

# DIAGNOSTIC TESTS

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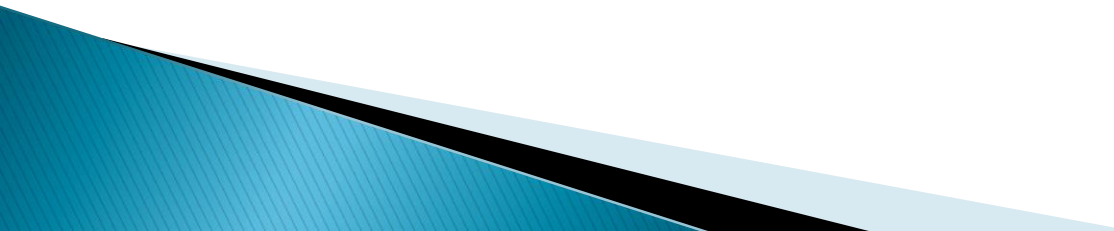
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# Types of Diagnostic Tests

- ▶ *Noninvasive:* The body is not entered with any type of instrument.
- ▶ *Invasive:* The body's tissues, organs, or cavities are accessed through some type of procedure making use of instruments.
  - Most invasive procedures require informed consent of the client.

# Preparing the Client for Diagnostic Testing

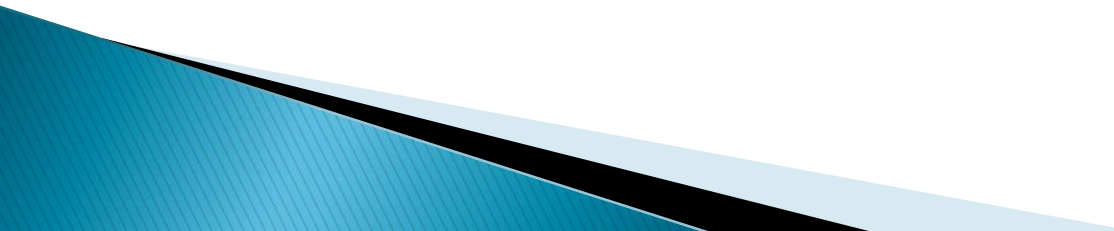
- ▶ Nurses prepare clients by ensuring client understanding and compliance with preprocedural requirements.
  - ▶ Clients, families, and significant others must be involved in the testing process and should be advised as to the estimated time required to perform the test.
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# ▶ Pretest

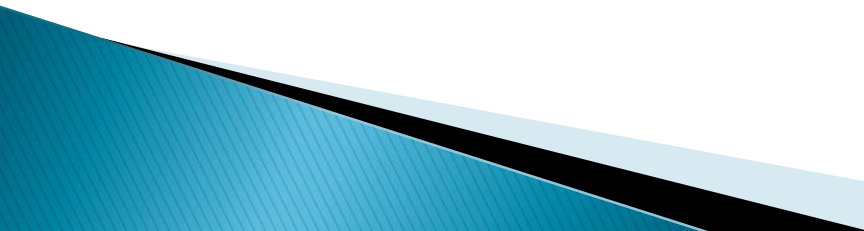
## Focus: Client Preparation

1. Teaching and communicating with the patient and Evaluating the client's anxiety level.
2. What type of sample is needed
3. How will it be collected
4. What Equipment to use
5. Does it need fasting prior to the procedure
6. Does it involve administration of dye
7. Are medications given withheld
8. Are fluids restricted or forced
9. Is consent required
10. How long is the test

# Role of the Nurse in Diagnostic Testing (**intratest**)

1. To facilitate the scheduling of tests.
  2. To perform client teaching.
  3. Preparing the procedure room (e.g. ensuring adequate lighting).
  4. Gathering and charging for supplies to be used during the procedure.
  5. Testing the equipment to ensure it is functional and safe.
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# Further Nursing Responsibilities During Diagnostic Testing

6. To perform or assist with procedures
  7. Uses standard precaution/Sterile technique as appropriate
  8. Monitors patient (VS, Pulse oximetry, ECG, etc.)
  9. Ensures correct labeling, storage and transportation of specimen
  10. To assess clients for adverse responses to procedures.
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# Care of the Client After Diagnostic Testing (**posttest**)

1. Directed toward restoring the client's prediagnostic level of functioning.
2. Compares previous and current test results
3. Client is monitored for signs of respiratory distress and bleeding.
4. With some diagnostic tests, the client's intake and output (I & O) is monitored for 24 hours.
5. Clients received written instructions upon discharge.


# Reasons for Laboratory Tests

1. To detect and quantify the risk of future disease.
2. To establish or exclude diagnoses.
3. To assess the severity of the disease process and formulate a prognosis.
4. To guide the selection of interventions.
  - ▶ To monitor the progress of the disorder.
  - ▶ To monitor the effectiveness of the treatment.



# Accuracy in Laboratory Testing

The following are required

1. The practitioner's order must be transcribed onto the correct requisition form.
  2. All information must be written on form.
  3. Pertinent data that could influence the test's results must be included.
  4. Collection of the specimen from the correct client must be confirmed by checking the identification card.
  5. Laboratory results must be placed in the correct medical record.
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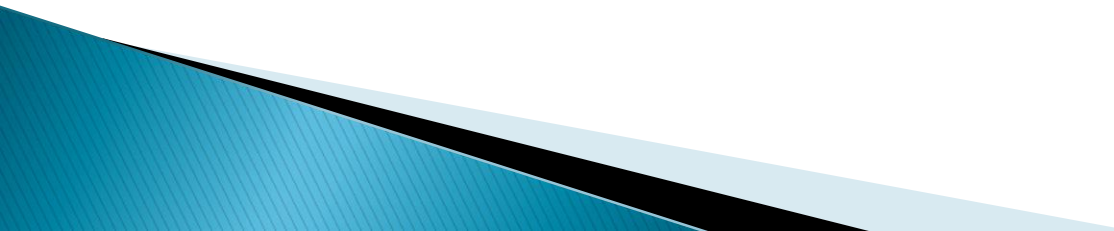
# Types of Specimen Collection

1. *Venipuncture*: the use of a needle to puncture a vein to aspirate blood.
2. *Arterial puncture*.
3. *Capillary puncture*.
4. *Central Lines*: refers to a venous catheter inserted into the superior vena cava through the subclavian or internal or external jugular vein.
5. *Implanted port*: a port that has been implanted under the skin.
6. *Urine collection*.
7. *Stool collection*

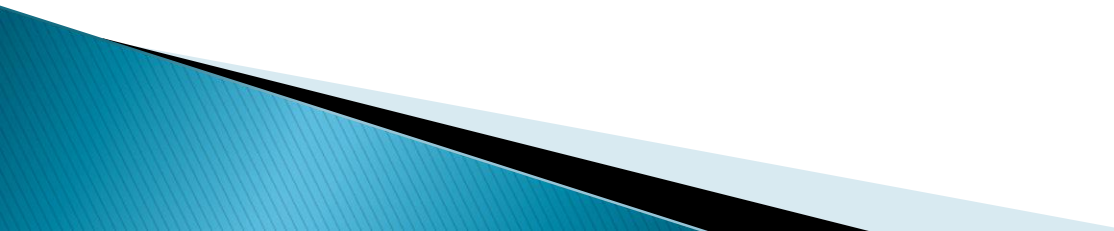
# Nursing Care after the Extraction of Blood

- ▶ Immediately after blood is drawn, pressure is applied (with cotton or gauze) to the puncture site.
- ▶ Resume your normal activities and any medications withheld before the test.
- ▶ Blood may collect and clot under the skin (hematoma) at the puncture site; this is harmless and will resolve on its own. For a large hematoma that causes swelling and discomfort, apply ice initially; after 24 hours, use warm, moist compresses to help dissolve the clotted blood.

# Types of Urine Collection

- ▶ Random (routine analysis)
  - ▶ Timed (24-hour urine)
  - ▶ Collection from a closed urinary drainage system.
  - ▶ Sterile specimen (catheterized)
  - ▶ Clean-voided specimen.
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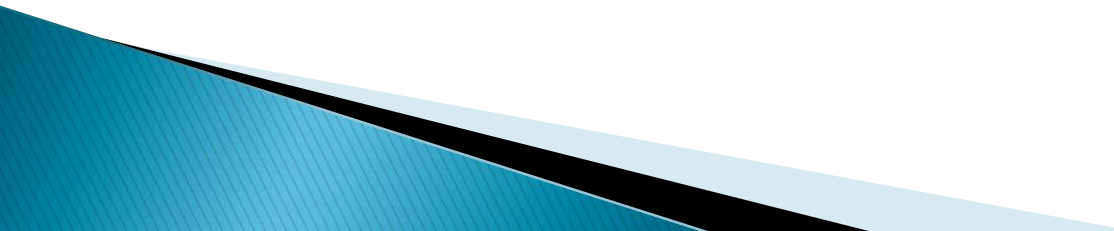
# Types of Urine Tests

- ▶ Urine pH.
  - ▶ Specific Gravity.
  - ▶ Urine Glucose.
  - ▶ Urine Ketones.
  - ▶ Urine Cells and Casts.
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# Procedures for Stool Collection

- ▶ Explain to client the reason for collection.
- ▶ Refrigerate stools if collected for a prolonged period of time.
- ▶ Label container with client's name, date and time, and test to be performed on the specimen.
- ▶ Place stool specimens in biohazard bag before transport to laboratory.

# Types of Stool Tests

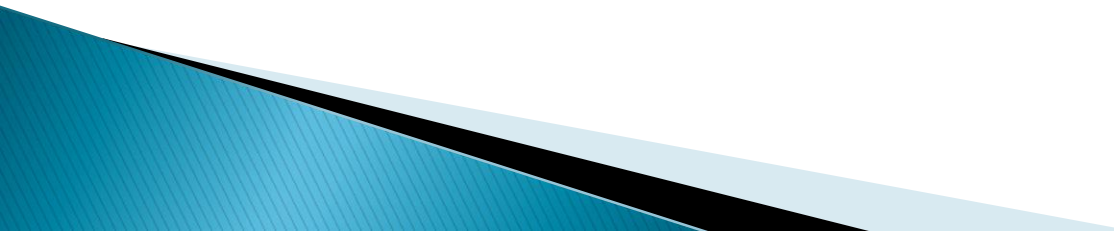
- ▶ Urobilinogen.
  - ▶ Occult blood (blood in the stool detected only with a microscope or by chemical means).
  - ▶ Parasites.
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# Type and Crossmatch

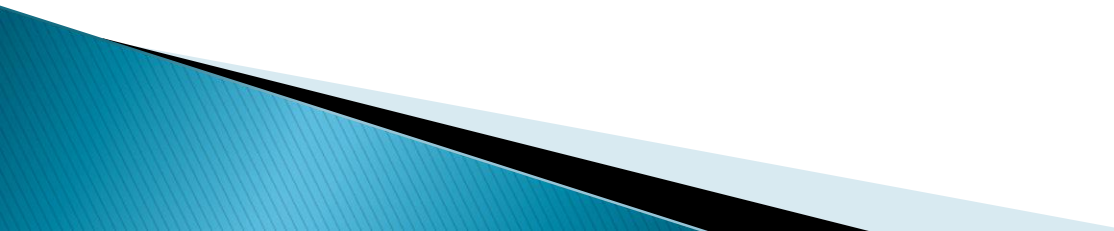
- ▶ Identifies the client's blood type and determines the compatibility to blood between a potential donor and recipient (client).



# Blood Chemistry

- ▶ Blood Glucose.
  - ▶ Serum Electrolytes.
  - ▶ Blood Enzymes.
  - ▶ Blood Lipids.
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# Culture and Sensitivity Tests

- ▶ *Culture* refers to the growing of microorganisms to identify the pathogen.
  - ▶ *Sensitivity tests* are performed to identify both the nature of the invading organism and its susceptibility to commonly used antibiotics.
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# Types of Culture and Sensitivity Tests

- ▶ Blood Culture.
  - ▶ Throat (Swab) Culture.
  - ▶ Sputum Culture.
  - ▶ Urine Culture.
  - ▶ Stool Culture.
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