ABSTRACT

Infants who born before 37 weeks of the gestation period are known as preterm or premature babies. Preterm baby requires surrounding exactly similar as in the womb to cope with the external environment. In fact mammals have the advantage of being homoeothermic, i.e. they have a nearly uniform body temperature, regulated independent of the environmental temperature.

Vital organs or enzymes of premature babies grow to the very lesser extent and thus requires special attention to cope with external physical condition like temperature, humidity, light and oxygen level. The infant has several disadvantages in terms of thermal regulation. An infant has a relatively large surface area, poor thermal insulation, and a small amount of mass to act as a heat sink. The newborn has little ability to conserve heat by changing posture and no ability to adjust their own clothing in a response to thermal stress. To provide the similar environment as in the womb infants have to be kept in a device known as incubator.

An infant incubator is a device consisting of a rigid box-like enclosure in which an infant may be kept in a controlled environment for medical care. An infant incubator provides stable levels of temperature, relative humidity and oxygen concentration The relative humidity should follow set values according to the number of incubation days.