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**MATRIC NUMBER: 17/SCIO3/019**

**COURSE CODE: BCH 308**

**COURSE TITTLE:FOOD AND NUTRITIONAL BIOCHEMISTRY**

**QUESTION**

**Explain the suitability if human breast milk over cow milk**

**ANSWER**

**Here are the major differences between cow and human breast Milk explained**

**Protein:**

**Leucine is a unique amino acid which is linked with growth. Animals that grow quickly after birth have higher levels of protein and leucine in their milk; cows have 3.3% leucine, humans have 0.9% leucine. Calves double their birth weight in 40 days; humans double theirs after 180 days.**

**Another difference is the ratio of casein to whey in milk. Cow’s milk has a ratio of 80:20, human’s 40:60 casein: whey. Casein is harder to digest. So humans don’t have as much in their milk.**

**Fat.**

**whole cow’s milk has almost the same amount of fat as human milk, but there the similarity ends. Cow’s milk contains 2.5% saturated fat, 1.0% monounsaturated and 0.1% polyunsaturated fat, while human milk contains 1.8% saturated fat, 1.6% monounsaturated fat and 0.5% polyunsaturated fat.**

**The higher level of unsaturated fatty acids in human milk reflects the important role of these fats in brain development. In humans the brain develops rapidly during the first year of life, growing faster than the body.**

**Human milk also contains the fatty acids arachidonic acid and docosahexaenoic acid, both of which are essential for brain development and functioning; cow’s milk does not contain these fatty acid.**

**Did you know that there is a Lactation Specialist at TMR International Hospital? If you would like to meet Dr Doreen Mazakpwe, please call our reception to make an appointment.**