
EFFECTS DEEP BREATHING TECHNIQUE ON RECURRENT ASTHMATIC PATIENTS

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Introduction

Respiratory exertion is influenced by considerable number of factors which also play a important part in determining pulmonary volumes. The thoracic cage expands as a result of upper and lower movement of ribs by the contraction of diaphragm and external and onternal Muscles.

Asthma occurs in any age but is commonly occur in Children's, especially in boys age group of ten.

This cn be treated prophylactcally and physiotherapeutically, prophylactically measure aim at relaxing the patient and improving his lung function capacity.

But out of this some of the cases get good results and most required of assistance, which makes us to findout a easy but very effective role in treatment of Asthma and reducing im its symptoms.

PURSED LIP BREATHING, creates a negative back pressure Along with prolongation of alveolar dilation, by the use of this technique, there is less air trapping occurs by more oxygen saturation in alveolar level. So pursed lip breathing is very effective to improve the oxygen saturation.

Aims to study:

To create awareness of physiotherapy in asthma and understanding the effectiveness of Pursed-lip breathing in improving Lung function and quality of life.

NEED OF STUDY:

Incidence of asthma is going on increasing now days & we need more effective treatment procedure to cure it or to dealing with it, Pursed lip breathing is a effective technique or one of the Available form of treatment and through understanding of this Procedure Will help to Physiotherapist to advice the patient About Pursed lip Breathing.

OBJECTIVES OF STUDY:

To find out the effectiveness of Pursed lip breathing in improving Lung function and Reduces the recurrent attacks of asthma.

METHOD OF TEACHING DEEP BREATHING

- Position of the patient in a Comfortable Half lying position.
- Patients are Encouraged Inhale air through his nose with closed mout For several Second.
- Then Exhale slowly through mouth or Fish mouth position held in wide narrow slit through the mouth.

This Procedure is done for three times a day at least for 30 times in each sitting.

MEASUREMENT:-

1. The Pre. Test and expiratory flow rate Values are taken by Peak flow meter.
2. Measurement can also be done by the help of Inch Tape to assess the Improvement in chest size.

METHODOLOGY

RESEARCH DESIGN

The study was experimental in nature. A sampling selected sample of my convenient method.

SELECTION CRITERIA

INCLUSIVE CRITERIA :

- Age specially 20-50.
- Both males & females.
- Patients having breathing Problem in Asthma.
- Only Mid- Acute Cases of Asthma.
- Pt Found Difficulty in Daily Activity Due to Asthmic attack

EXCLUSIVE CRITERIA:

- BELOW 20 & Above 50 years.
- Chronic cases of Asthma.
- Patients with Congenital deformity.
- Patients with Trauma in Chest wall.
- Patients with Other infection.
- Patients who have taken Some other Kind of Treatment.
- Uncooperated person.
- Any major Psychiatric problem.

POPULATION

All the asthmic patient fulfil the inclusive criteria from the population of Rohtak and associated villages.

SAMPLE AND SAMPLING METHOD

A simple of 30 patient b\w the age Group 20-50 selected from the population by the mean sampling quata which is mixed Sampling consists of convenience and purposive Sampling.

VARIABLE

INDEPENDENT

- Pursed –lip breathing

DEPENDENT

- Lung Function

INSTRUMENT USED

- Peak expiratory flow rate measured by peak flow meter.

PROEDURE

Peak expiratory flow rate is maximum flow rate of air from full inspiration during force expiration and is measured with a weight peak flow meter.

In the normal adult peak expiratory flow rate is over 400 lit./min.

DURATION OF TREATMENT

Two months duration of treatment and asses 30 patients of asthma to see the results.

MEASUREMENTS

All the measurement are done through the peak flow meter and with the help of measuring meter.

MATERIAL USED

INSTRUMENTATION:- **PEAK FLOW METER**

A Peak flow meter is the device that measures how fast air comes out the lungs when forcefully exhalation occurs. It is measured in litres per minute. A patients PEF may drop hours or even days before asthma symptoms are noticeable. Reading from the meter help the patient to recognize early changes that may be sign of worsening asthma. By taking medicine early patient can be able to stop the episodes of asthma quickly and avoid a severance of it the peak flow meter can also be used to help patient to

A :- Learn what triggers asthma

B :- Decide when to add or stop medications.

C:- Know when to seek emergency care.

OBSERVATION AND ANALYSIS

DATA ANALYSIS

This chapter deals with the analysis, interpretation and discussion of data collected on peak expiratory flow rate of 30 subjects was put in to several suitable statistical analysis in order to verify the investigation of the study.

The characteristics of data provided through tables.

Pre and Post score of Peak expiratory flow rate and analyzed by using mean and standard deviation presented in tables.

The paired T- Test was used to find out differences between Pre and Post test of Peak expiratory flow rate.

The statistical procedure and there Formulaes are ;

1. Mean $\bar{X} = \sum x/n$
2. Standard Deviation S.D. = $\sqrt{\sum (x-\bar{x})^2/n-1}$
3. Paired 't' - Test $t = d/s / \sqrt{n}$

Table I. Mean, Standard. Deviation, Mean . Difference, of peak expiratory flow rate.

S.no.	Variable	Pre-test Mean	S.D	Post-test Mean	S.D.	Mean diff.
1.	P.E.F.R	264.76	37.66	275.03	33.9	10.27

Table II

Paired 't' – Test Analysis for the peak expiratory flow rate

S.No	Variables	T Value Results
1	PEFR	13.628 Significant

RESULTS

RESULT:

The study was done on 30 subjects grouped for pursed lip exercise.

The result of study shows that:

- a. There is improvement in Peak expiratory flow rate as mean value of pre test score is 264.76 and post test score is 275.03.
- b. The Standard deviation in peak expiratory flow rate shows the pre test score was 34.67.
- c. The mean difference value of Peak expiratory flow rate is 10.27.
- d. This shows there is significant improvement by using Forced lip breathing.
- e. Paired t-Test showed significant difference in peak expiratory flow rate.

DISCUSSION

Statistical Analysis of the results shows the importance in the lung function of asthma with exercise programmed.

In asthma there is reduction of peak expiratory flow rate and peak expiratory volume¹, caused by both loss of elastic recoiling and narrowing of airways and alternation in positive and negative pressure changes, while daily pursed – lip breathing , waken bronchial airways are kept open by the effect of creating negative pressure. The pressure reduces narrowing of alveolar spaces and help in free flow of air.

The improvement in air entry pattern has resulted in improved Tidal Volume and reduction in the breathing work. The peak expiratory flow rate values are reduced.

CONCLUSION

It is concluded that

- The exercise programmed improved lung Function.
- Pursed-lip breathing exercise improves Quality and Quantity of life.
- Pursed lip breathing exercise reduces the asthmatic symptoms and attacks.

FURTHER FUTURE STUDY

1. A study of effectiveness of pursed- lip breathing And diaphragmatic breathing in treatment of Asthma.
2. Comparative study of beathing exercise to reduces the asthmatic symptoms.
3. A study of effectiveness of pursed – lip breathing in chronic cases of asthma and how to reduce the asthmatic symptoms.
4. A study of effectiveness of Pursed – lip breathing in C.O.P.D condition.

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