metabolic syndrome, obesity, higher risk of cardiovascular disease, and insulin resistance during adulthood due to the disproportionate gain of fat mass compared to lean body mass during the catch-up growth period.

[0004] Catch-up fat can occur in infants and children during a growing period, but catch-up fat can also affect adolescents and adults recovering weight after a period of weight loss. An increase in a rate of fat gain relative to lean mass in individuals who are recovering weight after a period of weight loss, has been referred to as fat or weight overshooting.

[0005] In view of the above, there is an urgent need to develop new and accessible technologies that improve catch-up growth in underweight children, particularly growth as it relates to increasing lean body mass as opposed to fat mass.

[0006] Accordingly, methods of promoting healthy catch-up growth during periods of weight gain in children are desirable.

SUMMARY OF THE INVENTION

[0007] It is therefore an object of the invention to provide a convenient means for improving growth in an individual.

[0007a] In one aspect, provided herein is use of a nutritional composition comprising an exosome-enriched product comprising intact bovine milk-derived exosomes in the manufacture of a medicament to promote healthy catch-up growth in a pediatric individual, wherein the nutritional composition comprising the exosome-enriched product comprising intact bovine milk-derived exosomes is to be administered to the pediatric individual during a period of weight gain.

[0007b] In another aspect, provided herein is use of an exosome-enriched product comprising intact bovine milk-derived exosomes in the manufacture of a medicament to promote healthy catch-up growth in an underweight individual, wherein the exosome-enriched product comprising intact bovine milk-derived exosomes is to be administered to the individual.

[0008] In one embodiment, the invention is directed to a method of promoting healthy catch-up growth in a pediatric individual, comprising administering a nutritional composition with an exosome-enriched product comprising intact bovine milk-derived exosomes to the pediatric individual during a period of weight gain.

[0009] In another embodiment, the invention is directed to a method for promoting healthy catch-up growth in an underweight individual, comprising administering an exosome-enriched product comprising intact bovine milk-derived exosomes to the individual.

[00010] The nutritional compositions comprising an exosome-enriched product comprising intact bovine milk-derived exosomes and methods of promoting healthy catch-up growth, are advantageous in that they provide a convenient, therapeutic strategy for improving the gain of