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Title

Do sociodemographic, health behaviors, and clinical factors predict levels of hs-CRP stratified by race and ethnicity?

Priority 1 (Research Category)

Health Care Disparities

Presenters

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Abstract

Context: High-sensitivity C-reactive protein (hs-CRP) is a marker of systemic inflammation associated with chronic illness. While research has independently shown disparities in hs-CRP levels, additional research is warranted to investigate these differences by race/ethnicity to inform intervention efforts. Objective: To identify sociodemographic, health behavior, and clinical factors that predict hs-CRP by race/ethnicity. Study Design and analysis: Secondary analysis of a nationally representative survey. Regression analyses were conducted stratified by race/ethnicity (non-Hispanic White (NHW), non-Hispanic Black (NHB), non-Hispanic Asian (NHA), Mexican American (MA), Other Hispanic, and Other/Multi-Racial) to determine risk factors that predict hs-CRP. Setting and Dataset: National Health and Nutrition Examination Survey (NHANES) data from 2017- March 2020 Population studied: 15,476 adults 18 years or older in the United States. Intervention/ Instrument: NHANES data w relevant for modifiable risk factors. Subjects whose CRP data were available were included. Outcome measures: hs-CRP levels Results: Diverging patterns emerged regarding hs-CRP levels. Significant risk factors included BMI, biological sex (female), and health status. For NHW individuals, identifying as female (b=0.13), increased BMI (b=0.07), and poor sleep (b=0.07) were significant predictors of inflammation. Regarding NHB individuals, increased age (b=0.01), identifying as female (b=0.19), and increased BMI (b=0.07) were significant predictors of inflammation. Pertaining to MA individuals, identifying as female (b=0.44), reporting good/fair/poor health (b=0.28), and increased BMI (b=0.08) were significant predictors of inflammation. Good/fair/poor health (b=0.33) and increased BMI (b=0.07) were significant predictors of inflammation for Other Hispanic individuals, while never being married decreased the risk for inflammation (b=-0.45). For NHA individuals, increased poverty (b=0.08) and increased BMI (b = 0.09) were significant predictors. Finally, for multi-racial individuals, identifying as female (b=0.37) and increased BMI (b=0.04) were significant predictors of inflammation. Conclusion: This study identified racial/ethnic differences in sociodemographic, health behavior, and clinical factors that predict hsCRP. Understanding disparities in risks for elevated hs-CRP could help clinicians identify potential biomarkers to aid in the reduction of inflammation among racial/ethnic groups.

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