BOX 4–3 Preoperative Client Teaching

Diaphragmatic Breathing Exercise
Diaphragmatic (abdominal) breathing exercises are taught to the client who is at risk for developing pulmonary complications, such as atelectasis or pneumonia. Risk factors for pulmonary complications include general anesthesia, abdominal or thoracic surgery, history of smoking, chronic lung disease, obesity, and advanced age.

In diaphragmatic breathing, the client inspires deeply while allowing the abdomen to expand outward. On expiration, the abdomen contracts inward as air from the lungs is expelled.

1. Explain to the client that the diaphragm is a muscle that makes up the floor of the abdominal cavity and assists in breathing. The purpose of diaphragmatic breathing is to promote lung expansion and ventilation and enhance blood oxygenation.
2. Position the client in a high or semi-Fowler’s position (see figure below).
3. Ask the client to place the hands lightly on the abdomen.
4. Instruct the client to breathe in deeply through the nose, allowing the chest and abdomen to expand.
5. Have the client hold the breath for a count of 5.
6. Tell the client to exhale completely through pursed (puckered) lips, allowing the chest and abdomen to deflate.
7. Have the client repeat the exercise five times consecutively.

Encourage the client to perform diaphragmatic breathing exercises every 1 to 2 waking hours, depending on the client’s needs and institutional protocol.

Coughing Exercise
Coughing exercises are also taught to the client who is at risk for developing pulmonary complications. The purpose of coughing is to loosen, mobilize, and remove pulmonary secretions. Splinting the incision decreases the physical and psychologic discomfort associated with coughing.

1. Assist the client in following steps 1 through 4 for diaphragmatic breathing.
2. Ask the client to splint the incision with interlocked hand or pillow (see figure below).
3. Tell the client to take three deep breaths and then cough forcefully.
4. Have the client repeat the exercise five times consecutively every 2 hours while awake, taking short rest periods between coughs, if necessary.

- Remove nail polish, lipstick, and makeup to facilitate circulatory assessment during and after surgery.
- Ensure that identification, blood, and allergy bands are correct, legible, and secure.
- Remove hair pins and jewelry; a wedding ring may be worn if it is removed from the finger, covered with gauze, replaced, and then taped to the finger.
- Complete skin or bowel preparation as ordered.
- Insert an indwelling catheter, intravenous line, or nasogastric tube as ordered.
- Remove dentures, artificial eye, and contact lenses, and store them in a safe place.
- Leave a hearing aid in place if the client cannot hear without it, and notify the operating room nurse.
- Verify that the informed consent has been signed prior to administering preoperative medications.
- Weigh the client and record height and weight in the chart (for dosage of anesthesia).
- Verify that all ordered diagnostic test reports are in the chart.
- Have the client empty the bladder immediately before the preoperative medication is administered (unless an indwelling catheter is in place).
- Administer preoperative medication as scheduled (refer to “Medications” earlier in the chapter and Table 4–4).
BOX 4–3 Preoperative Client Teaching (continued)

Leg, Ankle, and Foot Exercises
Leg exercises are taught to the client who is at risk for developing thrombophlebitis (inflammation of a vein, which is associated with the formation of blood clots). Risk factors for developing thrombophlebitis include decreased mobility preoperatively and/or postoperatively; a history of difficulties with peripheral circulation; and cardiovascular, pelvic, or lower extremity surgeries.

The purpose of leg exercises is to promote venous blood return from the extremities. As the leg muscles contract and relax, blood is pumped back to the heart, promoting cardiac output and reducing venous stasis. These exercises also maintain muscle tone and range of motion, which facilitate early ambulation.

Teach the client to perform the following exercises while lying in bed:
1. Muscle pumping exercise: Contract and relax calf and thigh muscles at least 10 times consecutively.
2. Leg exercises:
   a. Bend the knee and raise it toward the chest (see figure below).
   b. Straighten out leg and hold for a few seconds before lowering the leg back to the bed.
   c. Repeat exercise five times consecutively prior to alternating to the other foot.
3. Ankle and foot exercises:
   a. Rotate both ankles by making complete circles, first to the right and then to the left (see figure below).
   b. Repeat five times and then relax.
   c. With feet together, point toes toward the head and then to the foot of the bed (see figure below).
   d. Repeat this pumping action 10 times, and then relax.

Encourage the client to perform leg, ankle, and foot exercises every 1 to 2 hours while awake, depending on the client’s needs and ambulatory status, the physician’s preference, and institutional protocol.

Turning in Bed
The client who is at risk for circulatory, respiratory, or gastrointestinal dysfunction following surgery is taught to turn in bed. Although this may be a simple task prior to surgery, after surgery (particularly after abdominal surgery) the client may find it a difficult procedure. To make the procedure more comfortable, the client may need to splint the incision by using the hand placed on a small pillow or blanket. Additionally, the client should be taught that analgesics can be given to ease postoperative discomfort involved with turning.

Encourage the client to turn every 2 hours while awake.
1. Tell the client to grasp the side rail toward the direction to be turned, to rest the opposite foot on the mattress, and to bend the knee.
2. Instruct the client to roll over in one smooth motion by pulling on the side rail while pushing off with the bent knee.
3. Pillows may need to be positioned behind the client’s back to help the client maintain a side-lying position. The older client may also need padding over pressure points between the knees and ankles to decrease the chance of decubitus ulcer formation from pressure.

Intraoperative Nursing Care
The intraoperative phase of surgery begins when the client enters the operating room and ends when the client is transferred to the postanesthesia care unit. Nursing care in this phase focuses on keeping the client and the environment safe and providing physiologic monitoring and psychologic support. Circulating nurses and scrub nurses, according to specific role definitions, support and care for the client and assist the surgeons.

- Ensure the safety of the client once the medication has been given by placing the client on bed rest with raised side rails and by placing the call light within reach.
- Obtain and record vital signs.
- Provide ongoing supportive care to the client and the client’s family.
- Document all preoperative care in the appropriate location, such as the preoperative surgical checklist, the medication record, and the narrative preoperative nursing notes.
- Verify with the surgical personnel the client’s identity, and verify that all client information is documented appropriately.
- Help the surgical personnel transfer the client from the bed to the stretcher.
- Prepare the client’s room for postoperative care, including making the surgical bed and ensuring that the anticipated supplies and equipment are in the room.

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