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ORIGINAL RESEARCH

THE BENEFICIAL EFFECTS OF SPORT ON ANXIETY AND DEPRESSION

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Abstract

It is well established that exercise increases energy levels and mood state. At least 20 published studies, indicate a link between physical activity and signs of prosperity. There is much medical evidence showing the beneficial effects of exercise on cardiovascular disease, obesity and diabetes. Currently there is growing interest to see if physical activity can also improve symptoms of mental illness

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Drill motor activity produces beneficial effects on health

It is well established that exercise increases energy levels and mood state .At least 20 published studies, indicate a link between physical activity and signs of prosperity. There is much medical evidence showing the beneficial effects of exercise on cardiovascular disease, obesity and diabetes Currently there is growing interest to see if physical activity can also improve symptoms of mental illness. A large study conducted in England showed that 20% of women and 14% of men, suffered from mental problems at some point in their lives. In industrialised countries the most common diagnosis is depression, which affects approximately 50-10% of the population. The care of these patients accounts for 17% of total costs of the health service: a very large proportion. There is therefore a great interest in identifying alternative methods of treatment and prevention, and physical activity is one of the options considered. There is evidence supporting the idea that those who make or are fit and active, are less likely to develop depression. In a study conducted over many decades, has seen a connection between the level of activity and the risk of falling into a depression. People who place intense levels of physical activity reduced their risk of depression by about 30%, and those who had a medium-high level of activity reduced it by 20% compared to those with low levels of activity. The aerobics and bodybuilding have been shown to have good effects for the treatment of depression, at least on par with the effects produced by psychotherapy. Moreover, this type of training, showed improved responsiveness and understanding in the elderly.

Active regular exercise appears to prevent attacks of depression and anxiety, which is why many district councils have begun discussion on the possibility of allowing doctors to prescribe exercise to treat depression or anxiety.

Anxiety and agitation When we studied the effects that physical activity has on anxiety and agitation, were noted in many different influences that you could see that physical activity appears to have profound effects. In studies focused aerobic activity, such as race, we obtained a moderate reduction of anxiety directly after the training session. The same results were also found in more permanent conditions of anxiety, such as conditions of anxiety on personality.

Positive effects on comprehension There is great interest in identifying ways to maintain mental capacity in the

elderly, especially with regard to memory, reaction time and intellectual agility. When you examine the studies that are available, you may notice that older people who were and still are physically active have a better quality of life with regard to all abilities, than their peers who are not in shape. Further studies are necessary to obtain a more precise explanation.

Mechanisms

Since the early 1990s there was great interest by the media for "personal body morphine, endorphins, the body releases during exercise, and a feeling of wellness. Unfortunately, few systematic studies have been conducted, and those agreements have not established any direct relationship between the level of endorphins and the comfort level. Last year, experts in the field have focused their attention on the relationship between physical activity and serotonin produced by the brain. Serotonin is a substance signal the nervous system, which plays an important role in mental state. The pharmaceutical preparations based their anti-depressants, among others, precisely on this substance. Studies have shown that direct the synthesis of serotonin in the brain increases as acute response to physical activity, but is still too early to say how far and how can improve the mental state. Another theory is based on the idea that heat produces muscle relaxation.

During exercise the body temperature increases, which should produce greater relaxation and, therefore, well-being. The few systematic studies have however not been carried out to confirm this theory. There are also more general theories, for example related to the assumption that the increase in blood flow in the brain may be a positive factor, but again the studies are insufficient to draw conclusions. There are now scientific evidence sufficient to support the idea that physical activity has significant effects on memory capacity, mental status, conditions and depressive or anxious. Physical activity in different forms so you probably will become an important weapon to prevent and treat these conditions. Several county councils have started to organise the so-called "training recipe", for many specific diseases, and a large percentage of problems that require care concern, probably, even mental illness.

In a study conducted at the University of Wisconsin (USA), participants were tested for different treatments for depression, but the only effective one turned out to be the center for sport. We must add that this remedy is known for a long time since since 1896, Dr. Young. O. Fache argued in the thesis of Medicine entitled: "Of neurasthenia and its treatment with physical exercises" (Thesis Medicine, Lyon, 1896, No 1169). The lack of activity can be a sign of depression, and herald the contrary, the sport is linked to good mental health. A huge statistical work, carried out on 20,000 subjects over a period of 20 years, validated the findings of common sense. American researchers of the Laboratory of Human Sociology, Berkeley, have attempted to study in a large segment of the population, followed for 20 years and questioned three different occasions, if a weak physical activity can be regarded as a predictor of depression. There is an association in a population not depressed, including physical activity and risk of depression? A relationship between changes of activity and risk of depression? You can predict depression from the physical state, social isolation, socio-economic status?

In 1965, 8,023 children around 20 years, were selected in Alameda County in California to answer a questionnaire regarding their lifestyle, behavior (including sleep disorders research, nutrition, mood) and physical health (a measure of physical activity, number of hours each week). Ten years later, in 1974, the same people (ie 6235, taking into account deaths and unavailability) were interviewed again on the same subject.

Finally, in 1983, half of this group was again contacted and 1,799 persons agreed to be subjected to a lengthy interview. Statistical calculations generated from this study show a clear relationship between depression and physical activity. In 1965, those who practiced a mild sport, was given a weighting of "depression risk" of 4.2. The coefficient in 1974 for the same subjects, was reduced to 2.48 for men and 2.88 for women: a low risk, but still significant for men who had moderate activity.

Conversely, the fact that it incurred a very intense sport in 1965 and switching to a lower level of activity in 1974, highlighted a risk factor for depression in 1983. "In a depressed population, men and women engaged in physical activity very weak, are at higher risk of depression than those who have a high level of physical activity," explained the study's authors. "A ' association persists even when account is taken of other factors such as health status or socioeconomic level. But there is no real difference between those engaged in physical activity important and those who perform a moderate. "

It also shows that the inactive in 1965, whose physical activity increased until 1974, did not show risk of depression in 1983, reaching from the statistical point of view, those who maintained over the years, constantly active. Since there is a high risk of depression compared with a year of poverty, it could be improved with an increase of activity. "We conclude that exercise exerts a beneficial effect on mental health" stress the authors of the study. This mechanism is not yet clear, since any benefits of exercise remain to be evaluated on different forms of depression and understand how physical activity can affect the mental state. With a view to prevent depression there can be no doubt consider physical activity as a possible strategy" (American Journal of Epidemiology, 1991, 134, n. 2).

Sport can help to sleep

To effectively combat insomnia, sports medicine is one of the least known and yet more secure. In the evening, good care of movement, relaxes the muscles of the body that tend to harden after the stressful activity of the day. This activity leaves a pleasant feeling, eliminating the small evils that prevent a deep and restorative sleep. Stanford University researchers published in December 1996, the results of their work (which appears in JAMA) on sleep quality, particularly on that of insomniacs. About forty people, aged between 50 and 70 years, who complained of sleep disorders, underwent an exercise program appropriate in relation to their fitness (aerobics for the elderly, walking and cycling for others) and the set did not exceed three hours per week. The results were up to the hopes of the first "cure" their nights did not exceed the 4-6 hours and sleep latency ranged from 25 to 30 minutes, while the sixth month of activities have gained an average of 45 minutes stages of sleep and falling asleep decreased by more than a quarter of an hour.

Sport reduces the voltage

Jogging causes, according to the distance and frequency of training, a reduction in blood pressure that lasts from 4 to 10 hours after the end of the effort. The race walk results in a generalized vasodilation of blood vessels, including muscle and skin and causes a lowering of peripheral resistance and the light was greater, and it reduced the resistance to flow of blood.

Another hypothesis was recently advanced by Dr. F. Messerli Nouvelle-Orleans in the State of Mississippi: a sufficiently intense and prolonged exercise is often accompanied by a loss of fluid and electrolyte (water and minerals) and it seems that the practice daily jogging, involve a flight with diuretic effect of sodium, equivalent daily intake of a diuretic.

No study 1.

A survey conducted John Radcliffe Hospital in Oxford and published in The Lancet (1991) under the direction of VK Somers (Iowa City, USA) shows that prolonged intensive training has reduced the systolic and 9 mmHg distolica of 7 mm Hg in subjects who had hypertension limit. Among non-pharmacological therapeutic means, such as weight control or low-salt regime, exercise is the subject of studies to date, has only feed the controversy.

In order to give a more precise answer, 16 volunteers (14 men and 4 women) meet the profile of hypertensive limit, you are provided to assess the effects of physical training for six months and "disallenamento" on baroreflex sensitivity and ambulatory pressure and sleep. With "high blood pressure limit" was meant a systolic blood pressure above 140 mmHg and diastolic of 90 mmHg. Cardiovascular risk factors (alcohol, tobacco) and drug treatment less than six months, were the main criteria for inclusion. For 8 of these patients underwent a physical regimen worthy of the Royal Canadian Air Force (intensive jogging and aerobics 3-4 times per week), the measurements were performed before and after six months of training.

For other 8 patients who benefited from the same physical activities, measures were taken after four months of training dall'arresto. This case has had the effect of lowering blood pressure to rest more than 9 mmHg for systolic, and almost 7 mmHg diastolic. Ambulatory pressures were lower than 5 and 8 mmHg respectively. This gain may have a cardio-protective effect. It also increases the variability of the RR space index (heart rate). Instead, during sleep, if this space is stretched, the authors report no reduction in blood pressure. They then concluded that, despite the modest reduction in stress, it may be sufficient to raise the limits of normal blood pressure for which pharmacological treatment is discussed.

No study 2.

Regular physical activity leads to a decrease of 10 mmHg at a moderate hypertension (140-180/90-105). Running, walking, cycling or exercising, can lower both the systolic and diastolic numbers, the magazine says the 'American College of Sports Medicine in February 1996 with. Practice is apparently more effective than moderate intense activity. This is good news, because in most cases are elderly hypertensive. The predicted rate is 3 to 5 times per week, the meetings will last from 20 to 60 minutes and the intensity should remain between 50 and 75% of maximum heart rate.

The association "muscles full - empty head" seems no longer a correlation. Indeed, several studies have shown that endurance sports, such as race walking, cycling or cross country, when practiced in a reasonable manner, facilitate the transport of oxygen from the lungs to the deepest areas of the body and excite so effectively control the brain.

The study

Shepard et al (1980) have studied the influence of a physical activity program for an hour a day, integrated curriculum on the physical and intellectual development in children of primary school. This work has

developed over a period of seven years (1971-1977) at the University of the city of Trois-Rivieres in the State of Quebec (Canada). 546 children of both sexes, aged between 6 and 12 years, from an urban environment (Trois-Rivières) and one rural (Pont-Rouge), were recruited between 1969 and 1971. Were formed two groups. One group carried out the physical activity integrated into the regular schooling, ie 45 minutes per week: mini-basketball, handball, rhythmic dance, the floor exercises. A second group has practiced physical activities for five hours a week. The proposed range was much broader: athletics, sprinting, relay, mini-basketball, handball, hockey, gym, gymnastic ground, introduction to swimming, open air activities (cycling), figure skating, etc. This study shows that, contrary to widespread opinion, the replacement of one hour daily during an hour of physical activity does not lead to any prejudice in school performance. It was also found that in certain subjects such as mathematics, the performance of children in the experimental group is higher than the control group. Besides all disciplines are influenced positively, despite the reduction in the number of teaching hours. Finally, the state of health of two groups - compared to a year - proves to be identical and it seems clear that an integrated program of physical activities, not much influence the rate of frequency of current childhood diseases (Adapted from: H. Lavalée, Shepard RJ et al.: *Activité physique, croissance et développement*, in "The sport and the Child." - Montpellier, ed. Euromed, 1980, p. 483, pp. 117-140).

Sport stimulates the imagination

The spirit, like the body, draws benefits from physical activity supported: This is the conclusion of a series of tests conducted by the team of American Baylor College of Medicine. Forty-eight veteran athletes, especially practicing the foot race, revealed a condition equivalent to that of their colleagues 20 years, and in good shape, but also greater intelligence, imagination, independence and loyalty than the average population. The qualities of independence and imagination in sports are not innate, but increases proportionally with the level of practice. Even the less gifted, but subject to frequent, are not excluded from this bonus because the imagination grows also depends on the distance traveled is greater than that of marathon runners than in the middle distance, and the latter exceeds that of sprinter.

Sport can help to reflect

The regular practice of physical exercise, particularly resistance activity like jogging, cycling, cross country, seem to effectively develop reasoning skills. Experience has shown that following a training program for 4 months for 3 weekly sessions, objects of mature age could achieve better results in a series of mathematical and logical reasoning tests than before the study.

Sport allows you to find the reason

Sport is excellent for mental health. In an article in early 900, from the magazine "La Vie au Grand Air" reads: "In Germany you are testing a treatment for the insane. Some of them learned to ride a bicycle and found a significant improvement of their state after some time. The healing of mental illness is, as we see a long way through sport." (La Vie au Grand Air, No. 708, 04/13/1912).

The study

People in loss of autonomy are often abandoned only to medical treatment, excluding any outdoor activity. The French federation of physical education and exercise voluntary, it is interested in this audience and gave special training to its entertainers. One of them, Mrs. Biurrarena, ul presented the budget for six months of activity during the Day of the Week in sports medicine doctor in Paris. Twenty-four of 201 elderly people, from 5 nursing homes, have followed the course of voluntary exercise (GV) for six months. Among those excluded from the course, 19 men and 47 women of 78 years to 85 years, agreed to carry out simple tests. The first test was to throw a tennis ball over his eyes with his right hand, left hand or both hands, the second delivery, and to take it. The percentage of successful trials reflects the lateralization and eye-hand coordination. The second test explored the motor common: a subject in the center of a circle the ball was to exchange with other participants arranged around him. Participants were also proposed a questionnaire to get an idea on the psychological state of subjects. Seven questions related to mood, while 5 others explored the relationships with the outside world (the behavior to other retirees, nursing staff and the network of movement in the institution). The results showed a very marked improvement of strength and precision of gesture: at the beginning of the study the delivery of launch (right hand, left hand) was not observed by half of the subjects, while six months later 95% of them committed more errors. Initially the act was technically correct in only 20% of cases, compared to 40% at the end of the period. One person was able to make 10 consecutive passes against the 25 six months later. Responses to the questionnaire are equally interesting. At the beginning of the study showed a latent depression, while at the end of the program scores dropped significantly, with improved esteem and relational behavior. The perimeter of movement also improved and turned out of their room they saw people who previously remained confined there. This improvement is undoubtedly multifactorial: the qualities proper to the soul, however, who knew how to look for older people with kindness, in the program, contributed significantly to the success of the

proposed activity. The fact remains that the program of physical activity also contributes to improved capacity of the individual, both physically and mentally. It is therefore desirable to develop these projects for the elderly in institutions responsible for forming the animators for this specific audience, as the case supports the GV (Panorama Med., 03/10/1994). Diversabilita'nell'attivitã the 'motor sport

Theories of child development, particularly those of Bruner and Piaget argue that the formation of knowledge in child takes place in two stages: the first concerns the construction of perceptual and motor schemas, the second allows you to integrate these patterns and concept formation.

In the first phase, known as exploratory, the child recognises the physical properties of objects (the formation of perceptual categories-visual), skills that allows him to formulate formal hypotheses about the objects themselves (ie: the glass is cylindrical). At a later stage, the perceptual patterns will be integrated with the patterns of action, allowing the child to acquire the concepts, identify the characteristics of objects and the functional core of all objects belonging to the same category (glass, cup, works that are for drinking).

The ability to manipulate and explore objects, to obtain information on the surrounding environment affects the formation of knowledge early in a child's life, it follows therefore that the intellectual operations originate from real actions and that the inferential processes (the basis of abstract knowledge) are tied when motor.

A milestone of psychological development is the organisation's identity, closely linked to the ability to perceive separate from the mother's body. Frequently it is the situations in which children with disabilities exhibit excessive dependence and intolerance to any form of separation from the mother, with whom they live a ratio of fusion-confusion, without being aware of its limitations. Through the experience of mobility, moreover, the individual builds his own subjective experience, the basis for the further development of the personality structure that is thanks to the conquest of full mastery of body and gesture of their actions.

As regards the family environment of the disabled person, it must be said that the family often tends to maintain the individual in a state of dependence, even replacing him in some situations, thereby discouraging autonomy and therefore the discovery of other potential of the subject, both physically and psychologically. The starter motor activity, for these children is thus a major role, including psychological development and the gradual conquest of autonomy. First, the sport generates the need to physically move away from the family unit, promoting physical separation from the mother first, second, in the pool area or in any other Member to such activities, the child will have the opportunity to interact with the outside world (instructor, peer group), together with their internal world, integrating the inability or clumsiness with the discovery of new opportunities that contribute to acceptance of self, as being imperfect.

Certainly the development of motor skills is related to the development of the brain, as can be seen in the early games of children who face the outside world, making him the object of their cognitive activity. When the child is outside the family context, meet peers who have their own energy and the same problems with them and is starting to live new experiences and emotional ties. It is the natural way to begin to break free from their parents and to find new realities outside the narrow sphere of the family. E 'with their peers, thanks to the play, the child may seek emotional dynamics similar to those families, restoring the same roles or, in most cases, differentiated searches by merging with and taking on a different role than what occurring in the family. For example, if a family there is an over-the older brother, the child, playing outside the family context, with its peers, can live the same experiences, both successful failure, thus balancing his sense of inferiority .

Spending time with peers is also a way to seize the behavior of adults to get used to the control of reality by learning to take responsibility and accept those moral rules and behavior that are the basis of proper socialization.

The game is therefore an important driver and used to perform many functions:

- Exploration: the child observes its environment and makes knowledge manipulating and touching the various objects;
- Acquisition of specific physical abilities: through games of movement and accuracy;
- Fortifying the body: in this case through the various physical game engines;
- Increased sense of security and self-esteem: fun-motor activities, games and social games of accuracy;
- Socialization: group games;
- Appropriation of social roles and sexual Adult Games symbolic and social play, where you establish the various roles different between males and females;
- Acquisition of logical skills: construction toys, imaginative and rules.

Analysing this small list can be seen that the recreational activity, often mistreated or relegated to a strictly competitive vision is not only correct, but especially crucial.

In a training process, such as that developed in the project Gocosport, the recreational activity is of, precisely, a key role.

In younger children or in patients with more severe delays, we can think for example, a series of games designed to develop individual skills and socialization. This second part can be addressed by organizing games

in pairs, where it should be sought cooperation required, but always new organizing situations, children will adopt joint actions.

With increasing age, the need to increase socialisation by identifying with peers. At this stage the games will be more complex and may involve the entire group. Will begin to make their appearance the "rules" that will be followed is difficult to change. This will create the teams, you also begin to highlight the competitive aspect, which is nothing but a more mature adult game. Example of the foregoing, it can be found in situations which are carried out in the gym or outdoors, where teams are formed to confront a group, with games at the same time as developing coordination skills essential for growth. In the game the child imitates the adult, but while avoiding adult responsibilities: when the child plays the boundaries between fantasy and reality are abolished, create imaginary situations facing and mastering, thus managing to endure and overcome the anxiety of real situations.

The sporting activities, especially athletic type, allows:

- Express in the form of ritualised aggression necessary for the disabled person to assert itself in a competitive environment, and therefore not really in favor;
- A comparison with their opponents, experiencing the possibility of engaging a fight and then compete to win within the rules,
- without thereby created, and then destruction of the violence;
- To accept defeat, teaching anger management and frustration resulting from not being overwhelmed, the defeat does not exist without victory, is the flip side, seen in this perspective it becomes a stimulus to progress in sport and in life, becoming more self-esteem;

Develop self-discipline, exercise, training, efforts to learn and improve the technical gesture, in fact, are not ends in themselves, but according to one goal: success in the race, the field of play and the fulfilling a schooling or employment, in everyday life.

The simultaneous participation of multiple motor and sensory experiences, but also cognitive and emotional, allowing individuals the opportunity to discover or rediscover values, motivations, purposes and goals.

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