

Lancaster, Craig, et al, 2006). Diagnosis of fever without a focus should not be made based on tympanic thermometry, because it is not an accurate measure of core temperature (Batra, Saha, and Faridi, 2012; Devrim, Kara, Ceyhan, et al, 2007; Dodd, Lancaster, Craig, et al, 2006).

- **Temporal artery temperature (TAT):** TAT is not predictable for fever in young children but can be used as a screening tool for detecting fever less than 38° C (100.4° F) in children 3 months to 4 years old (Al-Mukhaizeem, Allen, Komar, et al, 2004; Callanan, 2003; Fortuna, Carney, Macy, et al, 2010; Hebbar, Fortenberry, Rogers, et al, 2005; Holzhauer, Reith, Sawin, et al, 2009; Schuh, Komar, Stephens, et al, 2004; Siberry, Diener-West, Schappell, et al, 2002; Titus, Hulse, Heckman, et al, 2009). However, a study by Batra and Goyal (2013) found that temporal artery temperature correlated better with rectal temperature than axillary and tympanic measures in a group of 50 afebrile children between the ages of 2 and 12 years old.

Apply the Evidence: Nursing Implications

- No single site used for temperature assessment provides unequivocal estimates of core body temperature.
- Studies show that the axillary and tympanic measures demonstrate poor agreement when these modes are compared with more accurate core temperature methods. The differences are more evident as temperature increases, regardless of age.
- TAT is not predictable for fever and should be only used as a screening tool in young children.
- When an accurate method for obtaining a correct reflection of core temperature is needed, the rectal temperature is recommended in younger children and the oral route in older children.

For infants younger than 1 month old, axillary temperatures are recommended for screening.