

# The NICU

When you are thrown into the whirlwind of a Neonatal Intensive Care Unit (NICU) experience, little else in your life will have seemed comparable. It can happen so fast that you don't even have time to think about how to deal with it and you may only react to each situation as it comes along.

If machines keep going off and frightening you, whether they belong to your baby or not, knowing what is happening will help ease your mind. It won't take away the anxiety you develop from hearing the alarms, but it will help you understand what they are all about.

## **What are these wires and tubes connected to my baby?**

The monitors provide the nurses and doctor with important information continuously. As much as possible these monitors are painless and non-invasive (attach to the outside of the skin). Your baby will have some, but probably not all, of the following:

- ✓ **Cardiorespiratory Monitor:** This is sometimes referred to as a Heart Monitor or a C-R Monitor. Three adhesive patches with wires connected to them are placed on the baby's chest, abdomen, arms or legs. The wires travel to a machine that displays the baby's heart rate, heart beat pattern, breathing rate and breathing pattern.
- ✓ **Pulse Oximeter:** The "pulse ox" continuously measures the baby's blood oxygen. There is a tiny light which is attached to the baby's palm, foot, finger, toe, or wrist by a piece of adhesive elastic. A cord travels from the light to a machine that displays the amount of oxygen being carried by red blood cells in the baby's body. This may be part of the cardiorespiratory monitor or a separate monitor.
- ✓ **Blood Pressure Monitor:** Blood pressure may be measured periodically by a small cuff placed around the baby's arm or leg, or may be measured continuously if the baby has a catheter (tiny tube) into one of the baby's arteries.
- ✓ **Temperature Probe:** A coated wire will be placed on the baby's skin and covered with an adhesive patch. The coated wire measures the baby's temperature. This information is used to help regulate the amount of heat from the overhead heater or isolette.
- ✓ **IV (intravenous infusion):** This is a needle, or small tube, that is placed into one of the veins of the infant. It is attached by tubing to a container of fluid. It is used to deliver fluids, medications and nutrients to the baby. Common sites for IVs are hands, feet, arms, legs, and scalp.
- ✓ **Umbilical artery catheter (UAC) or Umbilical venous catheter (UVC):** This is a small piece of tubing threaded into the baby's artery or vein in the umbilical stump. In addition to delivering fluids, medication, and nutrients, blood can be withdrawn painlessly for laboratory studies.
- ✓ **Transcutaneous Oxygen and/or Carbon Dioxide Monitor:** This machine measures oxygen and/or carbon dioxide at the skin. A small circular piece attaches to the skin with a thin circle of adhesive. This piece both heats up a tiny area of skin and measures the oxygen, carbon dioxide, or both. A tiny cord travels from the circular piece to a machine which displays the information. The oxygen measurement is different from that of the pulse oximeter so the numbers are different, usually lower. Because the skin must be heated, there may be a red spot where the circular piece has been. The location of the piece is changed regularly. The red spots will fade over time.
- ✓ **CPAP (Continuous Positive Airway Pressure):** Oxygen (or air) is delivered under a small amount of pressure usually through little tubes that fit into the nostrils of the nose. Delivering oxygen under pressure helps keep the air sacs in the lung open.
- ✓ **Endotracheal Tube:** This is a tube that goes from the baby's mouth or nose into the baby's windpipe (trachea). It is secured with tape and attaches by tubing to a breathing machine. It allows the machine to deliver air directly to the baby's lungs.
- ✓ **Respirator or Ventilator:** This is a machine to help your baby breathe. Some machines make the baby's own breaths bigger (synchronized ventilation), or give breaths like the baby should be taking. Others, called high frequency ventilators, hold the lungs open with a constant pressure and then give hundreds of tiny puffs of air or oxygen each minute.
- ✓ **Synchronizer:** This is a small soft circle attached to the abdomen. It is used only with certain kinds of breathing machines. It tells the machine when the baby starts to take a breath so the machine breaths can be timed to the baby's own breaths.