

Purpose: The purpose of this study was to verify whether the older is colder. We examined normal body temperature values of senior dwellers in nursing home, and the effects of measurement routes, gender and age on temperature values.

Design: A prospective, descriptive and correlational design.

Method: A total of 308 subjects between 65 and 102 years old were recruited from 17 nursing homes in Taiwan Taipei city during November 2007 to March 2008. Rectal, oral, ear based, axillary and ambient temperatures were simultaneously measured between 8 a.m. to 10 a.m. by electronic infrared thermometer and electrical thermometer.

Results: The average rectal, oral, ear based, and axillary temperatures were 37.00, 36.86, 36.41, and 36.52C, respectively. Both ear-based (SD=0.45, range=34.3~37.3), and axillary (SD=0.40, range=35.3~37.5) temperatures have higher variability (wide range and large standard deviation). The body temperature measured from four different sites had statistically significant difference between males and females. Female's body temperatures were higher than males. Weak relationship between age and rectal temperature ($r=0.194$, $p=0.028$) was found. There was no significant relationship between age and body temperature taken from other routes.

Conclusion & Suggestions: The hypothesis "the older is colder" was not confirmed. The senior dwellers of nursing home were not certainly lower in body temperature. In addition, body temperatures taken from rectal site and of female were slightly higher. The results of this study can be assessing body temperature of the elders in geriatric setting.

Keywords: axillary temperature, ear based temperature, nursing home, oral temperature, rectal temperature, senior, Taiwan