

[< Back to results](#) | 1 of 1[Export](#) [Download](#) [Print](#) [E-mail](#) [Save to PDF](#) [Add to List](#) [More... >](#)[Full Text](#) [View at Publisher](#)International Journal of Engineering and Technology(UAE) [Open Access](#)
Volume 7, Issue 2, 2018, Pages 287-291

The association of maternal diet and polyamines in human milk : A study among malay ethnic mothers in kuantan, malaysia (Article)

Kamaruzzaman, P.A.A.^a, Ghani, R.A.^a [✉](#), Ibrahim, M.^b, Shukri, N.A.M.^b [👤](#)^aDepartment of Biomedical Science, Kulliyah of Allied Health Sciences, International Islamic University Malaysia, Kuantan Pahang, Malaysia^bDepartment of Nutrition Science, Kulliyah of Allied Health Sciences, International Islamic University Malaysia, Kuantan Pahang, Malaysia

Abstract

[View references \(28\)](#)

Human milk contains a lot of nutrient and it offers advantages to infant age less than six months. Polyamines in milk accelerate the infants' gut maturation and protect babies from the harsh environment. Maternal diet is a factor which can affect the polyamines variability in milk. To date, no research on local diet and the composition of human milk has been investigated. This study aimed to identify an association between Malaysian maternal diet and composition of polyamines in human milk. Seventy nursing mothers were recruited in Pahang and each mother recorded their 24-hours food consumption within a week. Maternal diets were recorded in Nutritionist Prosoftware and the macronutrients were calculated. Milk samples were collected from each mother after 24 h of food diary. Polyamines in milk were extracted using 0.4 M Perchloric acid, dansylated and quantified using HPLC. The mean age of the respondent was 30.13 years [SD= 3.145]. Nursing mothers consumed high carbohydrate [41.4%] compared to fat [23.1%] and protein [13.7%]. Spermidine [49.1%] was the highest polyamines in the breast milk samples. A significant correlation were shown between putrescine and dietary carbohydrate [$p=0.027$] and putrescine and dietary protein [$p=0.031$]. The maternal education levels has no association with maternal diet pattern and breastfeeding practice in this study [$p=0.657$]. It is suggested that polyamines composition in human milk may be modulated by carbohydrate and protein intake among maternal mother. © 2018 Authors.

Author keywords

[Human milk](#) [Malaysia](#) [Maternal diet](#) [Polyamines](#)

ISSN: 2227524X

Source Type: Journal

Original language: English

DOI: 10.14419/ijet.v7i2.29.13334

Document Type: Article

Publisher: Science Publishing Corporation Inc

References (28)

[View in search results format >](#) All [Export](#) [Print](#) [E-mail](#) [Save to PDF](#) [Create bibliography](#) 1 (2014) *Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition*. Cited 34 times. In: Organization WH, editor. USA2014 2 (2015) *Related maternal nutrition*
In: Fund UNICSE, editor

Metrics [?](#)

0 Citations in Scopus

0 Field-Weighted

Citation Impact



PlumX Metrics [v](#)

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)[Set citation feed >](#)

Related documents

Polyamines in human breast milk | Anne Sütünde Poliaminler

Büyüksulu, N.
(2015) *Guncel Pediatri*

Polyamine profile in ovine and caprine colostrum and milk

Galitsopoulou, A. , Michaelidou, A.-M. , Menexes, G.
(2015) *Food Chemistry*

Polyamines in human breast milk for preterm and term infants

Plaza-Zamora, J. , Sabater-Molina, M. , Rodríguez-Palmero, M.
(2013) *British Journal of Nutrition*

View all related documents based on references

Find more related documents in Scopus based on:

[Authors >](#) [Keywords >](#)

3 Kramer, M.S., Kakuma, R.
Optimal duration of exclusive breastfeeding.
(2002) *Cochrane database of systematic reviews (Online)*, (1), p. CD003517. Cited 358 times.

4 McGuire, S.
World health organization. Comprehensive implementation plan on maternal, infant, and young child nutrition. Geneva, Switzerland, 2014
(2015) *Advances in Nutrition*, 6 (1), pp. 134-135. Cited 9 times.
<http://advances.nutrition.org/content/6/1/134.full.pdf>
doi: 10.3945/an.114.007781

View at Publisher

5 (2005) *Recommended Nutrient Intakes for Malaysia*. Cited 72 times.
A Report of the Technical Working Group on Nutritional Guidelines

6 Wang, W., Lau, Y., Chow, A., Chan, K.S.
Breast-feeding intention, initiation and duration among Hong Kong Chinese women: A prospective longitudinal study
(2014) *Midwifery*, 30 (6), pp. 678-687. Cited 9 times.
<http://intl.elsevierhealth.com/journals/midw/>
doi: 10.1016/j.midw.2013.07.015

View at Publisher

7 Oakley, L.L., Henderson, J., Redshaw, M., Quigley, M.A.
The role of support and other factors in early breastfeeding cessation: An analysis of data from a maternity survey in England
(2014) *BMC Pregnancy and Childbirth*, 14 (1), art. no. 88. Cited 16 times.
<http://www.biomedcentral.com/1471-2393/14/88>
doi: 10.1186/1471-2393-14-88

View at Publisher

8 Ali, M.A., Strandvik, B., Palme-Kilander, C., Yngve, A.
Lower polyamine levels in breast milk of obese mothers compared to mothers with normal body weight
(2013) *Journal of Human Nutrition and Dietetics*, 26 (SUPPL.1), pp. 164-170. Cited 16 times.
doi: 10.1111/jhn.12097

View at Publisher

9 Larqué, E., Sabater-Molina, M., Zamora, S.
Biological significance of dietary polyamines
(2007) *Nutrition*, 23 (1), pp. 87-95. Cited 142 times.
doi: 10.1016/j.nut.2006.09.006

View at Publisher

10 Anderson, R.C., Dalziel, J.E., Gopal, P.K., Bassett, S., Ellis, A., Roy, N.C.
(2012) *The role of intestinal barrier function in early life in the development of colitis*. Cited 10 times.
Colitis: InTech