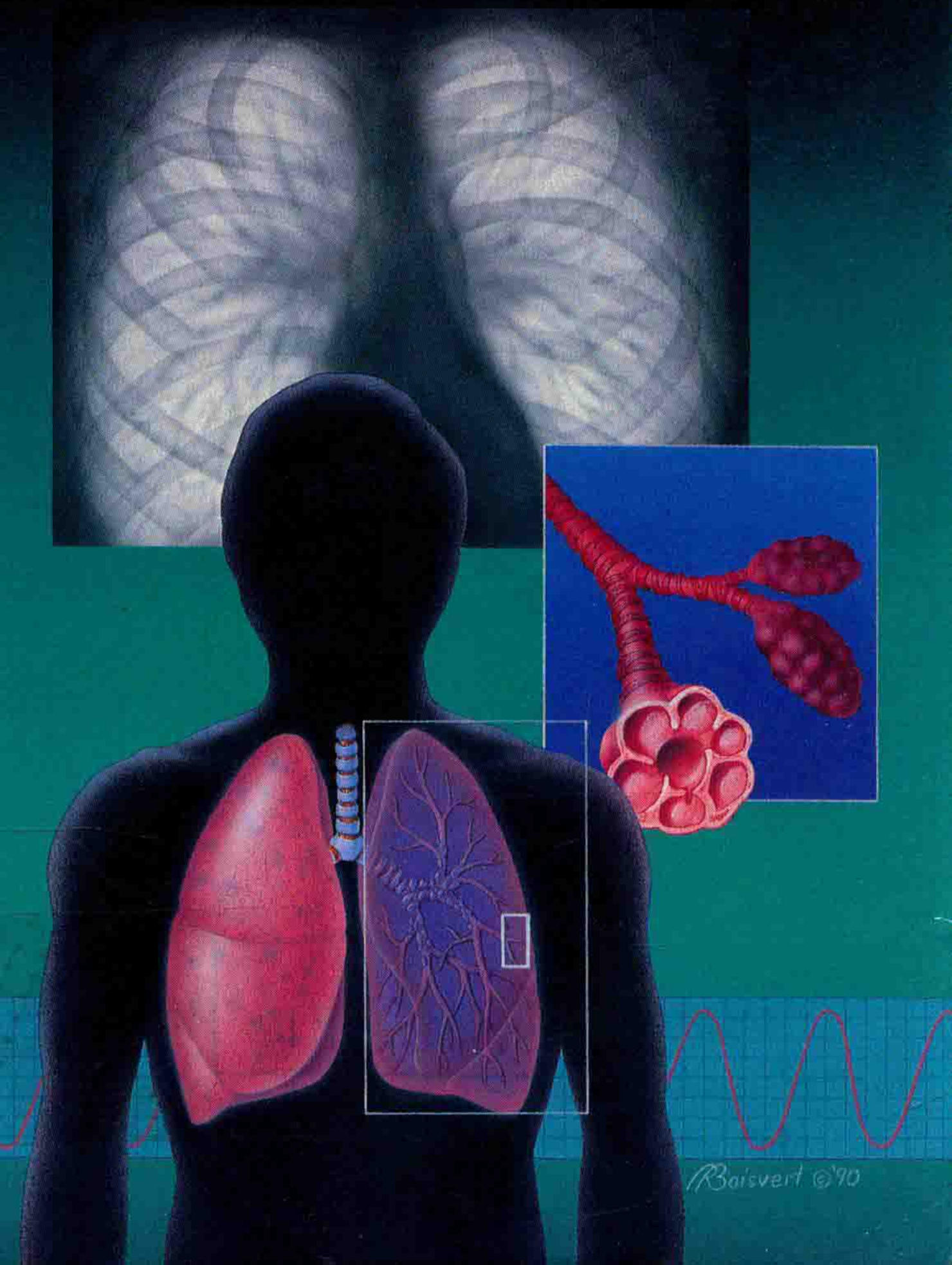


Pocket Guide Respiratory Care

WEILITZ



Pocket Guide to Respiratory Care

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Pocket Guide to
Respiratory Care

To
Alan for his love and support
and to
the memory of **Jeff**

Consultant Board

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Preface

Pocket Guide to Respiratory Care is designed to be a resource for nurses who provide care for clients with respiratory alterations. The text is developed using the nursing process; assessment, nursing diagnosis, planning, intervention, and evaluation, with regard to clients with acute care, home care and extended care needs.

The first chapter assesses clients with respiratory alterations. Included is a guide for completing a history and complete physical assessment of the respiratory system. Information given includes rationale for the test, significant findings, and nursing considerations.

Chapter 2 relates the formation of the nursing diagnosis. The diagnosis, related factors, and defining characteristics are presented to allow the nurse to select the appropriate nursing diagnosis based on the assessment data. Respiratory diagnoses as well as related diagnoses are presented.

Chapter 3 provides a quick reference to frequently encountered respiratory diseases. The chapter includes a descriptive summary of acute and chronic assessment findings. Nursing interventions commonly instituted are listed to assist the nurse in planning care.

Chapters 4 through 7 offer interventions for care of the respiratory client: airway management, respiratory medications, oxygenation management, and mechanical ventilation. Each chapter contains indications for the intervention, nursing responsibilities, and any special nursing considerations that may be necessary.

Chapters 8 and 9 complete the health care spectrum with details of pulmonary rehabilitation and respiratory home care. Nursing care plans, nursing interventions, and evaluation of ex-

pected outcomes assist the nurse in developing care plans for pulmonary rehabilitation and determining home care needs.

Throughout the text I have tried to provide the nurse with accurate, current, and practical information about caring for the client with respiratory alterations. I would like to acknowledge the encouragement, nurturing, and care of Dr. Myron Jacobs, Dr. Royal Eaton, and Dr. Mark Wald. Throughout the past 16 years they have shared with me their vast knowledge and love of pulmonary medicine and helped to develop my skill and love for the care of the respiratory client. I would also like to acknowledge Anne Griffin Perry, my mentor throughout graduate school and in my current practice as a clinical specialist.

Pamela Becker Weilitz

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Respiratory Assessment

1

The first step of the nursing process is *assessment*. Assessment includes the history, physical examination, and review of diagnostic data.

One of the most important parts of the assessment is obtaining an accurate and complete history. Many clients do not readily volunteer information regarding their health status. The nurse must be skilled in asking direct questions and be responsive to answers to allow additional questioning. Since many clients with respiratory problems are short of breath, direct, short-answer questions are best. Areas to interview specific to the respiratory system include breathlessness, characteristics of cough and sputum, previous respiratory illnesses, smoking history, activity level, sleep patterns, hospitalizations, oxygen therapy, intubations, and mechanical ventilation. A complete history should be taken on all clients including a review of systems, past medical-surgical history, medications, and social and familial history.

Table 1-1 identifies areas of respiratory history and suggested interview questions.

Table 1-1 Pulmonary history

Interview topics	Interview questions
Activity level	<p>How would you describe your activity level? Active? Sedentary?</p> <p>Are you able to do the activities you would like? Shopping? Walking? Housework?</p> <p>How far can you walk? Why do you stop?</p> <p>Has your activity changed recently?</p> <p>Can you climb stairs?</p>
Breathlessness	<p>Are you aware of your breathing?</p> <p>Has your breathing changed? When?</p> <p>How often do you have shortness of breath?</p> <p>Does a change in position relieve or increase the shortness of breath?</p> <p>Does your breathlessness interfere with things you want to do?</p> <p>Do you cough frequently?</p>
Cough	<p>Does anything seem to trigger the coughing?</p> <p>How would you describe your cough?</p> <p>Do you produce much sputum? How much? How often? What color? What consistency?</p> <p>What makes your cough better?</p>
Smoking	<p>Have you ever smoked?</p> <p>What do/did you smoke?</p> <p>How old were you when you started? Stopped?</p> <p>How many packs per day and how many years smoked?</p>
Respiratory illness	<p>Have you ever been told you have lung disease? What? When?</p>

Does your family have a history of tuberculosis, malignancy, emphysema, asthma, or chronic bronchitis?

Have you ever had pneumonia? When?

Have you ever taken steroids for your respiratory illness?

What medications do you take?

How many hours do you sleep at night?

Do you awaken frequently at night?

Do you sleep during the day? Do you snore?

How many pillows do you use at night?

Do you wake up short of breath?

Do you use oxygen at home?

When? How much?

How long have you been using oxygen?

What type of system do you use?

When was your most recent hospitalization for respiratory illness?

How many times were you admitted in the past year?

Did you undergo intubation or mechanical ventilation? If so, what was the date and length of time?

Have you ever been exposed to hazardous chemicals?

What is the nature of your work?

Are there environmental hazards? Possible allergens? Heating/air conditioning?

Do you live in an urban or rural area?

Sleep patterns

Oxygen therapy

Hospitalizations

Environmental factors

Physical Examination

Physical examination of the chest and thorax should be conducted and documented using standard chest landmarks (Fig. 1-1), enabling the nurse to localize findings and communicate them to other health care team members.

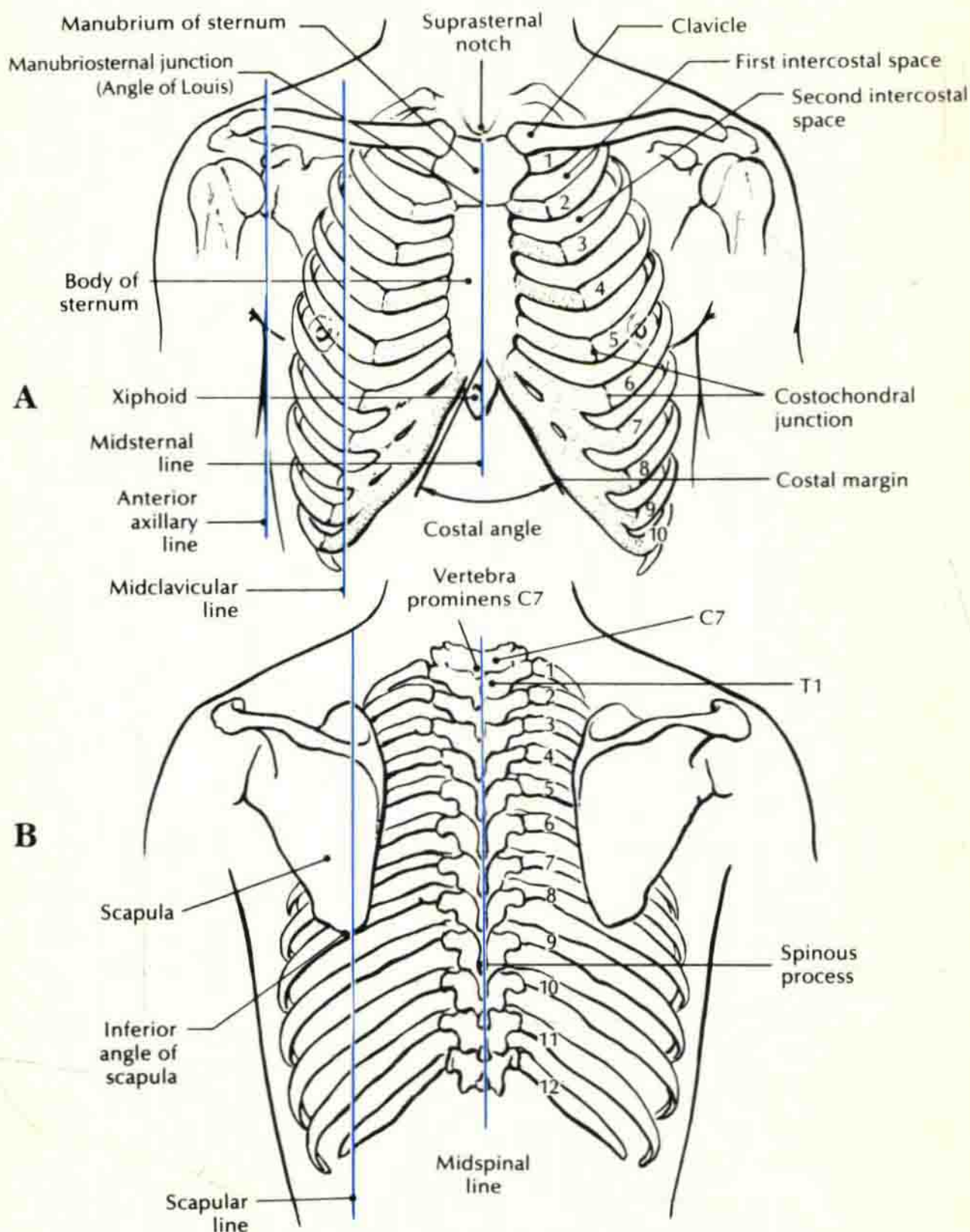


Figure 1-1

Topographic landmarks: A, Anterior thorax. B, Posterior thorax.

(From Malasanos L: Health assessment, ed 4, St Louis, 1990, The CV Mosby Co.)

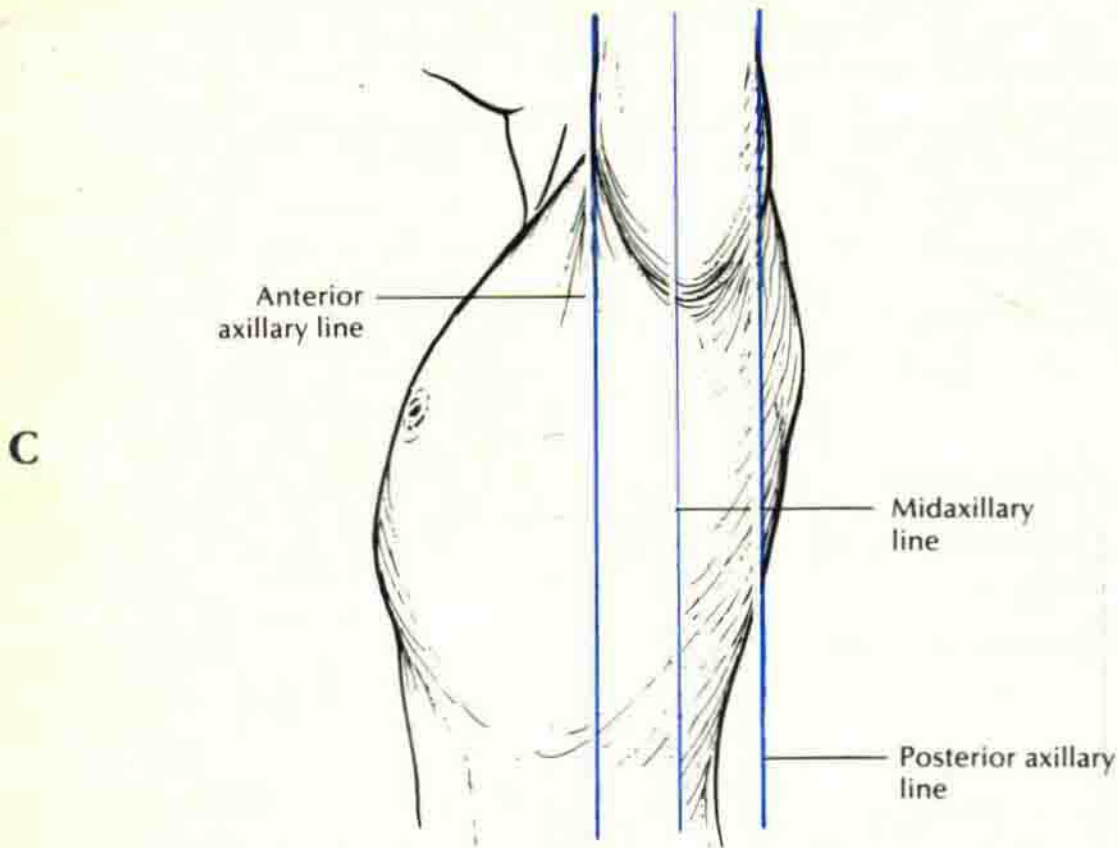


Figure 1-1 cont'd.

Topographic landmarks: C, Lateral thorax.

Inspection

Inspection begins with the overall pattern of the client's breathing. Observe the body positioning, use of accessory muscles of respiration, chest wall configuration, and respiratory pattern. Notice the shape of the chest wall. In an adult the anteroposterior diameter should be 1:2 or 5:7. Other configurations are barrel chest, pectus excavatum (funnel chest), pectus carinatum (pigeon chest), and kyphoscoliosis.

The respiratory pattern should be observed for rate, depth, and inspiratory and expiratory cycles (Table 1-2). Note whether the client is using pursed lip breathing since it improves gas exchange, increasing the PaO_2 by providing positive end expiration to the alveoli.

Observation of chest wall movement determines depth of respiration as well as symmetry of chest wall expansion. The chest wall should increase in lateral width and anteroposterior diameter during inspiration. Unequal movement suggests reduced ventilation to the affected side.

Table 1-2 Respiratory pattern



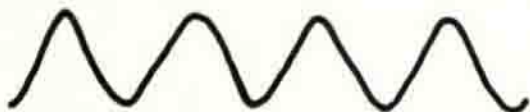


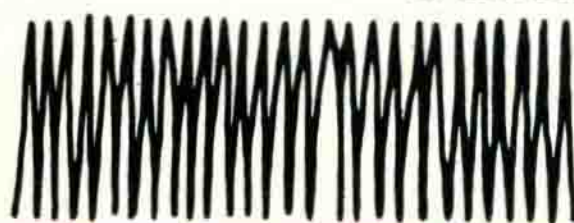
Type/Pattern	Rate (breaths per minute)	Clinical Significance
Eupnea	16-20	Normal
		
Tachypnea	>35	Respiratory failure Response to fever Anxiety Shortness of breath Respiratory infection
		
Bradypnea	<10	Sleep Respiratory depression Drug overdose Central nervous system (CNS) lesion
		
Apnea	Periods of no respiration lasting >15 seconds	May be intermittent such as in sleep apnea Respiratory arrest
		
Hypernea	16-20	Can result from anxiety or response to pain Can cause marked respiratory alkalosis, paresthesia, tetany, confusion
		
Kussmaul's	Usually >35, may be slow or normal	Tachypnea pattern associated with diabetic ketoacidosis, metabolic acidosis, or renal failure
		

Table 1-2 Respiratory pattern—cont'd

Type/Pattern	Rate (breaths per minute)	Clinical Significance
Cheyne-Stokes	Variable	Crescendo-decrescendo pattern caused by alterations in acid base status. Underlying metabolic problem or neuro-cerebral insult
Biot's	Variable	Periods of apnea and shallow breathing caused by CNS disorder; found in some healthy clients
Apneustic	Increased	Increased inspiratory time with short grunting expiratory time; seen in CNS lesions of the respiratory center

Normal muscles of respiration are the diaphragm and intercostals. Clients with respiratory alterations use the less efficient sternocleidomastoid, trapezeus, pectoral, and scalene muscles to breathe. The accessory muscles of respiration improve diaphragmatic efficiency.

Extremities are observed for color, temperature, and clubbing of the fingers (Table 1-3). Color is the most unreliable indicator of adequate oxygenation; however, it does suggest adequacy of circulation. Clients consuming nicotine will have decreased peripheral vascular circulation resulting in variable color changes and decreased temperature. Clubbing of the fingers is found in clients with chronic lung disease such as fibrosis, congenital heart disease, chronic hypoxia, or chronic obstructive lung disease (Fig. 1-2).