

## Lactating mother's high body fat measured by stable isotope technique coexisting with high risk of 4 to 5.5 months stunted children in rural Southern Benin

**Introduction:** The burden of malnutrition is well known in Benin under all its phenotypes. In 2005, Ntandou et al, found that the undernutrition child coexisted with maternal overweight or obesity in 16.2% of the households. Ten years after, Sossa et al, showed that the prevalence of children's undernutrition and mother's overweight/obese in the same household was 21.68% and was associated to food insecurity. Those studies used body mass index (BMI) to determine overweight/Obesity. According to De Lorenzo (2013), BMI does not measured percentage of body fat (PBF) directly and poorly distinguishes total body fat from total body lean or bone mass.

**Objective:**The study aims to determine the prevalence of the double burden of malnutrition as phenotype overweight of lactating mothers and the risk of 4 to 5.5 months stunted child.

**Methods:** A hundred and tree (103) lactating mothers at 4-5.5 months post-partum were recruited to assess their effective practice of exclusive breastfeeding using the deuterium oxide dose-to-mother technique. The weight and height/length of mother and child were measured first day of the study and have been used to calculate anthropometrics index (BMI and Length-for-Age Z-score). The back-extrapolation method as part of the dose-to-the mother turner technique of estimated human milk intake in breast-fed infants, following AIEA standards procedures, was used to find the percentage of maternal body fat (PBF). Length-for-age Z-score <-1 SD was considered to be the cut-off point of Risk of Stunted Child (RSC). BMI  $\geq$  25Kg/m<sup>2</sup> or PBF  $\geq$  29 % was classified maternal overweight. In each household, prevalences of maternal overweight's BMI/Risk of Stunted Child (MOB/RSC) and maternal overweight's PBF/Risk of Stunted Child (MOP/RSC) were calculated.

**Results :** About 36% of children were at risk of stunting while 21% of mothers were overweight's PBF in the same community. Prevalence of maternal overweight's BMI was 13.6% which is low than maternal overweight's PBF (21%). Also, in the same household, the Double burden of malnutrition as MOB/SRC and MOP/SRC had equal value to 7.8% (figure 1).

**Conclusion:** The coexistence of maternal overweight and child at risk of stunting was observed in the households. That shows one more, the double burden occurrence in Benin. The prevalence of obesity by PBF using stable isotope technique was greater than that of obesity measured by BMI. Early nutrition specific interventions for mothers and their children are needed.

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BENIN

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