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Date August 7, 1969

A COMPARISON OF PHYSICIANS' AND REGISTERED NURSES' VIEWS REGARDING THE INFORMATION THE REGISTERED NURSE IS TO TEACH THE EMPHYSEMATOUS PATIENT ABOUT HIS CONDITION

by

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ABSTRACT

This study investigated the views of physicians and Registered Nurses regarding the information the Registered Nurse is to teach the emphysematous patient about his condition.

The target population consisted of physicians and Registered Nurses associated with the same hospital in a selected Montana community. Interviews with seven physicans and questionnaires from fourteen Registered Nurses were used in the gathering of data.

The results of the study indicate that physicians approve of the Registered Nurse teaching the emphysematous patient about his condition; however, it was concluded that the Registered Nurse lacks knowledge of emphysema, is confused about the content of information to be taught, is unclear in her teaching role, and is uninformed in patient teaching methods.

CHAPTER I

INTRODUCTION

The interpersonal relationship between the nurse and the patient is an important part of nursing. Teaching the patient about health and illness is an aspect of this relationship. By giving the patient an opportunity to learn about his condition and to express his feelings, the nurse can initiate a therapeutic relationship, thus promoting his adjustment to living with his disease. Before the nurse can inform the patient, it is necessary for this relationship to be based on respect and belief in the human dignity of the individual.[1] The patient is an individual and wants to be treated as one. It is essential for the nurse to remember that patients are people.[2]

The content of information which is taught depends upon what the patient already knows, his interest, his ability to comprehend, and his learning needs. The patient isn't always

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[1]Hildegard Peplau, Interpersonal Relations in Nursing (New York: G. P. Putnam's Sons, 1952).

[2]Evelyn Pearce, Nurse and Patient (Philadelphia, London, Montreal: J. B. Lippincott Company, 1954).

aware of his learning needs. Therefore, it is necessary for the physician to determine these needs and the nurse to meet them. The nurse is guided by the physician in determining the content and extent of information that is to be related to the patient and his family. Because physicians' opinions vary as to the extent and content they would like to have their patients taught, it seemed necessary to establish a basis from which the Registered Nurse could approach the patient in an intelligent and useful manner.

In the hospital studied, no basis had been established for the teaching of medical and surgical patients by the Registered Nurse except for instruction given to diabetic patients. No foundation had been established for teaching the emphysematous patient about his condition. Since physicians and Registered Nurses may have differing opinions regarding the information the Registered Nurse is to teach, this study was undertaken in the interest of establishing a basis from which the Registered Nurse could teach the emphysematous patient.

Statement of the Problem

Do physicians and Registered Nurses hold conflicting views regarding the information the Registered Nurse is to teach the emphysematous patient about his condition?

Purposes of the Study

The purposes of this study were (1) to compare the views of physicians and Registered Nurses regarding the information the Registered Nurse is to teach the emphysematous patient about his condition, and based upon the findings, (2) to develop materials which may assist the Registered Nurse in teaching the emphysematous patient about his condition.

The Assumption on Which This Study is Based

Registered Nurses have an obligation to teach patients.

Limitations of the Study

The following limitations were noted: (1) The small population of both Registered Nurses and physicians contacted. (2) The results may not be applicable to the situation in hospitals other than the one surveyed. (3) The questions submitted to the Registered Nurses were subject to individual interpretation.

Definition of Terms Used

Emphysematous patient. The patient admitted to the hospital with the primary diagnosis of emphysema. (Emphysema- A condition in which the alveoli of the lungs become distended or ruptured. Usually the result of an interference with

expiration, or loss of elasticity of the lung tissue.)[3,4]

Physician. A person who is licensed to practice medicine in the state of Montana, and who in this study had direct contact with medical or surgical hospitalized patients who may have emphysema.

Registered Nurse. The professional nurse as defined by law in the state of Montana to practice as a Registered Nurse, and who in this study had direct contact with medical or surgical hospitalized patients who may have emphysema. (In this study reference to nurse designates the Registered Nurse. The abreviation R.N. is sometimes used.)

Remainder of the Study

The remainder of this study has been divided into three chapters. Chapter II contains the review of literature related to the patient teaching function of the Registered Nurse and the methodology of the study. Chapter III contains the analysis of the data, and Chapter IV the summary, conclusions and recommendations.

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[3]Seymore Farber and Roger Wilson, "Chronic Obstructive Emphysema," Clinical Symposia ed. J. Harold Walton (Summit, New Jersey: CIBA Pharmaceutical Company, 1968) p. 39.

[4]Eugenia J. McClure and Leighton L. Anderson, "Pulmonary Emphysema," The American Journal of Nursing 57:594, May 1957.

CHAPTER II

REVIEW OF LITERATURE

An objective of health teaching is health promotion and disease prevention.[5] The health professions, health organizations, family, friends, and mass communication media serve as sources of information whereby persons can learn about health and disease.[6] Particularly while hospitalized an individual has special learning needs. His minimum learning needs are an orientation to the hospital environment and his diagnosis.[7]

Although teaching is accepted as a function of nursing, Pohl points out that the practitioner's (that is the Registered Nurse's) concept of teaching ranges from the idea that teaching is limited to formal classroom instruction to the idea that teaching includes all the activities by which the nurse helps people learn.[8]

Lois Monteiro found that informal teaching was missed

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[5]Barbara Klug Redman, The Process of Patient Teaching in Nursing (Saint Louis: The C. V. Mosby Company, 1968), p. 2.

[6]Margaret Pohl, Teaching Function of the Nursing Practitioner (Dubuque, Iowa: Wm. C. Brown Company Publishers, 1968), p. 3.

[7]Hildegard Peplau, Interpersonal Relations in Nursing (New York: G. P. Putnam's Sons, 1952), p. 27.

[8]Margaret L. Pohl, "Teaching Activities of the Nursing Practitioner," Nursing Research, 14:10, 1965.

because bedside nurses often regard teaching as formal instruction. She also notes:

> The responsibility for encouraging the staff nurse to teach patients rests in the nursing service in which she is working. Verbalizing the importance of teaching is not enough. The nurse needs time to teach and to plan her teaching, and her teaching activities must become satisfying to her.[9]

Esther L. Brown noted that many persons in health care agencies are doing something for the patient, but evidence indicates that systematic plans for teaching patients how to care for themselves after leaving the hospital are rare indeed.[10] MacArthur also shows that health teaching by nurses is inadequate.[11]

The study done by Virginia Streeter reported that not all the patients were receiving adequate teaching regarding disease prevention and health promotion. "This is particularly interesting when one considers that this teaching, more than any other, has been stressed by nursing schools faculties."[12]

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[9]Lois A. Monteiro, "Notes on Patient Teaching -- A Neglected Area," Nursing Forum, 3 (1):30, 1964.

[10]Esther L. Brown, "The Social Sciences and Improvement of Patient Care," The American Journal of Nursing, 56:1149, September 1956.

[11]Christine MacArthur, "We Teach - Do Our Patients Learn?" Canadian Nurse, 55:205, 1959.

[12]Virginia Streeter, "The Nurse's Responsibility for Teaching Patient," American Journal of Nursing, 53:818, July 1953.

Streeter further reported, "Teaching about disease conditions was apparently lacking. The nurses who were interviewed felt that this situation existed because nurses did not know what the doctor wanted his patients taught."[13]

The following are some interfering factors in effective teaching, as determined by Streeter, and suggestions which she thinks may be helpful:

> Lack of time - planning and organization.
> Lack of knowledge of content - Teaching guides prepared by nurses and approved by the medical staff. The guide should include two parts - 1) information given to the patient; 2) information for the nurse with content and suggested teaching methods.
> Inadequate knowledge of various teaching methods and lack of skill in using them - Inservice education can most economically instruct nurses in methods of teaching. Teaching methods - lecture, visual aids, discussions, demonstrations, individual and group teaching.
> Inability to teach so that the patient understands - Due to lack of communication skills. Through casual conversation the patients social and cultural background, his ability to understand explanations, and the extent of his education and experience should guide the nurse when teaching patients.
> Poor communication between members of the health team - Doctors, nurses, dietitians and other workers could meet to plan care for groups of patients: "In spite of the fact that almost all nurses who were interviewed expressed difficulty in teaching because they did not know what the doctor wanted taught, not one reported any plan for nurses and doctors to discuss teaching content."

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[13] Streeter, Ibid.

Lack of emphasis upon teaching by nursing service personnel - Inservice education program for all nursing service personnel. All should participate in the planning so they will become aware of the need for teaching. Recognition should be given to good teachers as it is given to nurses who give good physical nursing care.

Nurses lack of responsibility in assuming the function of health teacher - Many nurses do not feel responsible for teaching. The only function they see is providing physical care. "Only when each nurse recognizes the need for teaching patients and shows this by her actions as well as by her words, will this need be met."[14]

Perhaps the nurse is not clear in her role of teaching the patient, is not prepared to teach, or the emphasis on teaching by the nursing service administrative personnel is lacking. Whether the problem is one or a combination of the above, the nurse is neglecting the patient's learning needs.

William Q. Jones, a retired J. C. Penney Company manager who became severely disabled as the result of emphysema, sent a questionnaire to 26 emphysematous patients in 16 different hospitals from Montana to California. It is interesting to note the answer to the main question, "Where did the nurses fail?" The answer was, "They were impatient and hesitant, and seemed lacking in a knowledge of the disease and the methods of treating it. In the operation of I.P.P.B. [Intermittent

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[14]Streeter, Ibid., 819-820.

Positive Pressure Breathing] units, they seemed to have very little training and appeared to be actually afraid of the equipment, which greatly increased the patients' tensions and feelings of panic."[15]

Implications from Mr. Jones's survey suggest the nurses who were in contact with these patients did not convey knowledge and sympathetic understanding, nor did they demonstrate ability to calm the fears and relieve tensions. These nurses who failed, did not teach these patients about emphysema, nor did they explain the methods of treatment to the patients. Evidently these nurses failed to develop a therapeutic interpersonal relationship through which these patients could make satisfactory adjustments to living with emphysema. Perhaps these Nurses failed because the content of information which should have been taught was not clear. (Mr. Jones does not define "nurses." He may be refering to Registered Nurses, Licensed Practical Nurses, or "nurses aides," or to all three.)

Methodology

The first purpose of this study was to compare the views of physicians and Registered Nurses regarding the information

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[15] William R. Jones, "Living With Emphysema," Nursing Outlook, 15:54, September 1967.

the Registered Nurse is to teach the emphysematous patient about his condition. The structured interview method was used to investigate the views of the physician and a questionnaire was used to investigate the views of the Registered Nurse.

The structured interview consisted of nine items which physicians may suggest the Registered Nurse discuss with the emphysematous patient. The nine items were (1) cause, (2) symptoms, (3) anatomy and physiology of the lungs and the mechanism of breathing, (4) anatomy and physiology of the heart and heart complications (associated with emphysema), (5) medications, (6) purpose of treatments, (7) nutrition, (8) infection prevention, keeping the doctor informed, rest, and gradual increase in exercise, and (9) instruction in breathing exercises and use of the nebulizer. Another question asked for further suggestions by which the Registered Nurse could improve the care of the patient who has emphysema.

The target population for the interview consisted of thirteen physicians associated with one hospital in a Montana community. The criteria for selection of the physicians was that they were either physicians in general practice, internal medicine, or thoracic surgery who have responsibility for the care of emphysematous patients. Of the thirteen physicians, seven consented to participate in the study and they were interviewed by the investigator.

The questionnaire submitted to the Registered Nurses consisted of eight items which asked what they discuss with the emphysematous patient concerning (1) cause, (2) symptoms, (3) anatomy and physiology of the lungs and the mechanism of breathing, (4) anatomy and physiology of the heart and heart complications (associated with emphysema), (5) purpose of medications, (6) treatments a) purpose and equipment of I.P.P.B. (Intermittent Positive Pressure Breathing), and b) breathing exercises, and (7) diet.

The target population was twenty Registered Nurses associated with one hospital in a Montana community. The criteria for selection of the Registered Nurses was that they were either head nurses, assistant head nurses, or team leaders who had responsibility for the care of patients who may have emphysema. Twenty questionnaires were personnally handed out by the investigator to the Registered Nurses at the beginning of their working day, and twelve were collected at the end of the eight hours. Eight R.N.'s felt the eight hour period during working hours was insufficient time to complete the questionnaire. These R.N.'s were allowed additional time and given envelopes in which to mail the questionnaire to the investigator. Only two of the eight returned the questionnaire by mail.

CHAPTER III

ANALYSIS AND COMPARISON OF DATA

This analysis and comparison of data is based on interviews with seven physicians and the answers to questionnaires from fourteen Registered Nurses.

1. Cause of Emphysema

All seven physicians agreed that smoking is a potential cause of emphysema and should be discussed by the Registered Nurse with emphysematous patients.

Two physicians suggested air pollution should be discussed as a cause of emphysema. The other five physicians suggested it could be discussed but was not necessary.

Dust, asthma, and chronic bronchitis were each suggested by all the physicians as potential causes, but are not to be considered as the primary cause. One physician said asthma and chronic bronchitis do not always lead to emphysema. The thoracic surgeon suggested heredity may be an important factor in causing emphysema, and could be discussed by the R.N.

Nine of the fourteen Registered Nurses reported they discuss smoking with the patient as a possible cause of emphysema.

Two R.N.'s discussed air pollution. One elaborated on this to include coal dust, gases, and automobile fumes. The other R.N. calls this smog.

Two R.N.s included dust in the discussion of the causes of emphysema. Both differentiate the kind of dust, "mining dust," and "occupational emphysema - such as miners - workers in different kinds of dust."

Four nurses discussed asthma as a cause of emphysema. These same four nurses discussed chronic bronchitis as a cause. Another R.N. discussed only chronic bronchitis.

None of the Registered Nurses discussed heredity as a factor causing emphysema.

In addition to the above, five R.N.s discussed the following which are not primary causes of emphysema:[16] allergy and respiratory infections, cold weather--damp, use of weed sprays and pesticides, and chronic respiratory disease. One Registered Nurse discussed, "climate, environment, occupation, general health, previous pulmonary conditions and complications" as possible causes of emphysema.

One Registered Nurse did not answer.

2. Symptoms of Emphysema

All of the physicians agreed the following symptoms should be discussed: shortness of breath, prolonged difficult

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[16]Seymore Farber and Roger Wilson, "Chronic Obstructive Emphysema," Clinical Symposia ed. J. Harold Walton (Summit, New Jersey: CIBA Pharmaceutical Company, 1968), p. 39.

expiration, chronic cough, and wheezing especially on exertion. Orthopnea and ankle swelling should be discussed if present.

Eight of the fourteen Registered Nurses discussed at least one symptom as suggested by the physicians. Four R.N.s discussed shortness of breath as a symptom of emphysema. Two R.N.s discussed prolonged difficult expiration and four discussed chronic cough. Four Registered Nurses discussed wheezing.

None of the Registered Nurses discussed orthopnea or ankle swelling as such. However, two nurses discussed "edema" which is a broad category under which ankle swelling may be placed.

Other answers which are not symptoms or are not suggested by the physicians for discussion were given by the above eight R.N.s as follows: four discussed dyspnea; two - expectoration of sputum; two - sputum; one discussed "hyperinflated chest which is sometimes fixed in inspiratory position"; one R.N. discussed cause of cyanosis; two, cyanosis; two discussed fatigue; and one discussed the "drop or flattening of the diaphragm with resultant rotund abdomen, peculiar stance with raised shoulder girdle."

Six of the fourteen Registered Nurses discussed the following incorrect information or did not discuss symptoms of emphysema: (1) "Dyspnea due to exertion when the alveoli are

not emptying properly. This progresses until dyspnea is present even at rest. Due to dyspnea and difficult breathing the patients resume characteristic character of drawn face, slumped posture and short jerky sentences"; (2) "Basic anatomy and physiology of respiratory system as much as patient can understand so he will know where emphysema affects him"; (3) "Lungs can take the air and diffuse it but when it reaches the bronchioles it is unable to force the old CO_2 which has already been used out of the body, this is why he has such difficulty breathing out the air"; (4) "The doctor should tell the patient most about these things. We encourage them to breath deeply - cough up as much mucus as possible"; (5) "None, unless asked--then only what the Dr. has told them"; (6) and one R.N. did not answer.

3. Anatomy and Physiology of the Lungs and the Mechanism of Breathing

All of the physicians suggested the R.N. discuss anatomy and physiology and the mechanism of breathing. The content should depend on the individual patient's learning needs. All thought pictures would be helpful, however one physician commented that pictures would not be necessary for all patients.

Ten of the fourteen Registered Nurses responded to the question concerning the anatomy and physiology and the mechanism of breathing. There was no similarity in the

content discussed. Two R.N.s discussed correct but incomplete information, and seven R.N.s discussed vague statements which seemed to imply a lack of knowledge of anatomy and physiology and the mechanism of breathing. One R.N. answered, "Patients usually don't ask."

None of the Registered Nurses suggested the use of simple drawings. Apparently word descriptions are all that are given to the patient.

4. Anatomy and Physiology of the Heart and Heart Complications

The physicians agreed that the anatomy of the heart could and should be discussed by the R.N., but discussion of complications would not be necessary unless heart complications were present. There was agreement among the physicians that the patient should be told to watch for ankle swelling and report this to his physician as soon as possible.

Six of the fourteen Registered Nurses report they discuss the following correct but incomplete information about basic anatomy and physiology of the heart and heart complications with the emphysematous patient. One R.N. discussed the reduction of edema to reduce pulmonary load. Two R.N.s discussed right sided enlargement of the heart. One discussed congestive heart failure, and four discussed "heart strain."

The other eight R.N.s discussed the following about the heart and heart complications: (1) "Usually very little";

(2) "Nurse doesn't unless she knows for sure of heart complications. This is the physicians responsibility"; (3) "None--usually the older patient is seen and he has little interest and is unable to understand or doesn't want to"; two of the R.N.s give incorrect information, (4) "Close connection between lungs and heart--heart has difficulty getting rid of oxygenated and unoxygenated blood due to excess of unexpired air--this increases extra burden on heart"; (5) "This disease makes it difficult for the patient to get oxygen to the heart--thus he is often cyanotic"; (6) the other three R.N.s gave no answer. None of the nurses discussed ankle swelling, as such, either here or as a symptom.

5. Medications Used in Emphysema

All seven physicians agreed that the bronchodilators and expectorants should be discussed with the patient. One physician said, "Tell him what and why." The diuretics and use of digitalis preparations, it was agreed, should be discussed if these drugs are being given to treat heart failure.

Six of the fourteen Registered Nurses discussed the purpose of the medications as follows: Three discussed the liquifying agents, one discussed expectorants, one iodides, and another R.N. discussed water; five of the six R.N.s discussed bronchodilators; one discussed antibiotics; and another R.N.

discussed "antihistamines and steroids to control allergy--sedation and tranquilizers, their value and dangers--and digitalis."

Four of the fourteen Registered Nurses responded with vague answers. They discussed the medications as follows: One R.N. stated she discusses everything; one discussed the dosage; one discussed the purpose; and the other discussed "the type of effect and how the effect is achieved." Three of these four R.N.s discussed the name of the medication.

Two Registered Nurses of the fourteen responded with the following incorrect information: "Medication dilates the air sacs (alveoli) for better aeration--helps cough up secretions that block ventilation. If heart complications--medications to make heart beat stronger"; "meds help bring unexpired air out of the lung (I.P.P.B.) by forcing it out--heart meds help by reducing overcompensation heart must make."

Two R.N.s reported they discuss, "Nothing until Dr. has told the patient what he is getting and why, then the nurse trys to simplify what Dr. has said"; and, "Nothing."

6. Treatments Used in Emphysema

The seven physicians suggested the R.N. discuss the purpose and the operation of Intermittent Positive Pressure Breathing (I.P.P.B.) to the point the patient is interested. Two physicians do not recommend its use, however when I.P.P.B. therapy is given they agree the R.N. should give an explanation

of its purpose and operation of the machine. The purpose of I.P.P.B. is (1) to provide more adequte aeration of the lungs and (2) to deliver medication deep into the lungs in order to help loosen secretions so they can be more easily coughed up.[17,18,19]

Five of the fourteen Registered Nurses discussed improvement in aeration as a purpose of I.P.P.B. Three of these five R.N.s discussed both improving aeration and the administration of medications to loosen secretions.

The other nine Registered Nurses reported they discuss the following information with the emphysematous patient concerning the purpose and use of I.P.P.B. equipment. These answers were difficult to classify due to the vague statements or incorrect information given. Examples are (1) "What

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[17]Seymore Farber and Roger H. L. Wilson, "Chronic Obstructive Emphysema," Clinical Symposia, ed. J. Harold Walton (Summit, New Hersey: CIBA Pharmaceutical Co., 1968) p. 65.

[18]Thomas L. Petty and Louise M. Nett, For Those Who Live and Breathe with Emphysema and Chronic Bronchitis, (Springfield, Illinois: Charles C. Thomas, 1967), p. 39.

[19]Mark G. Helming (ed.), "Symposium on Nursing in Respiratory Diseases" (in The Nursing Clinics of North America, Vol. 3, No. 3. Philadelphia, London, Toronto: W. B. Saunders Co., September 1968), p. 418.

happens when the lungs are expanded by Bird (sic.) and the medication getting down deep in the lungs"; (2) "Better ventilation of the lungs. This will increase the functioning parenchyma and capillary circulation will help to eliminate obstructing secretion"; (3) ". . . I.P.P.B. is designed to expand his lungs and help him exhale some of the unexpired air. It also contains meds to clear up infections in the lungs and to aide in proper breathing"; (4) "Introduction of medication locally. Expansion of alveoli which is difficult or impossible for this patient. Attempt to keep musculature of pulmonary tract active"; (5) "Assist in deeper respirations and in insistence on deliberate coughing to raise secretions. Stimulate coughing"; (6) "Helps to clear and expand lung--usually (nurse) doesn't know much about the Bird (sic.) equipment -- can give only general information"; (7) The therapeutic effect of I.P.P.B. is stressed and the patient urged to cooperate with inhalation therapy, the discussion of basic respiratory anatomy can be helpful here"; (8) "Nothing"; and one R.N. gave no answer.

All seven physicians agreed postural drainage is not necessary for all patients. Postural drainage is more effective in bronchiectasis than in emphysema. However, when this type of therapy is instituted the R.N. should explain its purpose to the patient.

Breathing exercises, the physicians agreed, have not been proven effective but in some cases may be helpful. One physician stated he wasn't convinced breathing exercises were helpful except for the psychological support they may give. Another physician suggested the exercises should be the type to strengthen the thoracic and intercostal muscles, and abdominal breathing to make proper use of the diaphragm; rather than pursed lip breathing and bottle blowing exercise type. He stated blowing increases the intrapleural pressure tending to collapse the already partly occluded bronchioles.

The major objective of breathing exercises is to expell trapped air in the lungs.

The breathing exercises taught by seven of the R.N.s are as follows: Of the blowing type of exercises, three R.N.s teach "blow bottles," three teach blowing up a balloon, four teach blowing out a candle, and one teaches exhaling longer than inhaling. Of the various ways of accomplishing diaphragmatic breathing the following are taught by the seven R.N.s: Five teach abdominal breathing, one teaches the use of weight on the abdomen, and one teaches the use of an abdominal belt. One R.N. teaches forced exhalation by the use of the diaphragm.

Four of the fourteen Registered Nurses teach similar breathing exercises, but included in their answers other exercises which are not correct exercises to be used for

emphysema. Examples of these answers are as follows: (1) "Postural drainage is taught--also methods of deep breathing--exhaling"; (2) "Inhale deeply and exhale deeply--often in order to try and decrease the expiratory period"; (3) "Abdominal breathing exercises--Effective cough, controlled cough. Beneficial positioning in bed, chair, and postural drainage"; and (4) "The use of a sandbag on the abdomen--deep breathing."

The remaining three Registered Nurses reported the following regarding breathing exercises: (1) "Usually none unless specifically order by the Dr."; (2) "This should be done by Dr.'s orders and depends on the involvement of the patient. The nurse should be familiar with a source of exercises so she can teach them as ordered"; the other R.N. gave no answer.

7. Nutritional Aspects in Emphysema

Six of the physicians suggested the Registered Nurse could discuss avoiding excessive weight, encouraging fluids, not to hurry meal-time, rest before and after meals, and salt free or low sodium diet. In the opinion of the six physicians, these areas should be discussed but should not be the major concern for discussion since sufficient information in these areas is given to the emphysematous patient or these are not seen as problem areas. The seventh physician commented that diet has nothing to do with emphysema.

Three of the six physicians suggested the most important of these areas for the Registered Nurse to discuss is the low sodium diet, which is instituted when right-sided heart failure is present. In addition to low sodium diet, one physician emphasized discussion of fluid encouragement.

Seven of the fourteen R.N.s discussed the low sodium diet. Two of these seven discussed fluid encouragement and one discussed "adequate protein and caloric intake. Ways to obtain it in spite of poor appetite." Two other R.N.s discussed hi-calorie hi-protein diet. Discussion of hi-calorie and hi-protein diet was not suggested by the physicians but may help to provide instruction in proper nutrition.

Two Registered Nurses discussed eating small portions and one R.N. discussed the following: "depends on heart involvement and diets as ordered by the physician--after the order, the nurse should make sure the patient understands his diet and encourages him to follow it." Two R.N.s gave the following incorrect information: (1) "Avoid highly seasoned foods"; (2) "Patient often craves food with acid." Three R.N.s gave no answer.

8. Miscellaneous Aspects in Emphysema

Preventing infection, keeping Dr. informed, rest, gradual increase in exercise, and instruction in the use of the nebulizer were discussed in the interview with the physicians.

All seven physicians agreed these subjects should be discussed with the patient. However, it was the opinion of the physicians that sufficient information in these areas is given to the emphysematous patient and should not be the major concern for discussion by nurses.

9. Suggestions for Improving the Care of Emphysematous Patients

The following are the specific suggestions from the seven physicians to the Registered Nurse for improving the care of the emphysematous patient.

(1) The Registered Nurse should consider the emphysematous patient when placing a patient who smokes next to him. This is polluting the air for the emphysematous patient. The nurse should also consider the emphysematous patient when placing him in close contact with the other patients who have infections. Exposure should be kept at a minimum. In addition, it is important to keep the air dust free.

(2) Taking a personal interest in the patient will help his outlook. He will feel that someone is doing something for him. It is important not to give hope that he will recover from his disease. Hope that he can maintain his present level or nearly so, can be given. The psychological support the nurse can give is very important.

(3) Today emphasis is placed on effective communication.

Just the fact that the nurse goes to the patient and talks to him will be benefical to him. It is important to get the patient himself involved in getting well. If all these things were done (as outlined in the structured interview) the care of the emphysematous patient would improve.

(4) The nurse should do all these things (as outlined in the structured interview).

(5) Everything (as outlined in the structured interview) is all right for the nurse to discuss. There should be some mention of psychological support.

(6) Everything (as outlined in the structured interview) is all right for discussion.

(7) a. The nurse should have an understanding of emphysema.

b. Offer the patient encouragement that something can be done for him. It isn't all black. The stage of the disease is very important. Arrangements can be made for job change if necessary.

c. Cold air strangles. That is, it produces bronchial spasms. So when outside in the cold air the patient should wear a wool scarf over his mouth. There are emphysema masks that warm the air before inhalation.

d. CO_2 and pH are very important in emphysema and it would be well for the nurse to understand something about

blood chemistry.

e. When starting oxygen on a patient with emphysema, start at a low level in order not to affect the blood chemistry levels rapidly. The patient can die if the oxygen is raised too quickly. Apnea will result.

f. Avoid over sedation. Respirations should not be depressed.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The primary purpose of this study was to compare the views of physicians and Registered Nurses regarding the information the Registered Nurse is to teach the emphysematous patient about his condition.

Based upon the findings, the secondary purpose was to develop materials which may assist the Registered Nurse in teaching the emphysematous patient about his condition.

The structured interview method was used to gather data from the seven physicians who participated in the study. The physicians were associated with one hospital in a Montana community and have responsibility for the care of emphysematous patients. A questionnaire was used to gather data from fourteen Registered Nurses who participated in the study. The Registered Nurses were associated with the same hospital in a Montana community and have responsibility for the care of emphysematous patients. The following summary was developed from the analyzed data.

The seven physicians who were interviewed generally agreed the Registered Nurse should discuss with the emphysematous patient (1) the potential causes of emphysema, (2) symptoms, (3) anatomy and physiology and the mechanism of breathing,

(4) anatomy and physiology of the heart, and heart complications associated with emphysema if complications were present, (5) medications, (6) purpose and operation of I.P.P.B. equipment, and breathing exercises, and (7) low sodium diet when used in conjunction with treatment of heart failure.

The suggestions from the physician to the Registered Nurse for improving the care of the emphysematous patient were (1) to keep the environment smoke, infection and dust free; (2) to become personally interested in the patient and give him psychological support; (3) to communicate with the patient and get him involved in getting well; (4) to discuss with the patient what has been outlined above; and (5) to acquire an understanding of emphysema.

In discussing the causes of emphysema, teaching breathing exercises, and discussing the low sodium diet, the majority of Registered Nurses (at least seven) did discuss the information which was suggested by the physicians. The content in the other suggested areas generally reflects vague, incomplete, and incorrect information.

It is recognized by the investigator that the questionnaire submitted to the Registered Nurses didn't include a question asking, "How does the Registered Nurse improve the care of the emphysematous patient?"

The secondary purpose of this study was to develop

materials which may assist the Registered Nurse in teaching the emphysematous patient about his condition. These materials, which were approved by the seven physicians, may be found in Appendix D.

Conclusions

From the information gathered, it may be concluded that teaching the emphysematous patient about his condition is favored, anticipated, and endorsed by the physicians. The Registered Nurses who participated in the study appear to have an inadequate knowledge of emphysema, are confused about the content of information to be taught the emphysematous patient, are not clear in their role of patient teaching, and are uninformed in the methods of patient teaching.

It is hoped that the above difficulties can be reduced, and that the materials which have been prepared by the investigator and presented in the appendix of this study will assist the Registered Nurse in teaching the emphysematous patient about his condition.

Recommendations

The investigator recommends that further research be undertaken:

1. To ascertain the effectiveness of the materials prepared to assist the Registered Nurse (Appendix D).

2. To determine if physicians and Registered Nurses in other hospitals have conflicting views regarding the information the Registered Nurse is to teach the emphysematous patient about his condition.

The investigator also recommends that Registered Nurses receive preparation in operating Intermittent Positive Pressure Breathing units.

APPENDICES

APPENDIX A

I am a graduate student in nursing at Montana State University and would like some information for my professional paper. I'll be in Great Falls Wednesday and Thursday, Feb. 26 and 27, and would appreciate 10 minutes of your time.

The information concerns suggestions to aid the Registered Nurse in teaching the emphysema patient about his disease in order to help him understand his condition.

Thank you.

Sincerely,

Carolyn Todd, R.N.

The above student is enrolled in the Master of Nursing Program at Montana State University. Any assistance you may give her will be appreciated.

Laura M. Walker, Ph.D.
Director, School of Nursing
Montana State University

APPENDIX B

The following questions have been prepared for a professional paper by Carolyn Todd, a master student in nursing at MSU. The questions pertain to patients with emphysema, and the nurse refers to the registered nurse (RN). Explanations would be given according to the patients' ability to understand.

1. Which of the following causes of emphysema should the nurse discuss with the patient who has emphysema?

   air pollution_____ dust _____ chronic bronchitis_____

   smoking _____ asthma____ other_____

2. Of the following symptoms, which should the nurse discuss with the patient who has emphysema?

   shortness of breath on exertion_____ wheezing_____

   shortness of breath at rest _____ orthopnea_____

   prolonged difficult expiration_____ ankle swelling____

   chronic cough_____ other_____

3. What of the following basic anatomy and physiology of the lungs and breathing should the nurse explain to the patient with emphysema?

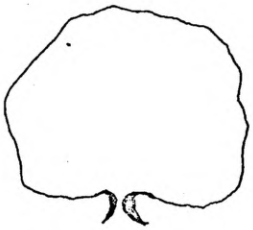
3.(cont.)



Normal
Alveoli



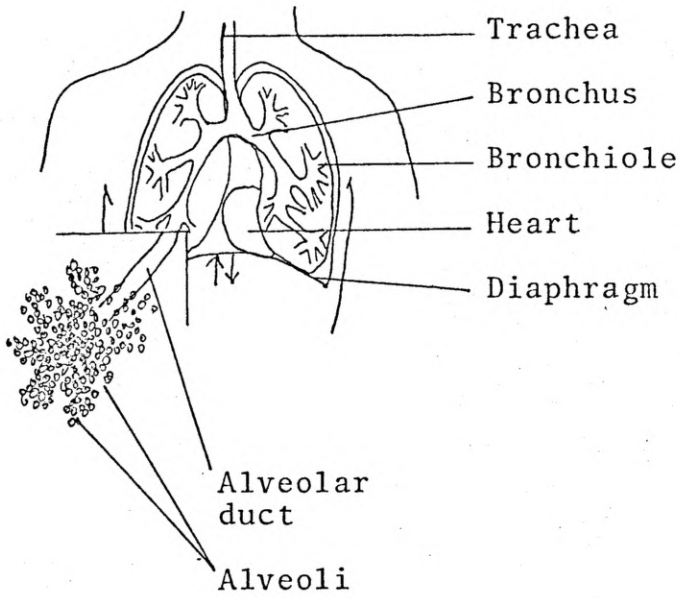
Emphysema
folds blown
out



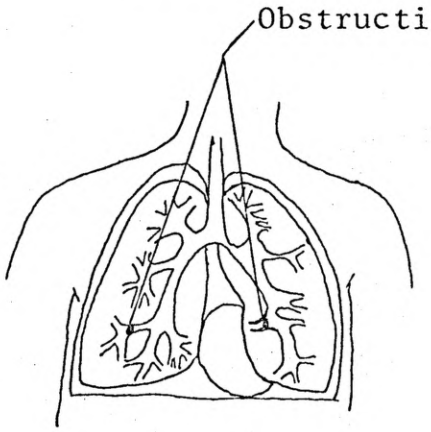
Severe Emphysema
with disruption of
septae and folds
to produce an
inflated air sac

a._____

NORMAL



EMPHYSEMA



-Diaphragm flattens
-Chest Enlarges

b._____

Other_____

4. What of the following anatomy and physiology of the heart and heart complications should the nurse explain to the patient with emphysema?

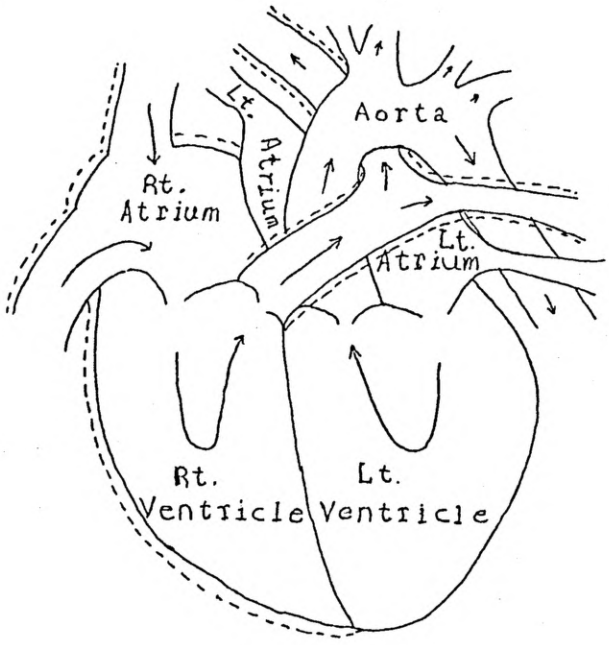
a. right side of heart changes_____

b. pulmonary arteries enlarge_____

c. liver enlarges due to "congestion"_____

d. feet and ankles swell due to "congestion" _____

e. Other_____



5. When the following medications are included in the treatment, which should the nurse discuss with the patient who has emphysema?

bronchodilators_____ expectorants_____

diuretics_____ other_____

cardiotonics (digitalis, etc)_____

6. For which of the following treatments should the nurse explain the purpose:

IPPB_____ breathing exercises_____

postural drainage_____ other_____

7. Which of the following aspects of diet should the nurse discuss with the patient who has emphysema?

   avoid excessive weight_____ encourage fluids_____

   rest before and after meals_____ not to hurry meal time_____

   salt free and low Na diet_____

   other_____

8. The nurse should discuss which of the following with the emphysema patient?

   The importance of: a. preventing infection_____

   b. keeping Dr. informed_____

   c. rest_____

   d. gradual increase in exercise_____

   e. other_____

9. Should the nurse instruct the patient in:

   a. breathing exercises?_____

   b. use of nebulizer?_____

10. What specifically would you suggest nurses do to improve the care of the patient with emphysema?

APPENDIX C

The following has been prepared for a professional paper by Carolyn Todd, a master student in nursing at MSU. The study is concerned with the Registered Nurse and the emphysema patient.

Your answers will be kept confidential. The results will be used only for the purpose of the study.

1. What symptoms does the nurse discuss anatomically and physiologically with the patient who has emphysema, in order to help him understand his condition?

2. What possible causes of emphysema are discussed by the nurse with the emphysema patient?

3. What does the nurse discuss with the emphysema patient concerning basic anatomy and physiology of the lungs and the mechanism of breathing?

4. What is discussed with him about basic anatomy and physiology of the heart and heart complications?

5. What does the nurse discuss with the emphysema patient about the purpose of his medications which help him understand their use?

6. What explanation is given by the nurse to the patient with emphysema concerning the purpose and equipment of IPPB?

7. Which breathing exercises are taught by the nurse to the patient with emphysema in order to help with his rehabilitation?

8. What aspects of the diet does the nurse discuss with the patient in relation to his condition of emphysema?

APPENDIX D

The following information has been prepared to assist the Registered Nurse in teaching the emphysematous patient about his condition. The Registered Nurse could discuss the information with the patient and answer his questions after he has read the material, or the nurse could use her own creativity in presenting the information. For assistance in teaching the patient, the nurse may wish to consult Teaching Function of the Nursing Practitioner by Margaret L. Pohl.

The nurse may wish to recommend sources which may be helpful to the patient.

1. Emphysema and Common Sense, a book by Spencer Robley. Parker Publishing Company, Inc., West Nyack, New York, 1968.

2. Living with Asthma, Chronic Bronchitis and Emphysema, a pamphlet from Riker Laboratories, Northridge, California, November 1966, price 50¢.

3. You and Your Emphysema, a pamphlet by Fred Q. Obley, M.D., J. B. Lippincott Company, Philadelphia and Toronto, 1968.

4. Breathing Exercises for Home Use, Breon Laboratories, Inc., 90 Park Avenue, New York, New York.

5. Breathing Exercises and Nebulization in Emphysema, Winthrop Laboratories, New York, New York, 1958.

6. You Can Learn to Breathe Better, Winthrop Laboratories 1966.

Numerous sources explain the psychological support which should be given the patient. Detailed discussion of psychological support is beyond the scope of this paper. For helpful information the Registered Nurse may refer to:

1. The series Clinical Symposia, 'Chronic Obstructive Emphysema' by Seymore M. Farber, M.D. and Roger H. L. Wilson, M.D., edited by J. Harold Watson, CIBA Pharmaceutical Company, Summit, New Jersey, 1968.

2. "Living With Emphysema" by William R. Jones, in Nursing Outlook, 15:53+, September 1967. Mr. Jones describes his personal experience with emphysema.

3. "Pulmonary Emphysema" by Eugenia J. McClure and Leighton L. Anderson in The American Journal of Nursing, 57: 594-598, May 1957.

4. "Personality Factors in Human Relations" by Anthony Oliver in Nursing Outlook, November 1954, pp. 578-579.

5. Nurse and Patient by Evelyn C. Pearce, Philadelphia, London, Montreal, J. B. Lippincott Company, 1954.

6. Interpersonal Relations in Nursing by Hildegard E. Peplau, G. P. Putnam's Sons, New York, 1952.

7. "An Education Program for the Pulmonary Handicapped" by Alice D. Sentman in Hospitals, 41:87+, September 1967.

CHECK LIST FOR PATIENT INSTRUCTION

Patient's Name_____ Date of Instruction

I. Emphysema _____

II. Outlook _____

III. Cause _____

IV. Symptoms _____

V. Anatomy and physiology of the lungs and mechanism of breathing
  A. Normal _____

  B. Emphysema _____

VI. Anatomy and physiology of heart and heart complications _____

VII. Medications _____

VIII. Treatments
  A. Postural drainage _____

  B. I.P.P.B. _____

  C. Breathing exercises _____

  D. Other _____

IX. Diet _____

X. Special Aspects
  A. Infection prevention _____

  B. Regular checkups _____

I. Emphysema

Emphysema is a condition in which the alveoli are abnormally increased in size due to dilation or destruction of their walls.

II. Outlook

Emphysema is a disease that has no cure. The objective in treating this disease is to prevent further damage to the lungs, and to use the remaining lung power to the best advantage.

III. Cause

The cause is not known with certainty, but smoking and chronic bronchitis seem to be most significant. Associated causes may be chronic infection, air pollution, dust, or asthma. Since smoking irritates the lungs, contributing to production of the disease, all efforts should be taken toward breaking the habit.

IV. Symptoms of Emphysema

Shortness of breath-Obstruction and spasms of bronchi and bronchioles, causes decreased air flow resulting in insufficient aeration.

Prolonged difficult expiration-The obstruction and loss of elasticity makes it difficult to exhale fully.

Chronic cough-The cough that is always present with or

without mucus. The cough is noticable when arising in the morning.

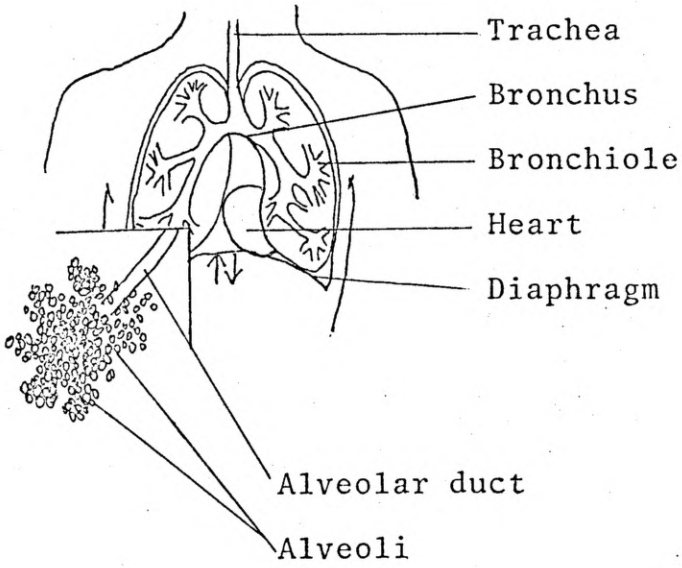
Wheezing-The air being forced out past the constricted bronchioles causes a small whistling sound; and many of the bronchioles being constricted causes the wheezing.

Inability to breathe lying down-Insufficient oxygenation of blood.

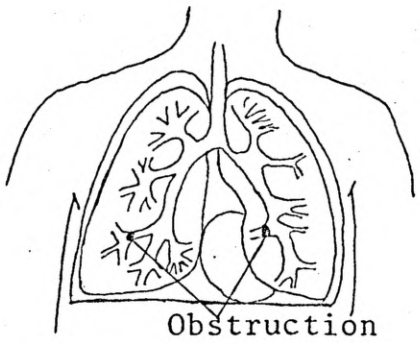
Ankle swelling-The heart is unable to circulate the blood efficiently and fluid accumulates in the tissues. It is always important to inform your doctor of this swelling.

V. Anatomy and Physiology of the Lungs and Breathing Mechanism

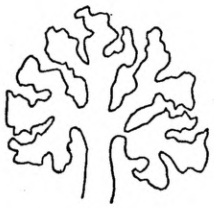
NORMAL



EMPHYSEMA



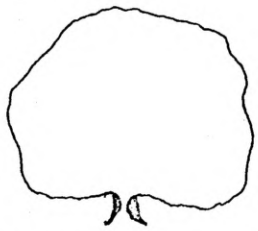
-Diaphragm flattens
-Chest enlarges



Normal
Alveoli



Emphysema
folds blown
out



Severe Emphysema
with disruption of
septae and folds to
produce an inflated
air sac

A. Normal

Trachea-The trachea or "windpipe" begins under the "Adams apple" and is about 4½ inches long.

Bronchi-When the trachea divides the branches are called bronchi. Bronchus for only one branch.

Bronchioles-The smaller divisions of the bronchi are the bronchioles.

Alveoli-The small air cells of the lungs where exchange of gases occur (alveolus is singular).

Heart-The heart lies in the center of the chest cavity and a little to the left.

Diaphragm-As the diaphragm rises (↑), expiration is taking place; when inspiration is taking place the diaphragm lowers (↓).

Respiration can be compared to that of the tree. The trachea is similar to the trunk of the tree, the bronchi are

like the branches, and the alveoli is similar to the leaf where actual respiration is taking place.

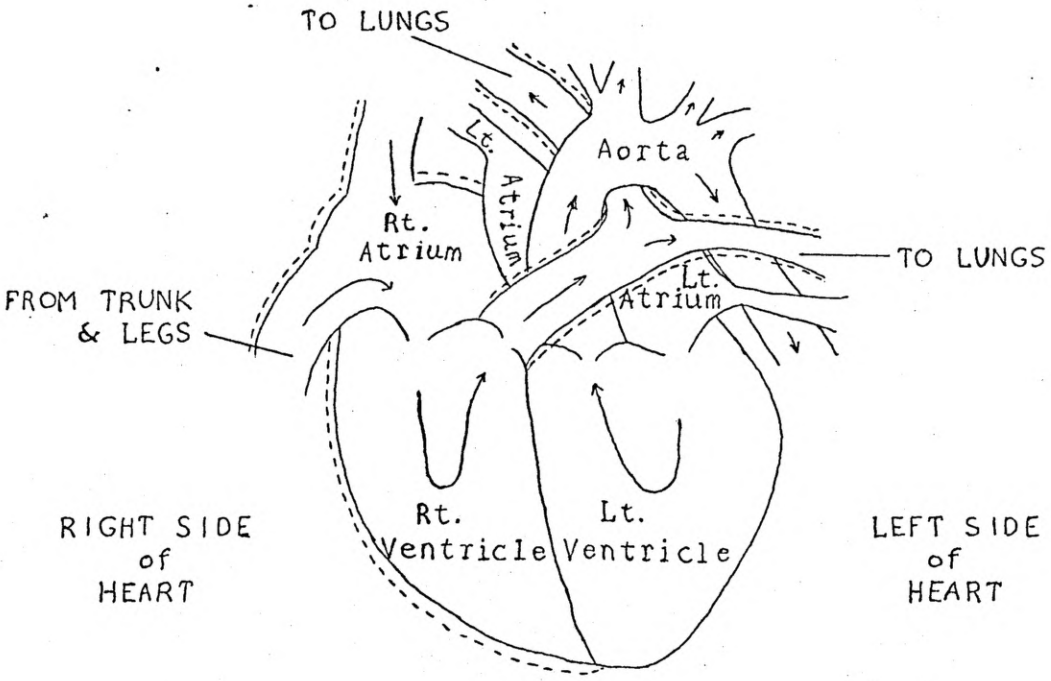
B. Emphysema

Obstruction-When the bronchi or bronchioles become obstructed the air flow is reduced, resulting in breathing difficulty. When the air is not adequately eliminated the alveoli become over-distended and loss of elasticity results. An example would be a balloon that has been blown up for at least three days, when the air is let out, the balloon will not resume its original shape.

Diaphragm flattens-Because of trapped air, the diaphragm becomes flat. This can be seen with a chest x-ray.

Chest enlarges-The chest cavity slowly enlarges due to the trapped air. The muscles between the ribs, the muscles of the shoulders, and neck are used to their maximum when breathing.

VI. Anatomy and Physiology of the Heart and Heart Complications



Venous blood from the entire body enters the right side of the heart. The small chamber first filled is called the right atrium. This chamber fills and then passes its supply of blood into the right ventricle. The blood then leaves the heart and travels to the lungs. Here, in the lungs, the exchange of gases occur and fresh oxygenated blood returns to the left side of the heart, the left atrium. After the left atrium fills the blood passes into the left ventricle; then

is pumped out through the aorta to all parts of the body.

In emphysema the lungs do not function properly, and the exchange of gases is not adequate to supply the body. The right side of the heart works harder to supply the blood; therefore the heart muscle increases in size. The vessels which lead to the lungs also increase in size.

The heart is not always involved in emphysema, but when it is, the following conditions may appear:

(1) Right side of heart enlarges-The heart is working harder to pump the blood and it increases in size.

(2) Pulmonary arteries enlarge-The blood vessels that carry blood to the lungs also become enlarged trying to supply a greater volume to the lungs.

(3) Feet and ankle swelling-The heart is unable to circulate the blood properly, so edema results. Usually the first area to become filled with fluid is the ankles and feet.

For more information about this type of condition refer to a pamphlet from the American Heart Association, "Facts about Congestive Heart Failure", 1960.

VII. Medications

Bronchodilators-Dilate and relax the bronchioles, which help open the airway and facilitate easier removal of mucus with gentle coughing.

Sputum liquifying agents-Liquify secretions and facilitate discharge of sputum. The best is water, three to four quarts a day.

Diuretics-Eliminate excess fluid accumulated in the tissues.

Digitalis-Increase the efficiency of the heart (increased force of ventricular contraction, slowing down of heart rate).

Steroids-Reduce bronchial inflamation, promoting mucous production and in turn maintaining a patent airway.

VIII. Treatment of Emphysema

Postural drainage-Helps to clear respiratory passageway by using gravitational flow of sputum. Cupped hands may be tapped on the chest, producing vibrations which help loosen secretions.

IPPB-Intermittent Positive Pressure Breathing
IPPB provides more adequate areation of the lungs, overcomes bronchial resistance, and helps establish a more effective cough.

Breathing exercises-The purpose is to eliminate trapped air in the lungs. Abdominal breathing lengthens expiratory diaphragmatic breathing. Sit in bed, back supported by pillows; or in a comfortable straight backed chair. Exhale, long and forceful through pursed lips, while contracting the

abdominal muscles. At first expiration will not be long or forceful, but with time and practice, it can be increased. Inhale quietly and gently through the nose, allowing the abdominal muscles to relax. Other exercises are helpful, but refer to your doctor or the physical therapist for guidance.

IX. Diet

Avoid excessive weight-This increases metabolic needs and adds further to respiratory embarrassment.

Encourage fluids-Because of the tendency of dehydration caused by mouth breathing and increased respiratory secretions. Water is one of the best hydrating agents.

Meal time should not be hurried.

Rest periods before and after meals are necessary.

Special food preferences should be taken into consideration.

Salt and low sodium restriction -- in order to minimize fluid retention.

Those with emphysema tend to lose weight because of poor appetite. Weight loss also may be associated with the respiratory difficulty following meals.

X. Special Things to Remember

Prevent infection-Avoid crowds and people with colds; if a cold should occur, see your doctor promptly.

See your doctor regularly for check-ups-Your doctor needs to know about your progress.

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