Visceral adiposity cut-off points to indicate risk factor to develop the nonalcoholic fatty liver disease in Brazilian and Italian obese adolescents.

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Background & aims: Visceral adiposity distribution also appears to influence metabolic complication. The purpose of this study was to determine a visceral adiposity cut-off points to indicate risk factor to develop NAFLD in Brazilian and Italian obese adolescents.

Methods: 151 Brazilian and 87 Italian obese adolescents were enrolled. Visceral adiposity was distributed in cut-off values using a ROC curve analysis.

Results: We verified that Brazilian obese adolescents showed a worse metabolic profile and liver function compared to Italian population. The risk factor to develop NAFLD was two fold higher in Brazilian compared with Italian obese adolescents. The corresponding OR (95%CI) was 6.66 (2.85-15.60) and 2.97 (0.61-14.47), for Brazilian and Italian population, respectively. The optimal visceral adiposity cut-off point to indicate risk factor of NAFLD development was 3.78 cm in Brazilian obese adolescents and 2.83 cm in Italian obese adolescents.

Conclusions: Brazilian obese adolescents have a higher risk to develop NAFLD compared with Italian obese adolescents, confirmed by upper odds ratio values and a higher visceral adiposity cut-off value.