Effects of Cross-Racial Social Evaluative Stress on Black Americans

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Abstract:
Experimental literature has found that acute race-related stress is linked with physiological changes, but does race-related stress influence immune system reactivity? For this study, Black participants are exposed to the Trier Social Stress Task (TSST), a paradigm known to elicit immunological response. They are randomly assigned to either two White interviewers, the race-related stressor (RRS) or two Black interviewers, the non-race related stressor (N-RRS). They are then exposed to the TSST. Biological samples are taken pre- and post-stressor to measure fluctuations in immune activity. We anticipate that Black Americans in the RRS condition will show greater increase in IL-6 relative to those who were in the N-RRS. Additionally, Black Americans in the RRS condition will show diminished histamine reactivity relative to the N-RRS condition. This research may provide evidence that racism-related stress can lead to chronic inflammation and, as a result, impact the overall health of Black Americans, contributing to worse health outcomes.

Methods:
- Random assignment
- TSST with White evaluators (RRS)
- TSST with Black evaluators (N-RRS)
- 30 minute skin prick test
- 60 minute blood samples

Research Question:
Does exposure to a Race-Related Stressor influence immune system reactivity?

Expected Results:

<table>
<thead>
<tr>
<th>Time</th>
<th>Pre-TSST baseline</th>
<th>Post-TSST 30 min</th>
<th>Post-TSST 60 min</th>
<th>Post-TSST 90 min</th>
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<tbody>
<tr>
<td>RRS</td>
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<tr>
<td>N-RRS</td>
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</tbody>
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Histamine Scratch Dimensions (Expected)

- Pre-TSST
- Post-TSST

Conclusion:

Expected Findings:
Racism-related stress negatively affected inflammation

Limitations:
This study focuses exclusively on IL-6 as the inflammatory marker of interest

Future Directions:
Explore cross racially and additional markers of inflammation