Liking sweets makes sense for kids

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As any parent knows, children love sweet-tasting foods. Now, new research from the University of Washington and the Monell Center indicates that this heightened liking for sweetness has a biological basis and is related to children's high growth rate.

"The relationship between sweet preference and growth makes intuitive sense because when growth is rapid, caloric demands increase. Children are programmed to like sweet taste because it fills a biological need by pushing them towards energy sources," said Monell geneticist Danielle Reed, PhD, one of the study authors.

Across cultures, children prefer higher levels of sweetness in their foods as compared to adults, a pattern that declines during adolescence. To explore the biological underpinnings of this shift, Reed and University of Washington researcher Susan Coldwell, PhD, looked at sweet preference and biological measures of growth and physical maturation in 143 children between the ages of 11 and 15.

The findings, reported in the journal Physiology *& Behavior*, suggest that children's heightened liking for sweet taste is related to their high growth rate and that sweet preferences decline as children's physical growth slows and eventually stops.

Based on the results of sensory taste tests, children were classified according to their sweet taste preference into a 'high preference' or 'low preference' group. Children in the 'low preference' group also had lower levels of a biomarker (type I collagen cross-linked N-teleopeptides;

NTx) associated with bone growth in children and adolescents.

"This gives us the first link between sweet preference and biological need," said Reed. "When markers of bone growth decline as children age, so does their preference for highly sweet solutions."

Other biological factors associated with adolescence, such as puberty or sex hormone levels, were not associated with sweet preference.

"We now know that sweet preference is related to physical growth. The next step is to identify the growth-related factor that is signaling the brain to influence sweet preference," said study lead author Coldwell, Washington Dental Service Endowed Professor and Associate Professor of Dental Public Health Sciences at the University of Washington School of Dentistry.

Source: Monell Chemical Senses Center