Thermoregulation Importance of Thermoregulation: After establishing respiration, maintaining an adequate body temperature is critical for a newborn's survival. Although newborns can generate heat, several factors make them susceptible to significant heat loss. Large Surface Area Relative to Body Weight: o Newborns have a relatively large body surface area compared to their body weight, which increases the risk of heat loss to the surrounding environment. Thin Subcutaneous Fat Layer: 1.2.2.3.