Lactose Intolerance

Lactose malabsorption (LM): lactose deficiency, lactose intolerance, milk intolerance.

The consumption of animal milk has been sold as a natural and healthy way to take calcium into the body. However, in the case of the African community this could not be any more further from the truth.

Milk is one of the essential building blocks for all infant mammals who nurse from the **mother's milk** rich in lactose. Lactose is a milk sugar, a disaccharide and principle carbohydrate source in milk of land animals.

To ingest milk the lactose is hydrolyzed (processed) in the small intestines, for this to happen the small intestines secretes the enzyme called lactase which splits the lactose molecule in two producing sugar glucose and galactose; this is then absorbed into the bloodstream. If the lactose remains unhydrolyzed i.e not processed it can lead to intestinal symptoms including stomach gas, distension, flatulence, diarrhea, phlegm and vomiting. Lactose intolerance is the inability to digest and absorb lactose which is a condition that occurs naturally in the majority of adults globally especially those who are highly melenated.

Lactose absorbers are those who can hydrolyze (process) lactose to produce glucose which is absorbed into the blood. Lactose malabsorbers are those people who cannot process lactose and so glucose is not absorbed. Many people who are lactose malabsorbers are able to consume milk daily with no signs of distress.

As children humans have a high intestinal lactase activity so the in take of milk is much easier. After weaning off the mother's milk the lactase activity declines to great lows for the remainder of the person's life. This happens with no experience of intestinal illnesses; the process of decline in lactase activity and the beginning of lactose malabsorption (the inability to digest milk) is normal in nearly all land mammals.
There have been some cases however where the process of lactose malbsorption (LM) is delayed until a person's teens or adulthood.

Ethnicity
Studies show that many racial groups have a high prevalence of LM (60%-100%). Research also illustrates that only Northern Europeans and a few small isolated peoples continue to have high lactose production levels in adulthood. Northern Europeans including Danes, Scandinavians, German, British and Irish, descendants in the US and Australia had low prevalence of LM. Elsewhere only 2 east African pastoral people had low perverlance – Hima and Tussi.

A high prevalence of LM has been found in the following groups of people:
South African Bantu
Aborigine Australians
US – American Blacks, Indians, Orientals (Chinese, Philipinos, Koreans, Japanese)
Chinese and Indians in Australia
Thais, Arabs, Jews, Greeks, Greek Cypriots
Natives of New Guinea
Agricultural Bantus groups of Uganda
Shona of Rhodesia
Greenland Eskimos (full blood)
Chami Indians in Colombia

Studies performed from the 1960's on 135 people from east African tribes including some Bantu agricultural tribes and other pastoral regions.
It was found that in adults 96% were LM from the neighboring Bantu groups. However, an exception were the Hima peoples with 9% and the Tussi at 17% LM.

Also further studies in the 60's and 70's showed Bantu tribes in Kenya, South Africa, Zaire and the Cameroons had high prevalence of LM.

In the US studies showed ½ of Black elementary school children have LM and the prevalence increased with age. In adults the percentage of those with LM was lower than those on the African continent which is thought to be due to the generations o f mixing with Europeans descendants who had a lactose absorption of 80%-90%. Overall it is estimated that in the US 2/3 of black, Mexicans, American Indians, Ashkenazic Jews and Orientals are lactose intolerant.

Reference

Lactose malabsorption in Africa. By Fredrick J Simmons, Africa Economic History. No 5, spring 1978 pp16-34.

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