Equipment you may see in the ICU

Many patients with brain injuries will appear to be asleep. Others are very restless, irritable, and combative. A patient has no control over this. This happens because the brain has been injured and is not working “normally.” Often families become anxious or embarrassed by this. We know it does not show your loved one’s true personality. Sedation may be used to calm your loved one. It takes time for the brain tissue to heal and for these behaviors to resolve. Staff realizes it is the head injury, not the patient, causing the behavior.

There may be equipment at the bedside, which is unfamiliar to you. Many families say this is frightening. If you have questions about anything, please ask.
Equipment you may notice

**Arterial Line or Art-Line**
The art-line is a catheter that goes into an artery (usually in the wrist). We can get blood pressure readings from this art-line. It also allows the nurse to take blood samples.

**Central Venous Pressure Line, or Central Line, or Triple Lumen**
This is a large catheter (IV) placed into one of the large blood vessels of the shoulder, neck, or groin. The catheter’s large size allows drugs and fluids to be given quickly and easily. With these IVs, several solutions can be given at the same time. It can also measure blood pressures. This helps us know if the patient needs more or less fluid.

**Endotracheal Tube (ET Tube)**
Often, people with head injuries are not as awake as usual. This can mean they may need help to breathe. If your loved one needs this help, a tube will be placed into the mouth or nose and then into the trachea (wind pipe). The tube attaches to the ventilator (see below for more on ventilators). The ET tube passes through the vocal cords, so your loved one will not be able to talk until the tube is removed.

![Endotracheal Tube Diagram](image)

**Foley Catheter**
This is a flexible rubber tube (catheter) placed into the bladder to drain urine. This helps us to measure the amount of urine coming out.
Intracranial Pressure Monitor (ICP monitor)
This is a small pressure sensor that is placed surgically beneath the skull. It attaches to the ICP monitor at the top of the bed. It allows staff to continuously watch the ICP.

Intravenous Line (IV)
IV lines allow access to veins for fluids and medications. We will try to place the IVs in sites that might be more comfortable for the patient. We will need to avoid tough or fragile veins though.

Intravenous Pumps (IV)
Along-side the bed there will be several poles with small machines attached. It is common to see several machines and bags of fluid at the bedside. The IV pumps deliver fluids and medications to your loved one.

Monitor
The monitor is a machine at the side or head of the bed. It helps to watch the heart rate and rhythm. It also gives readings of blood pressure, respirations, and heart and lung pressures when needed.
**Naso-Gastric or Oral-Gastric Tube**  
A small, flexible tube is placed into the nose or mouth and extends into the stomach. It is attached to a suction bottle on the wall near the bed. It removes stomach contents. This helps prevent nausea and vomiting. Later, it may be used to provide nutrition called “tube feedings.”

**Feeding Tubes**  
The patient may be fed through an IV at first. Later a tube can be placed into the nose, and then down the swallowing tube (esophagus) into the stomach (called a nasogastric tube or NG) to provide nutrition. When the patient wakes up more, the speech therapist will help make sure he can eat safely. Swallow tests will be done as needed. The NG may be used for a while. If it is needed for a period of time, a gastrostomy feeding tube (G tube) may be inserted. This is a tube that goes right into the stomach. This option may seem scary at first. It is an important way to provide the nutrition needed for healing and growth. It also allows your loved one’s face to be free of tubes. Also, the tube is less likely to be pulled out by mistake.

**Neck Brace**  
There are two types of neck braces: hard and soft. One type of hard collar is called a Philadelphia collar (Philly collar for short). When the head was injured, the neck could have also been twisted. Your loved one may not be able to tell us this. To prevent further injury, the collar immobilizes the neck. The collar will be removed when the patient is more stable.

**Pulse Oximetry (pulse ox)**  
This piece of equipment fits over a finger, toe, or ear. It shines a red light through the skin. It measures the amount of oxygen in the blood. It is normally more than 92%.

**Swan-Ganz Catheter**  
This specialized catheter is used to obtain measures of pressure and fluid status. It takes readings from places in the heart and lungs.

**Venodynes or Sequential Compression Stockings**  
These are plastic tubes wrapped in sleeves which are placed around the legs. They are connected to a machine under the bed, which blows air into the tubes. The pressure on the legs helps blood flow better to prevent blood clots.

**Traction**  
Sometimes bones may not heal well in a cast. They may need to have a small amount of tension or weight placed at the fracture site. This helps the bones heal in the best position. The tension is created by a series of cords, bars, and weights.
**Restraints**
Restraints are soft cloth devices used to prevent your loved one from pulling out tubes or IV lines by mistake. Restraints can be wrapped around the wrist or covering the hands. Staff will be watching closely while the restraints are on.

**Ventilator**
This machine is used to help your loved one breathe and keep enough oxygen in the blood. A tube is inserted through the mouth or nose into the trachea (wind pipe) and is attached to the ventilator. The patient will not be able to talk until this tubes removed.

**Ventriculostomy**
This is a catheter that goes into the ventricles or spaces of the brain. It is used to watch and control the pressure in the brain. Pressure can rise if natural fluid (cerebral spinal fluid, CSF) builds up. This device is just a temporary solution. This picture shows what it looks like.
Shunt
A shunt is a thin plastic tube placed into the fluid spaces of the brain. The shunt keeps CSF draining from the brain down into the abdominal cavity. It may be needed to treat hydrocephalus. This is when CSF builds up instead of being absorbed. This extra fluid can cause pressure on the brain.

Chest Tubes
These tubes are inserted into the pleural space (space between the ribs and the lungs). They drain fluid, air, or blood that can collect in this space. This tube will be attached to a drainage system. Sometimes suction is used to help it drain better. The suction causes the bubbling noise heard at the end of the bed.