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**Topic:** Malnutrition treatment and prevention

**Title:** AN INVESTIGATION OF POSSIBLE CONTRIBUTING RISK FACTORS RELATED TO DIET AND LIFESTYLE WHICH MAY CAUSE HYPERTENSION IN MALE EMPLOYEES OF HOTAZEL MANGANESE MINES (NORTHERN CAPE PROVINCE, SOUTH AFRICA)

**Presentation Type:** Poster

**Introduction:** Health Staff noticed a high prevalence of hypertension among employees that were hypertension free at the start of employment at Hotazel Manganese Mines. This study investigated nutrition and lifestyle as risk factors for the perceived high prevalence of hypertension among male mineworkers.

**Methodology:** An analytical unmatched case-control study design was used. Proportionate random sampling were used to select participants (N=88). Anthropometric data was obtained from each participant's medical file with blood pressure measurements at the start of employment and yearly thereafter. Participants completed self-administered questionnaires on physical activity, stress and demographic information. The researcher administered the quantified food frequency questionnaire. A p-value of <0.05 was regarded as statistically significant.

**Results:** Fifty eight per cent of the participants developed hypertension during employment at Hotazel Manganese Mines (cases) during an average of 11 years of employment. The cases have, on average, worked significantly longer ( $p < 0.01$ ) than the controls and were also significantly older ( $p = 0.03$ ) than the controls. Body mass index (BMI) increased on average with 3 kg/m<sup>2</sup> during employment and the cases had a significantly higher increase in BMI during employment ( $p = 0.004$ ). Coloured participants in more senior positions were significantly more likely to develop hypertension than the coloured participants employed in lower levels ( $p = 0.01$ ). White participants working at Mamatwan mine were more likely to develop hypertension ( $p = 0.01$ ).

**Conclusion:** Duration of employment, increased age and BMI increase was associated with the risk of developing hypertension in this study. Lifestyle interventions should be introduced to improve the health and well-being of the employees.