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1763 - The burden of high fasting plasma glucose in South American Countries, 1990 to 2019: a systematic analysis for the Global Burden of Disease study

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Introduction: High fasting plasma glucose (HFPG) is an independent risk factor for several adverse health outcomes and has become a serious public health problem. Objective: to describe the burden of HFPG in South American countries 1990 to 2019. Methods: We analyzed the burden of HFPG in adults aged 25 years or older in twelve South American countries 1990 to 2019 using the Global Burden of Disease (GBD) 2019 estimates. We evaluated disability-adjusted life years (DALYs), years of life lost (YLLs), years lived with disability (YLDs), summary exposure value (SEV), and mortality. We also evaluated the data with Socio-Demographic Index (SDI). Results: In South American countries, in 2019, the rate, per 100.000, of DALYs, YLLs, YLDs, SEV, and deaths were 2010.2, 1415.4, 594.8, 11.9, 77.4, respectively. Across countries, Guyana had the highest rate of DALYs, YLLs, YLDs, SEV, and deaths, as Peru had the lowest rate of DALYs, YLLs, SEV, and deaths. Uruguay had the lowest rate of YLDs. Between 1990 and 2019, there was a considerable decrease in DALYs, YLLs, and deaths, but an increase in YLDs and SEV. There was substantial variation across countries in all estimates. SDI, between the period, seemed to be correlated with variations in the rate of YLDs and SEV. Discussion: YLDs and SEVs increased in this region between 1990 and 2019. YLDs increase reflects an illness impact on quality of life before it resolves or leads to death. In other words, people are living longer with it, probably due to better healthcare in terms of treatment and secondary prevention. SEV evaluates the population exposure to HFPG that considers the extent of the exposure and the severity of HFPG. This means that the prevalence of HFPG and the populational mean of fasting glycemia are increasing. The increase in these estimates might be related to worsening health behaviors, such as low physical activity and poor diet, thus being the two most important factors that should be targeted for primary prevention of HFPG, diabetes, and their outcomes. Conclusions: South American HFPG burden is significant and heterogeneous across countries. Besides, there has been an increase in years of living with disability in these countries.