

OLIMPIA. Revista de la Facultad de Cultura Física de la Universidad de Granma.  
Vol.13 No.41, octubre-diciembre 2016. ISSN: 1817-9088. RNPS: 2067. [olimpia@udg.co.cu](mailto:olimpia@udg.co.cu)

## INTERVENE PLAN FOR INCORPORATION ASTHMA CHILDRENS TO RECREATIVE ACTIVITIES ON COMMUNITATIVE (ORIGINAL)

Plan de intervención para la incorporación de niños(as) asmáticos a las actividades recreativas de la comunidad.

MSc. Luis Alberto Moreno-Hernández. Centro Universitario Municipal Aguada de Pasajeros, Cienfuegos. Cuba. [luiamoreno@ucf.edu.cu](mailto:luiamoreno@ucf.edu.cu)

MSc. Norma Suárez-Guzmán. Filial Municipal de Ciencias Médicas Aguada de Pasajeros, Cienfuegos. Cuba. [normasg@jagua.cfg.sld.cu](mailto:normasg@jagua.cfg.sld.cu)

MSc Nidia Álvarez-Bazán. Dirección Municipal del INDER Aguada de Pasajeros, Cienfuegos. Cuba

### ABSTRACT:

The investigation was carried out given the necessity to integrate to the recreational activities that are developed in the community to the asthmatic children of the Council Popular "Freedom" of the Diluted Municipality of Passengers. This plan was conceived after carrying out a diagnosis to determine the main necessities and these minor potentialities, you could verify with the initial application of the instruments the faulty participation of these children in the recreational activities physique in the community, for its development a study was made to a sample of 68 children of them 27 they are female and 41 males, in one period understood from November of 2013 until August of 2014. Their general objective is the implementation of an intervention plan sustained in the application of games to achieve a bigger incorporation of asthmatic children to the activities recreativas. Se they used methods of theoretical, empiric and mathematical level - statistical that when analyzing and to process the obtained results, it allowed to confirm the effectiveness of the intervention plan, when being increased the number of asthmatic children to the recreational activities physique and the active participation in the same ones, the parents refer to feel satisfied with the activities and it has diminished the frequency and severity of the crises.

**Key words:** intervention plan, recreational activities, bronchial asthma

### RESUMEN

La investigación se realizó ante la necesidad de integrar a las actividades recreativas que se desarrollan en la comunidad a los niños(as) asmáticos del Consejo Popular "Libertad" del Municipio Aguada de Pasajeros. Este plan fue concebido después de realizar un

diagnóstico para determinar las principales necesidades y potencialidades de estos menores. Se pudo constatar con la aplicación inicial de los instrumentos la deficiente participación de estos niños(as) a las actividades físico-recreativas en la comunidad. Para el desarrollo de la investigación se hizo un estudio a una muestra de 68 niños(as) de ellos 27 son hembras y 41 varones, en un período comprendido desde Noviembre de 2013 hasta Agosto de 2014. Su objetivo general fue la implementación de un plan de intervención sustentado en la aplicación de juegos para lograr una mayor incorporación de niños asmáticos a las actividades recreativas. Se utilizaron métodos de nivel teórico, empírico y matemático, al analizar y procesar los resultados obtenidos, permitió confirmar la efectividad del plan de intervención, al incrementarse el número de niños asmáticos a las actividades físico recreativas y la participación activa en las mismas, los padres refieren sentirse satisfechos con las actividades y ha disminuido la frecuencia y severidad de las crisis.

**Palabras claves:** plan de intervención, actividades recreativas, asma bronquial

## **INTRODUCTION**

Bronchial asthma has uninterruptedly occupied medical care since antiquity, (460-130 BC) was described by Hippocrates, Galen and Areteo of Cappadocia. Celso gave such name to the "lack of moderate air" that the soldiers presented when performing exercises. Since then and now, this respiratory condition has aroused the greatest interest in the world, although the absence of a precise definition of the disease is one of the major problems in the study and attention to the patients who suffer it ( Collective authors 2003)

The prevalence of bronchial asthma and morbidity is increasing worldwide, many countries have stated that more than 5% of their population suffer from some respiratory affectation, mainly bronchial asthma (Menéndez Díaz, 2005).

In the Cuban population, the prevalence is 8.2-8.5% in urban areas and 7.5% in rural areas, although values above the national average are observed in maritime areas and lower in mountainous areas (Abdo Rodríguez And Cué, 2000). Children who begin to suffer are not exempt from this disease, and sometimes, from the first months of life, they carry it for a lifetime, even limiting it to the good development of school life.

Asthma is one of the most frequent reasons why children are excluded from Physical Education classes and sports practices, representing the most common barrier to vigorous physical activities. Some authors argue that the lack of knowledge of the asthma-exercise relationship can make it difficult for asthmatics to practice sports, which would lead them

not only to a sedentary lifestyle but also to a poor quality of life (Callol Delgado, R. and AE Sánchez Ortiz, 2004).

It is important that asthma is well controlled to try to eliminate or minimize the number and intensity of seizures. The treatments available today, generally allow adequate control of asthmatic disease. (Torre Marco, P. 2001)

In all cases, the asthmatic should perform a careful preheating and gradual physical cooling upon completion. Training should be periodic and systematic at regular times. Exercise should be avoided immediately after a heavy meal, as well as in conditions that make it particularly risky.

When you start a physical activity for the first time, everyone tends to feel fatigue and choking sensation. In the asthmatic child who has not done sport before, these feelings are even stronger. Therefore, the adaptation of the child with asthma to sports activity should be very progressive, so that over time learn to distinguish between the feeling of normal choking by intense exercise, and the feeling of drowning by an asthma crisis. (National Asthma Program, Brochure, 2006 - 2007).

The immediate environment of the child (family, school, community) usually very soon detects the difficulties of an asthmatic child. According to the sociocultural environment and the means available to the family and the physician, the consequences of the disease can be overcome, that is, compensated. (Barrera U, Diana M and E. Benítez Martínez, 2002).

Physical recreational activities are a part of the child's life and represent very early, through play, an important element of social integration. It is in the field of sports where children are evaluated, learn to cooperate, have interpersonal relationships and in a good way, enjoy through movement. (Ministry of Education 2009).

Concern is therefore about how to offer well-being to children with limitations, specifically respiratory conditions, such as bronchial asthma. Exercise and play are necessary for all children, and they provide them with happy moments while teaching them how to prepare for adult life. The asthmatic child should not be an exception, and must perform physical exercise adequately (Fulleda Bandera, P. (2004).

The program that serves recreation in the community carries out different activities such as: recreational sports festivals, street plans, programs to play, competitions Inter popular sports district such as football, basketball, baseball, among others, where most The children, not being asthmatic children.

Despite the work carried out by recreation promoters in the Popular Freedom Council, the assistance and participation of asthmatic children to recreational activities is still a dissatisfaction that hinders the integration process.

The analysis of the instruments applied initially made it possible to differentiate that in the visits to recreational activities carried out in the council, the incorporation of asthmatic children is insufficient, they do not manage to be fully integrated, in the majority of the cases for fear of presenting asthma crisis and severity Of them, it was noted as a difficulty, that in the popular council does not take advantage of various recreational activities as a means of integrating asthmatic children into the community. This is what motivated the selection of this topic as a line of research, and the following question is presented as a scientific problem: How to achieve the incorporation of asthmatic children into recreational activities in the "Freedom" Popular Council of the Municipality Aguada de Pasajeros? Where it aims to: Evaluate a sustained intervention plan in the application of games to achieve a greater incorporation of asthmatic children to the recreational activities of the community.

**Importance of research:**

A community intervention plan based on the application of breathing exercises for asthmatic children, which favors the incorporation of these infants into recreational physical activities.

With the application of the same it has been verified that the frequency and severity of the crises has diminished, the active participation of these children has been achieved, they have lost the fear of the disease and the parents refer to being satisfied. The proposal of the community intervention plan for asthmatic children in recreational activities is an experience that is applied for the first time in the municipality Aguada de Passengers, starting from the causes that generate the little incorporation of these children to this type of activities.

### **Population and sample**

The plan of intervention for asthmatic schoolchildren was carried out from conceiving a system of physical and recreational activities and was applied in the People's Freedom Council of the Aguada Municipality of Passengers, with a total population of 7 131 inhabitants, of them 102 are asthmatic children, 39 females and 63 males. The sample for the investigation was made up of 68 children, including 27 females and 41 males who do not attend recreational activities, aged between 6 and 11 years. A non-probabilistic sample of an intentional nature was conceived due to the interest of the research. A descriptive study based on a pretest and posttest experiment was used. We took into account the use of the dependent variable, process of incorporation of asthmatic children into recreational activities. This was measured before and after manipulation of the independent variable. The magnitude of the change was then computed. Relevant inquiries were verified through surveys, interviews, as well as the application of theoretical and empirical methods that allowed us to arrive at the results of the work.

### **Procedure for the application of the instruments.**

Before starting the application of the instruments, a letter of consent was drawn up for parents, to know their willingness to be part of the research, and for their children to be an important part of it.

The evaluation instruments were applied individually to the mother / father who was at the time of the visit, in several work sessions at home. The individual environment potentially provided a climate of security where the parents cooperated by exposing their experiences and their criteria according to the opinion of each of them. The children's surveys were applied at school (recess), fostering an environment of trust and cooperation. The interview with the physical culture technician was performed during a methodological preparation session. Participatory observation was carried out in 24 recreational activities to verify the degree of assistance and participation of asthmatic children in recreation.

### **Design of the Intervention Plan through games for asthmatic children.**

After analyzing the results obtained in the surveys and interviews, the task of designing the plan for the conditions existing in the popular council that was taken as object of study was carried out. These activities were elaborated according to the needs of the asthmatic children, the place where the study is carried out and also analyzed the SWAP Matrix.

**WEAKNESSES:**

- 1- Insufficient sports equipment for the accomplishment of the activities.
- 2- Little disclosure of activities.
- 3- Little recreational offer when planning activities.
- 4- Little involvement of asthmatic children.

**THREATS:**

- 1- Little creation of teaching aids.
- 2- There are few sports facilities.

**STRENGTHS:**

- 1- Universalization of Higher Education.
- 2- Sport, Recreation, Physical Education in function of Recreation.
- 3- Operation of the Coordinating Committee of the Popular Council.
- 4- Preparation of the staff that will work on the plan.

**OPPORTUNITIES:**

- 1- Look for alternatives that make it possible to increase the incorporation of asthmatic children into sports-recreational activities.
- 2- Offer activities that arouse interest and motivation in children with asthma.
- 3- Integration plan.

**General objectives of the plan:**

1. Achieve the incorporation of asthmatic children to recreation.
2. Keep active children with asthma.
3. Strengthen the muscles involved in breathing.
4. Teach correct breathing and relaxation techniques.
6. Control bronchial asthma attacks with therapeutic games.
7. Reduce crises.

**PLAN OVERVIEW:**

Methodological guidelines for the implementation of the games plan.

1. A suitable area must be chosen to carry out the activities. The room must be spacious and ventilated.
2. Wear light clothing and comfortable shoes.
3. To control the activities it is recommended:
  - \_ Measure the heart rate at rest, before starting the games.

\_ Measure the heart rate during the games.

\_ Measure the heart rate at the conclusion of the games.

4. If the child feels tired or tired, he should pause the activity.

5. Do not play games with fever, flu or other infection and illness or when in an asthma attack.

6. Any anomaly that occurs during the realization of the games should consult the specialist.

Frequency for the plan of physical-recreational actions.

**DURATION:** 25 weeks.

**WEEKLY FREQUENCY:** 3.

**DAYS:** Monday-Wednesday-Friday.

**SCHEDULE:** 4:00 p.m.

Plan of intervention of recreational physical activities for children diagnosed with bronchial asthma.

## **ACTIVITIES OF THE PLAN**

### **RESPIRATORY GAMES:**

#### Game # 1

Name: Transfer on the rope.

Objective: Strengthen the muscles involved in inspiration and exhalation.

Organization: In pairs start from standing position, hands clasped behind back.

Development: It is deeply inhaled and then completely expelled air through the mouth, trying to move the cardboard figure attached to a rope (1m) located near the child.

Materials: Cardboard figures, 1m rope

Rules: Proper posture should be maintained to avoid body deformities.

Bring the figure to the end of the rope.

Several expirations can be made.

Variants: Figures of different colors can be used to stimulate the sensations and perceptions of children.

#### Game # 2

Name: Strain the ball.

Objective: To favor a greater entrance and exit of air in the lungs.

Organization: It can be done between teams of two children or next to a relative, in the same place a ping - pong ball is placed on the table.

Development: It blows strong, making passes between both players, forcing them to use

the expiration, wins the one that places the ball inside a marked circle in the table.

Materials: Pin balls, table.

Rules: Hands should not be used at any time.

Variant: Change the ping - pong ball by a ball or a ball.

### Game # 3

Name: Blow the balloon.

Objective: To activate the general muscular tone and the sanguineous circulation, favoring a better oxygenation.

Organization: Starting from standing position, each child with a balloon in hand. (Latex gloves can be used if balloons are not available).

Development: To the voice of the professor inflate the balloon, trying to store the greater amount of air in the same in 30 seconds.

Materials: Balloons, latex gloves.

Rules: Maintain correct posture of the body, can be stimulated.

Variant: Determine the one that inflates more in a single attempt.

### Game # 4

Name: The crewman.

Objective: Strengthen the muscles involved in inspiration and exhalation.

Organization: It is played in pairs, placing a paper boat in a container with water.

Development: They will blow the boat they have in front of them, whoever is faster will win it on the other side of the vessel.

Materials: Paper of different sizes, container with water.

Rules: Do not use your hands.

Variant: Put weight to the boat as it supports.

Vary the size of the boats.

### Game # 5

Name: Avoid a fire.

Objective: To achieve a greater expulsion of air contained in the lungs.

Organization: It is played in pairs.

Development: A student with 10 matches, will turn them on and off blowing, the other student will take the time that takes to do it, the activity is broken, the less time consuming wins.

Materials: Portion of poly foam, matches.

Rules: you can not blow the match until it is not well lit.



Variant:

Game # 6

Name: Who blows the most?

Objective: Strengthen the muscles involved in inspiration and exhalation.

Organization: Students in prone position, with a pinball put in the mouth.

Development: The voice will blow to see who makes it higher.

Materials: Pin balls

Rules: You can not touch the ball with your hands.

Variant:

Game # 7

Name: Who puts out the candle?

Objective: To achieve a greater expulsion of air contained in the lungs.

Organization: The students formed in rows (teams), between 50 and 80 cm there will be a candle lit.

Development: To the voice of the teacher the first of each row, will blow trying to put out the candle, wins the team that more times manage to turn it off.

Materials: Chalk, candles, matches.

Rules: Only an expiration will be made.

Variant: The distance to which the candle is placed.

Game # 8

Name: Target shooting with blowgun

Objective: To achieve a greater expulsion of air contained in the lungs.

Organization: Teams will be formed (2-4 children)

Development: Each team will have an order to shoot the target, win the team that accumulates more points.

Materials: Dianas, blowpipes, darts, peas.

Rules: Each student pulls only once.

Variant:

Game # 9

Name: Who shoots farther with blowgun?

Objective: To achieve a greater expulsion of air contained in the lungs.

Organization: Teams will be formed (2-4 children)

Development: Each team will have an order to shoot the target, the team that gains the most distance will win, the next child will do it from the point where the previous shot

stopped.

Materials: Dianas, blowguns, darts, peas.

Rules: Each student pulls only once.

Variant:

Game # 10

Name: Voleo in pairs.

Objective: To activate the general muscular tone and the sanguineous circulation, favoring a better oxygenation.

Organization: Will be played in pairs.

Development: Each couple will try to keep the balloon floating without touching the earth.

Lose who drops the balloon.

Materials: Balloons.

Rules: You can not touch the balloon with your hands.

Variant: Playing in trios, quartets.

Game # 11

Name: Football blowing.

Objective: Strengthen the muscles involved in inspiration and exhalation.

Organization: Teams of two children will be formed, on a table or on the floor a soccer ground will be marked.

Development: Blowing the ball will try to score the opposite team.

Materials: Table, an area on the floor, ball pin or ball.

Rules: Do not touch the ball with your hands.

Variant: Individual play, trios, quartets, extend area according to number of participants.

Game # 12

Name: Blow and Win.

Objective: To achieve a greater expulsion of air contained in the lungs.

Organization: Individually, a ball on the streak on the floor, 1m from the wall.

Development: To the teacher's voice the children will blow the ball, the faster the ball hits the wall.

Materials: Chalk, beads.

Rules: Do not interfere with the actions of the partner.

Variant: Play by sex or all together.

Game # 13

Name: Drive the balloon to the box.

Objective: To favor a greater entrance and exit of air in the lungs.

Organization: A large cardboard box in the center of the play area, the children surrounding the box, all the same distance, with a balloon in hand.

Development: To the voice of the teacher will try to lead the balloon to the box making it float.

Materials: Large cardboard box, balloons.

Rules: If the balloon touches the floor should start from the exit.

Variant: Play it in pairs, trios or quartets.

#### Game # 14

Name: Who can submerge more?

Objective: To activate the general muscular tone and the sanguineous circulation, favoring a better oxygenation.

Organization: Children lying in rows.

Development: To the voice of the professor they will take a deep inspiration and will hold the air as much as they can.

Materials:

Rules:

Variant:

#### Game # 15

Name: Who blows for longer?

Objective: To favor a greater entrance and exit of air in the lungs.

Organization: Children sitting in rows.

Development: To the voice of the professor they take a deep breath and expel the air through the mouth, the one who expels more time expels air.

Materials:

Rules: Wait for the signal to blow.

Variant:

#### Game # 16

Name: To pass the line.

Objective: To favor a greater entrance and exit of air in the lungs.

Organization: Mark an area of 1m<sup>2</sup> on the floor, in the center a ball or pinball, 30 cm from the ball, on both sides a line.

Development: The teacher's voice will blow the ball trying to get the ball to pass the line.

Materials: Chalk, balls, pinball.

Rules: Wait for the start signal.

Variant: It can be played in pairs and trios.

Game # 17

Name: Visit all points.

Objective: To activate the general muscular tone and the sanguineous circulation, favoring a better oxygenation.

Organization: On a table or the floor, a group of points or small circles in a disorderly way will be marked.

Development: The child blowing will have to pass the ball or ball through all points or circles marked in the area.

Materials: Chalk, balls, pinball.

Rules: The ball must pass through all the marked points.

Variant: You can play by teams, giving shifts to each child.

Game # 18

Name: Game of passes.

Objective: Strengthen the muscles involved in inspiration and exhalation.

Organization: In pairs, on an area of 1m<sup>2</sup> marked on the floor.

Development: They will keep blowing the ball or pin ball, trying not to reach the final line of the area.

Materials: Chalk, balls, pinball.

Rules: You can not change positions.

Variant: Playing in quartets.

It is good to point out that, together with these games, exercises of the rehabilitation program for asthmatic patients can be incorporated, as well as the incorporation of other small ones into these activities, since they are not contraindicated for healthy children, quite the contrary.

### **Analysis of results**

#### **Comprehensive qualitative analysis of the results before and after applying the intervention plan.**

In making a comprehensive assessment of the results before the implementation of the intervention plan, children did not attend recreation or did so on very few occasions for fear of the occurrence of crises and the consequences of them, did not feel Satisfaction with the activities, they did not like the same ones, they proposed to be little varied, they were

too active, they did not respond to their interests and necessities, participating in games and recreational activities with the other children suffered asthma attacks frequently and in most Cases were severe.

Parents make a non-favorable assessment of recreational activities because they do not correspond with the characteristics and needs of their children and preferred to play at home, to solve this situation recommend the inclusion of activities for asthmatics in recreation.

The recreation technician considers the participation of asthmatic children in recreation to be deficient, sometimes participating in micro groups, among them, recognizes that the activities were not varied since he had not taken into account the characteristics of the disease, he does not consider himself capable of Include activities for these children with asthma, and recommends the inclusion of didactic games, passives, or other activities appropriate for these children in recreation.

After applying the intervention plan it was verified that the participation of asthmatic children to recreation was massive, offering a wide range of activities for them, claiming to feel satisfied with them as the activities are varied and enjoyable, The number of crises decreased, the frequency of crises, and the intensity of crises, so they say they have lost their fear of disease, they feel better and their parents support them to participate in recreation, they no longer feel Inferiority when participating in activities with children who do not have the disease, consider that the plan should be applied in other neighborhoods or popular councils so that other asthmatic children can have access to healthy recreation, participate among all without establishing barriers with other children who do not Suffer the disease.

Parents consider the intervention plan very effective because of the palpable results it offers, it has decreased in number of crises and their severity, they observe a greater willingness in their children to participate in recreation activities, since they are less afraid of the disease, Has been able to integrate children into community activities, are more willing and recommend to maintain the plan, perfect it including new activities and extend it to other popular councils.

The recreation technician considers the intervention plan very important, novel, consistent, activities require few resources, are varied, easy to organize and develop, motivates children for recreation, feel satisfied, strengthens physically, evaluates Very good attendance and participation of children, has been able to check the assistance of asthmatic children from other neighborhoods to recreation and recommends socializing

the plan, enrich it, perfect it so that the experience can be extended to other popular councils.

## **CONCLUSIONS**

1. The prevalence of bronchial asthma and morbidity increasing more and more globally is one of the most frequent reasons why children are excluded from physical education classes and sports practices, representing the most Habitual for the carrying out of vigorous physical activities.
2. The evaluation instruments were applied individually in several sessions of work in the home, it was possible to corroborate that in the individual field potentially provided a climate of safety where the parents cooperated exposing their experiences and their criteria according to the opinion of each one from them.

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