

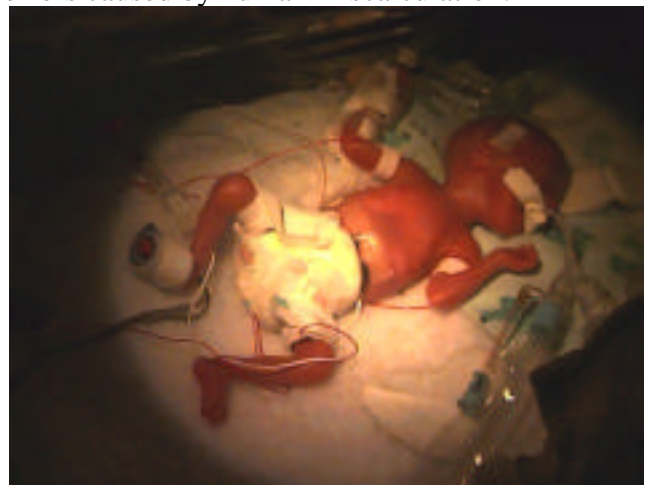
**Syringe Pumps: Medfusion in the NICU**  
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A Syringe pump is a biomedical device used in hospitals to deliver fluid through tubing into a patient. The device is an external microprocessor with a syringe automatically filled with a precise amount of medication. The device is connected to the patients IV catheter. There are many advantageous to this medical equipment, and new developments in this line of products are further helping patients and doctors.



The Medfusion Pump is a specific syringe pump, from the brand MEDEX, Inc. It is used in a hospital setting, usually in intensive care units. This product offers specific advantageous over other lines, and is an alternative to IV fluid. The Medfusion pump allows fluid from the syringe allows a meticulous low volume must be administered. It also allows the drug to be administered without as much excess fluid as would be in an IV. It also allows blood to pass through, so small amounts of blood may be transfused to patients. The maximum capacity of the syringe pumps is about 9999 mL. There are 4 basic delivery modes with each category having several options in terms of units. Body Weight Mode ( $\mu\text{g}/\text{kg}/\text{min}$ ,  $\mu\text{g}/\text{kg}/\text{HR}$ ,  $\text{MG}/\text{kg}/\text{min}$ ,  $\text{MG}/\text{kg}/\text{R}$ ), Mass Mode ( $\mu\text{g}/\text{min}$ ,  $\mu\text{g}/\text{HR}$ ,  $\text{MG}/\text{min}$ ,  $\text{MG}/\text{HR}$ ,  $\text{mU}/\text{min}$ ,  $\text{mU}/\text{HR}$ ,  $\text{U}/\text{min}$ ,  $\text{U}/\text{HR}$ ), Continuous Mode ( $\text{ml}/\text{min}$ ,  $\text{ml}/\text{HR}$ ) and Volume Over Time Mode (dose volume/delivery time) are the options available. The variety allows the

physicians and nurses to better meet the needs of the patients. This pump senses the size of the syringe. There is an alarm mode, which is there to detect possible miscalculations in terms of dosage; the Body Weight Mode is especially helpful in cutting down on the number of dosage errors caused by human miscalculation.



Although the Medfusion pump can be used in a variety of clinical settings, it is important and beneficial device in the NICU (Neonatal Intensive Care Unit). The NICU, which serves newborn babies, mostly premature. These infants have volatile health, and very specific medical needs. For example, preemies are very sensitive to fluid, related to the topic of syringe pumps. These babies may weigh as little as one pound, and usually less than five pounds. When their weight is so low, it is easy to understand why they would be so sensitive to fluid intake. The low weight also exemplifies how the meticulous differences in medicinal dosages can cause a large scale problem with in baby's health.

Although there are several other brands of syringe pumps on the market, and other patient groups whose needs may be met by these products, the Medfusion pumps has been spoken highly of by professionals working in the NICU.