



## The effect of migration on the incidence of new-onset metabolic syndrome in migrants to Qatar

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### ABSTRACT

**Background:** There is substantial evidence that migration to Western countries is associated with an increased risk of metabolic syndrome (MetS)<sup>1</sup>. However, there is a paucity of data on the incidence of MetS in migrants from different countries coming to Qatar. As a result, an important health problem is overlooked, and prevention measures are absent. This study aimed to investigate the effects of migration on the incidence of MetS following 24 months of residency in the Middle East (ME) among a group of migrants employed at Hamad Medical Corporation (HMC).

**Methods:** This is a prospective longitudinal observational study. Migrants aged 18–65 years who joined HMC from June to December 2017 were invited to consent and participate. Baseline screening for MetS was conducted. Parameters included glycated hemoglobin (HbA<sub>1c</sub>), triglycerides (TG), high-density lipoprotein-cholesterol (HDL-C), blood pressure (BP), and waist circumference (WC) measurement. Migrants with normal metabolic parameters at baseline were invited to be rescreened 24 months post-migration. The International Diabetes Federation (IDF) Consensus Worldwide Definition of MetS was employed to diagnose MetS<sup>2</sup>. Inferential statistics were applied to compare results before and after migration. Throughout the study, migrants with metabolic abnormalities were referred to physicians for further management.

**Results:** Of the 1,379 screened migrants, 472 consented to participate. Of those, only 205 migrants had normal metabolic parameters. The incidence of MetS within the group with normal parameters rose to 17% (n = 27) after 24 months of residing in Qatar. Eighty-one percent (n = 129) developed at least one element of MetS. Migrants receiving medications that potentially induce MetS were more likely to develop MetS (odds ratio OR [(AOR 6.3, p < 0.001); 95% [CI], 0.07–0.59. p = 0.003).

**Conclusion:** The incidence of MetS amongst migrants increases following residency in Qatar however, it is lower than that estimated in many developed countries (3, 4).

*Keywords:* migration, metabolic syndrome, incidence, Qatar, migrants

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