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A Systematic Review on Flavonoid Composition in Human Milk

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Structured Abstract

Background: Flavonoids are a large group of polyphenolic compounds with a benzopyrone structure produced by the phenylpropanoid pathway and can be found in all plants. There are seven types of flavonoids found in human milk which were epicatechin, epicatechin gallate, epigallocatechin gallate, naringenin, kaempferol, hesperetin, and quercetin. In human milk, flavonoids play an important role in preventing allergy and reducing oxidative stress.

Methods: In this systematic review, PICO tool were used to identify components of clinical evidence. Electronic databases such as Web of Science and Scopus were used in this study to search for articles. The articles were screened based on title and abstract. Only articles with inclusion factors were selected.

Results: Based on four included articles, types of flavonoids found in human milk are daidzein, genistein, naringenin, quercetin, epicatechin, kaempferol, epigallocatechin, epicatechin gallate, epigallocatechin gallate, and hesperetin. Epigallocatechin has the highest concentration in human milk while kaempferol has the lowest concentration in human milk. The findings also show that flavonoid such as daidzein and genistein in human milk increase after intervention of soy drinks.

Conclusion: In conclusion, there are seven types of flavonoids found in human milk which were epicatechin, epicatechin gallate, epigallocatechin gallate, naringenin, kaempferol, hesperetin, and quercetin flavonoids. Flavonoid epigallocatechin gallate can be found in abundance in human milk, while kaempferol has the lowest concentration in human milk. The dietary intake of mothers also affects flavonoids levels in human milk. The concentration of flavonoids in human milk increase when the intake of food with flavonoids increase.

Keywords: Human milk, flavonoid

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