

PRE-OPERATIVE AND POST-OPERATIVE CARE OF THE SURGICAL PATIENT

Abstract:

Care of surgical patients in the pre-operative and post-operative phases of a procedure is an important responsibility of a Certified Nursing Assistant that requires close collaboration with all members of the surgical team. Preparing a patient for surgery requires focus on pre-operative tasks as well as patient education and psychological preparation and support. Pre-operative care of patients helps to ensure successful outcomes in the post-operative phase of recovery and healing. The surgical treatment team must always bear in mind that the surgical patient has been through very stressful experience and that serious complications are possible. By preparing the patient and reinforcing post-operative treatment the surgical health team can encourage patient compliance during all phases of recovery. The post-operative exercises and preventive measures to avoid post-operative complications to speed the recovery process are discussed.

Learning Objectives:

1. Describe the pre-operative tasks and psychological preparation of the surgical patient.
2. Describe patient education of surgical procedures and legal documentation needed.
3. Identify the serious complications that are possible after surgery.

Introduction

Taking care of a patient who is going to have surgery or who recently had surgery can be two of the most important responsibilities a Certified Nursing Assistant (CNA) will have. Surgery is a psychologically and physically stressful experience and the stress does not end after the operation is completed. Surgery may be a cure or treatment for an illness, but the recovery period may be prolonged and patients are often in discomfort following surgery. They may feel pain, weakness, and experience gastrointestinal symptoms such as nausea. Also, complications may also arise after surgery. These can delay a patient's recovery and may pose a danger to the patient. If a patient is elderly or has medical problems, the operation and the post-operative period can be risky. With the exception of some simple procedures, surgery is a serious proposition that is associated with complications and risks.

Patient Care Before Surgery

The period before a surgical procedure is called the pre-operative period, and the period after surgery is called the post-operative period. Patients must be prepared for both because surgery itself and the period of time after an operation can be stressful. Good preparation before surgery will make the post-operative period more comfortable for a patient. It will also decrease the likelihood of post-operative complications.

Preparing a patient for surgery in the pre-operative period should focus on pre-operative tasks and education, and psychological preparation and support.

Preoperative Tasks and Education

Surgery and the post-operative period typically receive a lot of attention but the pre-operative period is also important. Preparing a patient for surgery will help the patient recover physically and psychologically while preventing post-operative complications. Many of the pre-operative tasks are essential for physical recovery and for preventing post-operative complications.

Informed Consent:

One of the basic rights of all patients is the right to accept or refuse medical or surgical treatment. Surgery, invasive procedures, or any medical or surgical treatment that is not considered to be routine may only be performed if a health professional has obtained the patient's informed consent. Patient consent is not typically required if a procedure is considered to be routine, for example, a venipuncture for obtaining a blood sample.

Consent alone is not sufficient. For example, it is not sufficient for a surgeon to ask permission to remove a gallbladder and for the patient to agree. The consent to perform surgery or an invasive procedure must be accompanied by information. It must be *informed* consent.

Informed consent indicates that prior to surgery the patient has been informed by the surgeon, and that the patient understands, the following factors related to surgery.

- 1) The primary diagnosis.
- 2) The nature of the surgery or procedure.
- 3) Why the surgery or procedure is being done.
- 4) The risks and benefits of the surgery or procedure.

- 5) The risks and benefits of *not* having the surgery or procedure performed.
- 6) What outcome he or she can expect.
- 7) What the post-operative period and the recovery period will be like.
- 8) Alternatives to the surgery or procedure and their risks and benefits.

All of the above factors should be discussed with the patient and the patient must then sign a *surgical consent form*. The surgical consent form is an agreement that is signed by the physician and the patient or by the patient and a witness. The surgical consent form indicates that the information outlined in the numbered list above has been discussed with the patient and that the patient understands what was discussed.

A consent or surgical consent form is not necessary if a patient is unable to understand the risks and benefits of a surgery or procedure and there is an immediate danger to life and health. Children, minors, and people who are intellectually or psychologically incapable of understanding the risks and benefits of a surgery or procedure, cannot sign an informed consent or surgical consent form because they do not have legal capacity to give informed consent.

A surgical consent form is signed by the patient. Sometimes the surgeon will sign the form but many times a nurse will sign the form after witnessing the patient sign it. When someone signs a surgical consent form or an informed consent form as a witness, that simply indicates that the person has correctly identified the patient and witnessed the patient signing the form. It does *not* mean that the

witness explained the procedure, the risks and benefits, *etc.* That information is documented in the patient's chart by the physician. The witness is only agreeing that he or she saw the patient sign the form. The patient signing the form indicates that he or she has been informed.

The step of obtaining an informed consent by a health team member during the pre-operative period could be avoided by having the physician witness the patient signing after informing the patient of the surgical procedure. However, this does not typically happen in many busy healthcare facilities. Whether the patient signed the consent form or that the signing was witnessed is not as important as the fact that the patient was informed. It is the responsibility of the physician to fully inform the patient about a surgical procedure prior to starting surgery.

It is extremely unlikely that a CNA would be asked to witness an informed consent form being signed by the patient. If it were to happen, the CNA should decline or discuss the situation with an immediate supervisor.

Pre-Operative Checklist

The pre-operative checklist is the final document that must be completed before a patient is transferred to the operating room. It indicates that all necessary preparations for surgery have been completed. This document must accompany the patient when being transported for surgery. Table 1 provides an example of a typical pre-operative checklist. Most of these items are standard for a pre-operative checklist but the form can vary to meet the patient's needs.

For example, some patients will need to have bowel preparation prior to surgery. If so, this should be documented in the chart and on the pre-operative checklist.

Table 1: Pre-Operative Checklist

<p>Patient name Date of birth Positive patient identification by two witnesses Verification patient identity band Allergies Name of the surgery Vital signs Last time of urination Contact lenses, dentures, and hearing aids removed (if applicable) Jewelry removed Pre-operative medications (names, doses, times administered) Verification of patient fasting (as ordered by the physician) Laboratory test results X-ray test results Electrocardiogram result</p>

Completion of the pre-operative checklist is the responsibility of a nurse, nurse practitioner, or physician's assistant. The responsible person examines the patient and reviews the chart to make sure that all of the required information is in the chart and all of the required tasks (such as, taking and recording vitals signs) have been done. However, if a CNA is caring for a patient who is preparing for surgery, the CNA should make sure that the pre-operative checklist is on the chart and that it has been completed.

Fasting Requirements Before Surgery

Prior to surgery the patient may be required to be fasting and to meet certain NPO medical orders. *NPO* is an abbreviation for a Latin phrase, "*nil per os*" meaning, "nothing by mouth." This is an important pre-operative concept and will be discussed here in detail.

Patients who are preparing for surgery are required to refrain from eating or drinking for a specified period of time before the operation. This requirement is not necessary if the surgery is minor and/or only a local anesthesia will be used. General anesthesia can cause vomiting. Vomiting during surgery, or in the first few hours after surgery, can cause aspiration of stomach contents into the lungs. This can be a serious operative or post-operative complication. It is easily avoided by keeping a patient NPO.

The traditional phrase applied to these situations was *NPO after midnight*. That may still be true in some cases but the hour at which NPO begins is not as important as the amount of time the patient is NPO before the surgery. In most cases, surgeons and anesthesiologists prefer that a patient has no solid food for eight hours before an operation and no liquid four hours before the procedure. These time limits vary on a case-by-case basis. In addition, these restrictions can be relaxed if needed. For example, someone who takes an antihypertensive and a hypoglycemic drug to control diabetes, may be allowed to take medications an hour or two before surgery with a small sip of water.

Although there can be exceptions, it is much safer to keep a patient NPO unless a nurse, nurse practitioner or physician specifically orders

that it is acceptable for a pre-operative patient to have something by mouth. If in doubt, the patient should be NPO.

Skin Preparation

An intact skin is the body's first line of defense against infection. However, surgery involves breaking that line of defense with an incision. The surface of the skin is home to countless numbers of bacteria, the so-called normal flora of the skin. These bacteria are the source of most surgical wound infections. Although surgery involves sterile technique, even the most conscientious use of sterile technique cannot prevent all surgical wound infections. Because of these risk factors, preparation of the skin by a thorough cleaning before surgery is often performed. This decreases the risk of infection and it is a vital part of the pre-operative procedure.

There are too many pre-operative skin preparation techniques to discuss them here in detail. The basic procedure involves cleaning the skin on and around the surgical area and removing hair from the area that will be incised during surgery. Cleaning the surgical area is done so that the incision will not become infected and hair is removed because it can interfere with the procedure. Additionally, body hair harbors bacteria and that bacteria cannot be removed if the hair is not removed. Removing body hair by shaving was once standard procedure. Now, for many procedures, body hair is not removed. If it is removed, clippers or a depilatory cream are the preferred methods. The depilatory creams can also be used for areas that are difficult to shave. Shaving can damage the skin by creating small cuts and this increases the chances that an infection will develop.

A surgeon will write orders that will specify what part of the body is to be cleaned and how it should be cleaned. Additionally, the pre-operative skin prep order will state what product should be used and when it should be done. Do not clean any other area and only use the method(s) that have been ordered.

Sterile Technique:

The definition of the term sterile is the *absence of all living microorganisms*. This would be the optimum condition of a surgical site but it is not possible. Sterilizing skin would require extremely harsh chemicals or the application of intense heat that would cause burns. A sterile technique should be used when preparing the skin for surgery. However, skin cannot be made sterile, it can only be cleaned.

Pre-Operative Teaching

Pre-operative teaching prepares a patient for all aspects of surgery, hastens recovery, and helps prevent complications. The most important areas to cover in pre-operative teaching are 1) the surgical procedure, 2) the operative day, 3) the post-operative period, and 4) the post-operative exercises.

The Surgical Procedure

A patient should know the type of operation that will be performed and why it will be done. The first person to give this information and the primary source for this information should be the surgeon. However, a CNA should know what type of surgery is being done and why it is being done.

A CNA can provide a patient with some basic information if the patient has questions. A CNA should ask an immediate supervisor what is permissible to discuss with a patient. If a patient asks questions about the operation and it seems as if more education is needed, the CNA's immediate supervisor should be advised so that the surgeon may be notified. The CNA should not discuss details of surgery with the patient, such as the risks of the procedure, how the procedure is done, or how long before a patient may go home.

The Operative Day

A patient should be educated about what will happen the day of the surgery. The informed consent form should be signed and on the chart. The pre-operative checklist should be completed.

A CNA may be asked to help with some of the items on the checklist. For example, checking vital signs, making sure the patient is wearing an identification band, and helping the patient remove dentures or contact lenses.

The CNA will be able to review the chart to see what has been ordered. An intravenous (IV) line will often be inserted and the patient may be given some medication in preparation for the operation. These medications frequently cause drowsiness and may even put the patient to sleep.

The Post-operative Period

A patient should be informed about what to expect during the post-operative period. The CNA may be aware of what has been ordered post-operatively. Each case is different but it is common for a patient

to feel drowsy, nauseated, or in pain after the operation. The patient should be informed of this.

Patients will want to know how long the drowsiness, pain, and nausea will last. The patient will want to know when it is permitted to get out of bed, when food and water may be taken, the length of hospital stay, and when discharge to home can happen. The patient may ask you if the operation was successful. After a CNA reviews this information with the CNA's supervisor, and after checking the post-operative orders on the chart, a CNA can give the patient some basic information. However, the CNA should not offer any information beyond these basics or beyond what a supervisor has approved.

Post-Operative Exercises

Post-operative exercises can help prevent post-operative complications and they can also speed the recovery process. Teaching post-operative exercises before surgery eases stress and pain during the time they practice these exercises. It also gives the health professional time to reinforce to the patient the importance of post-operative exercises. Commonly used post-operative exercises are discussed. If the patient has a history of lung disease or is a long-time smoker, it is especially important to review and practice coughing and deep breathing. These patients are susceptible to post-operative pulmonary complications.

Coughing:

Patients are lying completely immobile during surgery and in many cases, they have been on bed rest before the operation. Because a patient has been immobile for an extended time, secretions can pool in the lungs, bacteria can grow, and a pulmonary infection can happen.

For example, if the surgery lasts between 2-3 hours, the patient is 5 times as likely to develop post-operative lung complications. In addition, patients who have abdominal or chest surgery are less likely to cough normally, as a forceful cough can be quite painful to a surgical incision in those areas.

Coughing exercises are an effective way to prevent post-operative lung infections. Coughing will help expand the lungs and bring up secretions. Coughing exercises are simple to teach and easy to do. The patient should be sitting upright and it is recommended that a towel or a small pillow be held firmly over the surgical incision. This can be done by a CNA or by the patient. Instruct the patient to take a deep breath, hold the breath for a second or two and then give a forceful cough. Cough from the belly, not the throat. Press down on the towel that is covering the incision during the cough. This is called *splinting*. It will stabilize the area, help prevent pain, and allow the patient to perform the exercises.

The exercise procedure should be repeated several times. A typical plan will be to have the patient perform 5-10 coughs and 5-10 deep breaths every two hours, but the specifics of the routine will be ordered by the physician. The patient should be informed that coughing will be required after surgery and of the reason why the coughing exercise is important. Additionally, the patient should be informed that coughing exercises can be painful but that the pain can be controlled.

Deep Breathing:

Deep breathing can be performed by itself but it is usually done along with the coughing exercise. Like coughing, it expands the lungs and prevents lung infections. The patient should be instructed to take a very deep breath, hold the breath for a second or two, and then slowly exhale. Splinting may be helpful and, in many cases, it will be necessary in order for the patient to perform deep breathing.

As with the coughing exercise, it should be explained to the patient that deep breathing exercises will be required after surgery. The importance of post-operative deep breathing should be emphasized. Deep breathing exercises can also be done using an incentive spirometer.

An incentive spirometer is a plastic tube with an attached flexible hose and a mouthpiece at the end of the hose. The tube has gradations and a plastic ball inside the tube. To use the incentive spirometer, the patient inhales as deeply as possible, places the mouthpiece in the mouth, and then exhales through the flexible tube. As the patient exhales, the movement of air will cause the plastic ball inside the incentive spirometer tube to rise, and the level of the ball is compared to the gradations.

Deep breathing exercises using an incentive spirometer provides patients and those caring for them with an objective way of measuring how well a patient is performing deep breathing exercises. An illustration of an incentive spirometer is provided below.

Incentive Spirometer



Turning:

Patients will benefit from being turned from side to side every two hours after surgery. If possible, patients should turn by themselves but some patients will need assistance. Turning from side to side prevents skin damage, increases circulation, and prevents secretions from pooling in the lungs and causing an infection.

Moving after an operation can be painful, so the CNA should take time and not rush the patient. As with coughing and deep breathing, splinting while turning may be helpful and at times it will be necessary.

Walking:

Early ambulation after surgery is frequently recommended as a method for preventing post-operative complications, specifically pulmonary complications and peripheral blood clots. Patients should be informed that the surgeon may recommend early ambulation, which will probably be painful. Preparing the patient for this is far preferable to not being informed of what to expect. If the patient understands the need for this exercise before the surgery, it will encourage compliance.

Exercises:

Patients who have had orthopedic surgery are typically required to perform specific exercises during the post-operative period. For example, someone who has had a total knee replacement will be asked to do straight leg raises, supported knee bends, and quadriceps tightening. These will often be started a few hours after the surgery.

Psychological Preparation and Support

Surgery is a stressful experience and it can be frightening. The patient is often having surgery due to a serious illness. Surgery involves risks, complications, pain, and discomfort, before and after the operation. There is the possibility that the patient's life will be drastically changed, and not all surgeries are completed successfully.

Psychological preparation and support are important in the pre-operative period. It is impossible to make a general statement about the best way to psychologically prepare someone for surgery and how to provide that person support. However, there are several things to consider related to providing patient information.

Some patients will want detailed information about the operation during the pre-operative period, the recovery period, and what life will be like after the surgery. Some patients want to know very little, and they feel most comfortable when all the decisions are made for them. There is no right or wrong way, the patient must make the decision.

It is up to each person to decide how much they know about their surgery. However, even for people who prefer to know almost nothing, they should be informed about what type of surgery they are having, when and why it is being done. It should be remembered that the surgeon is the first source of these facts, but if the surgeon has told the patient this information then the CNA can review it with the patient as needed.

It is important to be aware of the patient's fears. Fear is a normal feeling associated with surgery. Patients should be allowed to talk about their fears to the extent they desire. The best approach is simply to let the patient know that there are people who will listen and who can provide support if they want to talk. After that, the patient can decide who to confide in and what they want to express.

Post-operative Care and Complications

Post-operative care is just as important as pre-operative care. Surgery is generally a very stressful experience for patients. Pain, vomiting, and discomfort are common surgical outcomes and serious complications are possible. Knowing what to observe and do for a post-operative patient is crucial. To provide good post-operative care, the CNA must focus on the following areas of concern listed in Table 2.

Table 2: Post-Operative Care: Areas of Concern

<p>Vitals Signs Mental Status Pain Surgical Dressing Bleeding Urinary Retention Nausea and Vomiting Infection</p>

Vital Signs

The surgeon, anesthesiologist, physician's assistant, or nurse practitioner will write an order that specifies how often the vital signs should be checked. Measuring the pulse and blood pressure every 15 minutes in the first hour after the operation is not unusual. The CNA should always let the supervising nurse or physician know about a fever or an abnormal pulse or blood pressure. This is especially important when caring for a post-operative patient. Slight deviations of pulse and blood pressure may be normal after surgery, but these should still be reported. It should not be assumed that a pulse greater than 100, or a systolic blood pressure that is low, are of no concern.

Mental Status

Drowsiness is expected after surgery. This can be minimal or it may be significant. However, excessive drowsiness or drowsiness that is not improving is not normal. A nurse or physician should be informed if a patient's mental status appears abnormal.

Pain

Pain is inevitable following surgery. An incision has been made through the skin, and the swelling and bleeding at the incision increase pressure on nerve endings, contributing to the pain. Some patients will inform the CNA or nurse about their pain and request medications, but others will not.

The CNA should always ask the post-operative patient if pain is occurring, but should also be observant to recognize the nonverbal signs of pain. A patient may decide to endure the pain without taking pain medication because of feeling wary about accepting medication. Aside from specifically asking the patient about pain, the CNA should look for objective information and nonverbal cues that indicate the presence of pain. Does the patient grimace when asked to move? Is the patient hesitant about performing coughing and deep breathing exercises? Is the patient's blood pressure and heart rate elevated? If the patient is showing evidence of any of the above, the CNA may reasonably assume that a significant level of pain is occurring. Pain control is important as it increases patient compliance with post-operative movement and surgical wound healing measures, and the speed of recovery. It is also important to address physical suffering in the post-operative phase to improve standard quality measures of patient comfort during hospital care.

The level of pain a patient has will depend in part on what operation was performed. The pain associated with a minor procedure should be mild, but if the patient has had a major orthopedic surgery, such as hip surgery, the pain can be severe. There is no "normal" level of pain and each person has an individual level of tolerance. If the procedure was a simple one, and the patient is significantly uncomfortable, this

may indicate a problem. If the CNA notices the patient is uncomfortable, a nurse or physician should always be informed. If the patient is requesting pain medication more frequently than it has been prescribed, this is a warning sign.

Many healthcare facilities use pain scales to assess a patient's level of pain. A typical pain scale is the 1-10 scale. The patient is asked to remember the worst pain ever experienced and consider that a level 10. The patient is then asked to remember a painful experience that was very minor and consider that a level 1. After that, the patient is asked to assign the current level of pain a number on the 1-10 pain scale. The CNA would ask the patient, for example, "If the worst pain you have ever felt was a 10 and a very minor pain you've experienced was a 1, what would you consider your current level of pain to be?"

Surgical Dressing

A surgical dressing is a sterile cover applied over the incision. A dressing can be a small bandage, or it may be a large, complicated affair with gauze pads and tape. The surgeon will write orders that specify how to care for the dressing. It is very important to follow these orders exactly. The CNA should not change or adjust the dressing in any way that has not been ordered. The dressing should be checked frequently to make sure it is intact and that there are no loose edges. Any bleeding or unusual drainage should be noted, and if the CNA notices either one, a supervising nurse or physician needs to be notified.

Bleeding

A slight amount of bleeding can be expected at the surgical incision site. In most cases, the bleeding will be under the dressing and will not be seen until it has been changed. Bleeding that stains through the dressing is much less common and should be reported.

Urinary Retention

Urinary retention is defined as a failure to void and a documented bladder volume of > 600 mL. Post operative urinary retention (POUR) is common following anesthesia and has a varied incidence, ranging from 5 to 70 percent. Unless the patient has a diagnosed urology condition, postoperative inability to void is usually transient however can take longer to resolve in some patients. The POUR risk factors are patient-specific, procedure-specific, and anesthetic-specific. People who are older, males, and with a history of urinary retention or a neurological condition, such as cerebral palsy or multiple sclerosis, are at higher risk of having post-operative urinary retention.

Patients undergoing pelvic surgery, joint surgery, hernia repair or incontinence surgery are at higher risk of POUR. During anesthesia, an excessive IV fluid administration, certain medications or types of anesthesia administered may lead to patients experiencing more difficulty when needing to void post-operatively. The CNA should be aware that types of anesthesia and analgesics can cause urinary retention, pain, and anxiety. Also, when the patient tries to void while in a supine position this can contribute to POUR. Urinary retention can result in a prolonged hospital stay, bladder infections, an infection from urinary catheterization, and bladder dysfunction.

The last time the patient voided should be documented on the chart. The surgeon or the anesthesiologist may indicate when the patient is expected to void. If voiding has not occurred by that time, or if the patient is uncomfortable, a nurse or a physician should be notified. An ultrasound will be performed to determine the volume of urine in the bladder. If urinary retention is present, a urinary catheter can be inserted.

Nausea, Vomiting, and Constipation.

Nausea and vomiting are very common post-operative problems. In the great majority of cases, they are mild and temporary, and can be easily treated with an anti-emetic (anti-nausea) medication. If the nausea and vomiting persist and/or are causing the patient pain, a nurse or a physician should be notified. Constipation is another common gastrointestinal post-operative complication. The CNA should notify a nurse or physician if the patient is having difficulty having a bowel movement.

Infection

Despite the careful use of sterile technique, post-operative infections cannot be eliminated. There will always be patients who develop a post-operative infection, and for some patients, the risk is high. Examples are provided below.

- People who have diabetes have poor circulation.
- Long-time smokers or people who have lung disease are susceptible to post-operative pulmonary complications.
- Elderly patients do not tolerate anesthesia as well as younger patients, putting them at risk for post-operative complications.

- Even if the surgical site was carefully prepared, and the surgical procedure was performed meticulously, an incision through the skin exposes the internal environment to microorganisms.
- Regardless of age or health status, every patient who undergoes surgery is at risk for post-operative infections. The patient has been immobile, so secretions in the lungs begin to pool, and bacteria can multiply. The bladder is not emptied and bacteria can grow in the urine. Blood stagnates and may become infected in the extremities. Intact skin is disrupted by the surgical incision.

Post-operative infections can happen in the lungs, the surgical incision, and the bladder. Blood pooling in the legs can cause blood clots to form. These blood clots can become inflamed and occasionally infected. A simple way to remember these areas of concern is to use the four Ws of post-operative infections and complications: **Wind**, **Wound**, **Water**, and **Walk**. Wind is associated with pulmonary complications. Wound is associated with surgical incision complications. Water is associated with bladder complications. Walk is associated with lower extremity complications. Signs and symptoms of post-operative infection are listed in Table 3.

Table 3: Signs and Symptoms of Post-Operative Infection

<p style="text-align: center;"> Confusion Dyspnea Dysuria Fever Hypertension Hypotension Pain Peripheral edema Productive cough Purulent drainage at the incision site </p>
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**Redness at the incision site
Tachycardia
Tachypnea**

If the patient is young and healthy, and the surgery is a routine procedure, the post-operative period will be uneventful. The patient may experience some nausea, vomiting and mild pain, but no serious complications will occur. If the patient has certain risk factors and/or undergoes a major procedure, the post-operative period may be more difficult, and these patients will need careful monitoring.

Table 4: Risk Factors for a Complicated Post-Operative Period

**Advanced Age
Alcohol Use
Chronic obstructive pulmonary disease (COPD)
Cigarette Smoking
Diabetes
Dementia
Heart Disease
Immunosuppression
Liver Disease
Obesity
Sedentary Lifestyle**

Emergency Post-operative Complications

The following situations that can occur in the post-operative period are emergencies and may indicate something is seriously wrong. If any of them occur, the CNA should notify a supervising nurse or physician immediately.

Dehiscence:

When a surgical incision splits open, that is called *dehiscence*.

Dehiscence is an emergency. The CNA should not insert anything into the incision site and should not touch the area. It is important to call for help immediately. If possible, the CNA may put on sterile gloves and cover the incision site wound with a moist, sterile dressing.

Prolonged Vomiting:

Prolonged vomiting can increase intracranial pressure. It can be dangerous for someone who has cardiac disease, and it can affect the integrity of the surgical incision site. There is no exact definition of prolonged vomiting. If the vomiting is causing pain, prevents oral hydration, or is not relieved with an antiemetic medication, then it can be considered prolonged.

Surgical Incision Bleeding:

A slight bit of blood oozing, or a small stain on the surgical dressing, is not serious. However, anything more than that should be considered potentially serious, and may indicate bleeding below the surgical incision where it can't be seen.

Severe Pain:

Pain that is causing significant changes in vital signs or is causing the patient severe discomfort requires the immediate attention of a supervising nurse or physician. Any abnormal changes in the patient's vital signs or mental status may indicate underlying severe pain, and is particularly important to monitor in vulnerable patients such as the

elderly or children who are unable to clearly express symptoms of pain.

Summary

The Certified Nursing Assistant caring for the surgical patient may participate with the surgical treatment team to prepare the patient for surgery in the pre-operative period and to ensure proper treatment during the post-operative period occurs. During the pre-operative period, the surgical health team focuses on pre-operative tasks and patient education, and on the psychological preparation and support of the surgical patient. The pre-operative checklist is the final document that must be completed before a patient is transferred to the operating room. It indicates that all necessary preparations for surgery have been completed.

Post-operative care of the surgical patient addresses physical and mental health concerns the patient may be experiencing. It is important for the CNA and all members of the health team to remember that the surgical patient has just been through a very stressful experience. The patient will need to be monitored for pain, compliance with treatment, and the potential for a serious surgical complication. By supporting the patient to report pain and to adhere to post-operative medical orders, the CNA can help to prevent post-operative complications from happening and also help speed the patient's recovery and healing.