during the training, sensations and general well-being are more lasting and begins to be a part of our habitual mood state, it means that, the body adapts to its hormonal levels. The main key is for the intensity to be appropriate with a proper progression because what today might be intensive, it will no longer be in two weeks and we should not increase the level. (Merchan, 2015)

The human body has an incredible capacity to experience New things, especially about exercises. In only a week Time of exercises, after retaking the exercise routine in a long while, the body will begin to indicate couple of changes. According to the type of exercise that we commit ourselves to do, our body will go through a series of physiological events. These events explain the great potential and benefits, Or others not so pleasant effects, which you feel when finishing your training.

#### **2.1.1 Skin**

The heat generated by exercising and causing the body temperature to rise causes your blood vessels to dilate, increasing the fluidity of blood in your skin. The evaporation of sweat through the skin is also something that the body uses to regulate its temperature. For



this reason the skin of a person who exercises will look brighter and shinier if it stays well hydrated.

### **2.1.2 Kidneys**

The activities of filtering the blood in the kidneys are positively affected with exercise, the level of protein that filters in the urine changes and the need for water reabsorption is modified to have the body hydrated.

### **2.1.3 Brain**

The increase of blood fluid Due to exercisesMost definitely benefits the brain. With the increase of blood fluid the brain cells wake up, allowing a high state of alertness and focus during and after exercise. The increase in oxygen that reaches the brain promotes the growth of new brain cells. During exercise the brain secretes chemicals called endorphins, adrenaline, serotonin and dopamine. These chemists, who work together to raise your mood and give you an "Up," are what we call "Runner's high."

### **2.1.4 Stomach and intestines**

While you exercise your body is busy pumping extra blood to feed the muscles that are exercising. This results in the other systems of the body having less priority at that time. If the digestive system does not have the proper attention you need then you will know that if you eat something heavy shortly before training or at that time, it will not digest well. Eating the right foods before exercising will not cause any of these problems.

### **2.1.5 Lungs**

With the intention of increasing the capacity of oxygen that the body needs to exercise breathing becomes fast and deep. When the pulsations increase, the muscles around the lungs work to their maximum capacity until you reach a maximum of oxygen consumption. The more trained or fit you are, the higher your oxygen consumption will be.

### **2.1.6 Diaphragm**

This muscle separates the chest from the abdomen; it goes up and down with each breath. A strong breath during exercise can tire the diaphragm and cause spasms. With deep breathing and while you stretch you can eliminate this discomfort that you gave during exercise. Good posture acquired with disciplines such as yoga or Pilates also helps to make sure that spasms do not occur.

### **2.1.7 Heart**

The pulsations increase during the exercise with the intention of pumping more blood into the body. With aerobic exercise practiced on a regular basis you can strengthen the cardiovascular system and make it more efficient. You also have the potential to decrease your heart rate and blood pressure with exercise.

### **2.1.8 Muscles**

When we do weights or some other type of exercise the energy of muscular contraction comes from the glucose that has been stored in the body as glycogen. In addition, glucose can be used for a rapid energy need and when the supply is depleted more oxygen is needed



to create ATP (adenosine triphosphate) as energy. This oxygen is received by the pumping of blood in tired muscles.

## **2.2 Psychological changes.**

“The psychology intervention seeks the balance between feelings, thoughts and actions during the learning and execution of motor skills. The athlete during his preparation is subjected to various situations to reach his maximum development”. (Charchabal, 2005).

- Pain and fatigue: You know what they say: "If it does not hurt, it's not worth it" Exercising requires a little muscle damage, which causes pain and inflammation. Soon after the muscle is repaired, rebuilds and becomes harder than before. And do not worry, that little pain and tiredness only lasts 2 to 3 days (or less) and are the first indicator of good results.

- You will find clarity: A solid workout increases blood circulation and the amount of oxygen the brain receives. This means that your brain can function better and be alert. That's why, a cardio routine before an exam or a job interview, is the best you can do.

- Your skin will shine: Good blood circulation allows the body to eliminate harmful toxins, thus making the skin have an adorable glow. Not to mention that sweat opens the pores, so it fights acne and other skin diseases.

- Life is easier: Exercising teaches your body to use oxygen better. Therefore, the heart rate decreases, heart health improves and other tasks that were previously complicated become simpler. Why do you think you can do more squats every day?



- You will make healthier choices: You will notice that it is easier for you to refuse a chocolate donut for a salad. And is that exercise is the ultimate expression of self-love, which could improve your lifestyle in ALL the senses! If you exercise, you will give your body the respect it deserves and, therefore, help you make better and healthier decisions.

- You will have sweet dreams: If you ever had trouble sleeping, this was probably not your first idea, but it is a very good one. Exercising in the mornings will help you sleep better at night to recover. And it's not because your body will be more tired (though it does), but because you will feel incredibly satisfied.

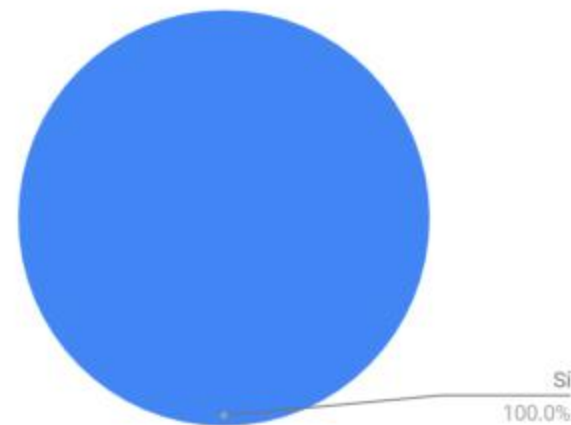
### CHAPTER III: SURVEY

A survey was done to 30 colleagues from 3rd year of high school regarding physical and psychological changes when practicing sports sports, from the results we could make a general probe of the answers, and that's what I'm going to explain below

Figura 1: Resultados academicos

Fuente: Formularios google

Autor: Israel Rosero



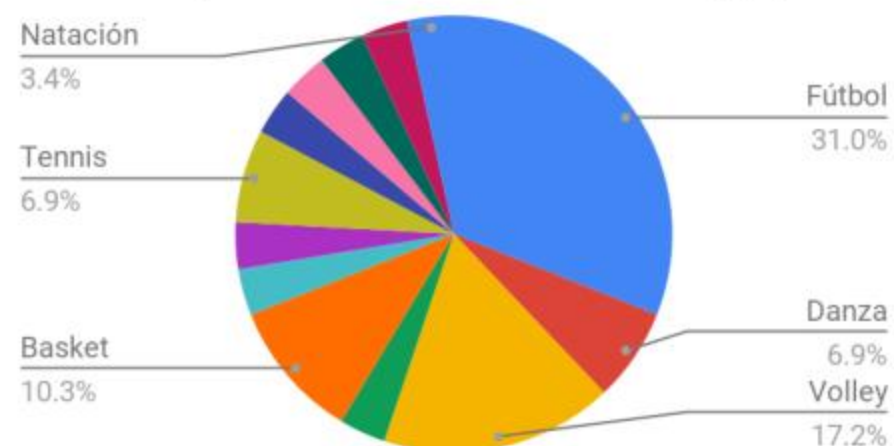
In the first question we can realize that the 30 people surveyed have practiced sports at least once in their life. With the second question we could make a general probe of the most practiced sports by people of our age they are 10 sports, 33.3% of the respondents chose soccer, being the sport of greater choice on their part, followed by Volley (16.7%), basketball (10.3%), tennis (10%), dance (6.9%), Ecuavolley (3.3%), running (3.3%), swimming (3.3%), kick boxing (3.3%) and baseball (3.3) %)

Figura 2: Resultados academicos

Fuente: Formularios google

Autor: Israel Rosero

#### 2. Si respondiste sí a la anterior ¿Qué



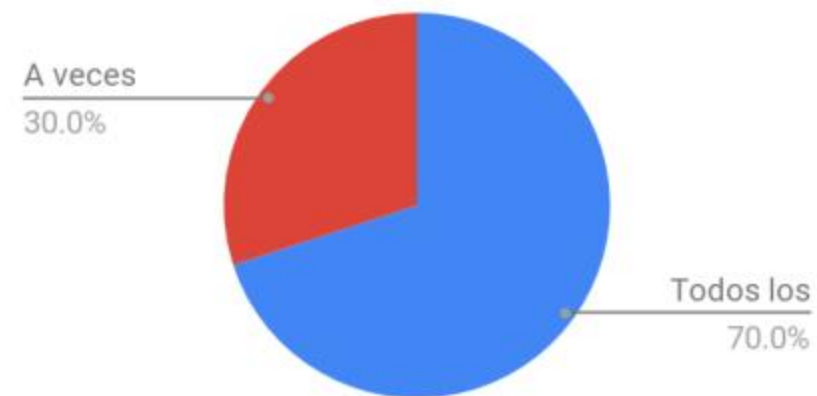
How often do you practice or practiced sports? 70% of the respondents practice or practiced sports every day, and also have knowledge of the benefits it has on their physical and mental health and 30% practiced frequently.

Figura 3: Resultados academicos

Fuente: Formularios google

Autor: Israel Rosero

Recuento de 3. ¿Con qué



This question raised the psychological feelings of the human being, which the respondents had to answer if they felt good about practicing sports or physical activities, 96.7% answered yes, then I could realize that everything has to do with how you feel to do something, but 3.3% said no.

Figura 4: Resultados academicos

Fuente: Formularios google

Autor: Israel Rosero

Recuento de 4. ¿ El deporte te





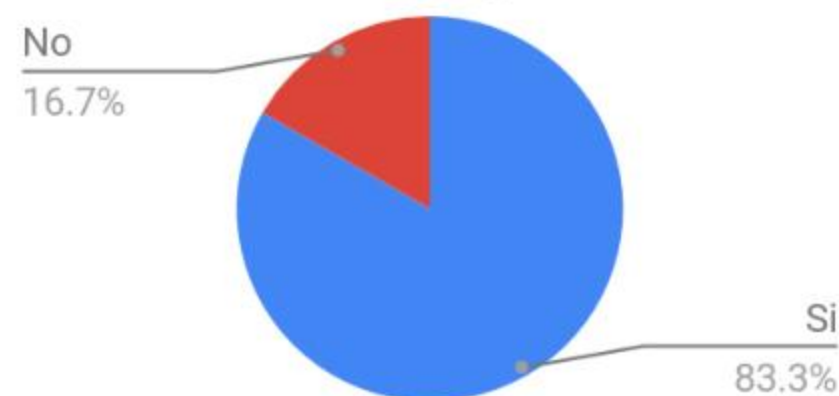
Does sports produces changes in the body of the human being? 83.3% of the respondents answered that they perceived physical changes when they did exercises, in certain answers they stated the following: " it made me stronger "," I lost weight ", or " toned my muscles ", but 16.7% answered that they did not see any change after practicing sports or physical activity.

Figura 5: Resultados academicos

Fuente: Formularios google

Autor: Israel Rosero

Recuento de 5. ¿Has vistos



The Influence of sport in our life, the changes of mentality that can causes to people, probe this question, we can see answers in which the polls shows: "they look better in the mirror "," sports gives them more confidence in themselves "," physical activity takes away stress and makes them feel happy ".

The last one is a little bit personal because, it deals with a little knowledge and maybe some experience, it is about the sports that most influence the change of the body, some responders said: Soccer enlarges the legs and widens the calves, swimming makes your back grow , volley makes your hand grows, tennis makes your arms longer, basket makes you be taller and legs get bigger but there was an answer that I liked a lot and it was "All sports every one of them focuses on different sections of the body".

## CONCLUSIONS

At the end of this monographic work it is concluded that:

- Practicing sports and physical activity are not the same, even that both bring great benefits to health. One of the benefits is through constant practice gives a prosperous life, physical, help in the cardiac aspect and psychologically makes us feel good by the progress we make.
- The human body by the constant practice of sport undergoes physical changes, some of them very remarkable and others not so much, some are internal and others external that can be seen at a glance. An example is the swimmers, that the constant practice of their sport, makes the back widens, or the soccer players that develop more muscular mass in the thighs
- In an analysis by means of surveys made to students of class 58 in the school, Javier was able to deduce that all of them have done sport throughout their lives and at the same time they feel good doing it improving their confidence and their physique.

## RECOMMENDATIONS

At the end of this work it is recommended that:

- People should do more exercises, for the health benefits it brings, improves blood circulation, decreases the risks of heart disease, and many more benefits.
- Sports promote a healthy life and high self-esteem. If we can use the self-esteem of a person who does sports to help people who do not feel comfortable with their body because they say they are very fat, we would achieve success.
- Society in general should be healthy and practice sports three times a week, because that keeps us healthy, happy and alive



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