



Associations between chronic stress and ATN biomarkers in Alzheimer's disease in Latin America (ReDLat Consortium) #7420

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Chronic stress, measured through allostatic load, was associated with amyloid and tau pathology, highlighting a potential biological pathway linking social adversity and Alzheimer's disease in Latin America.

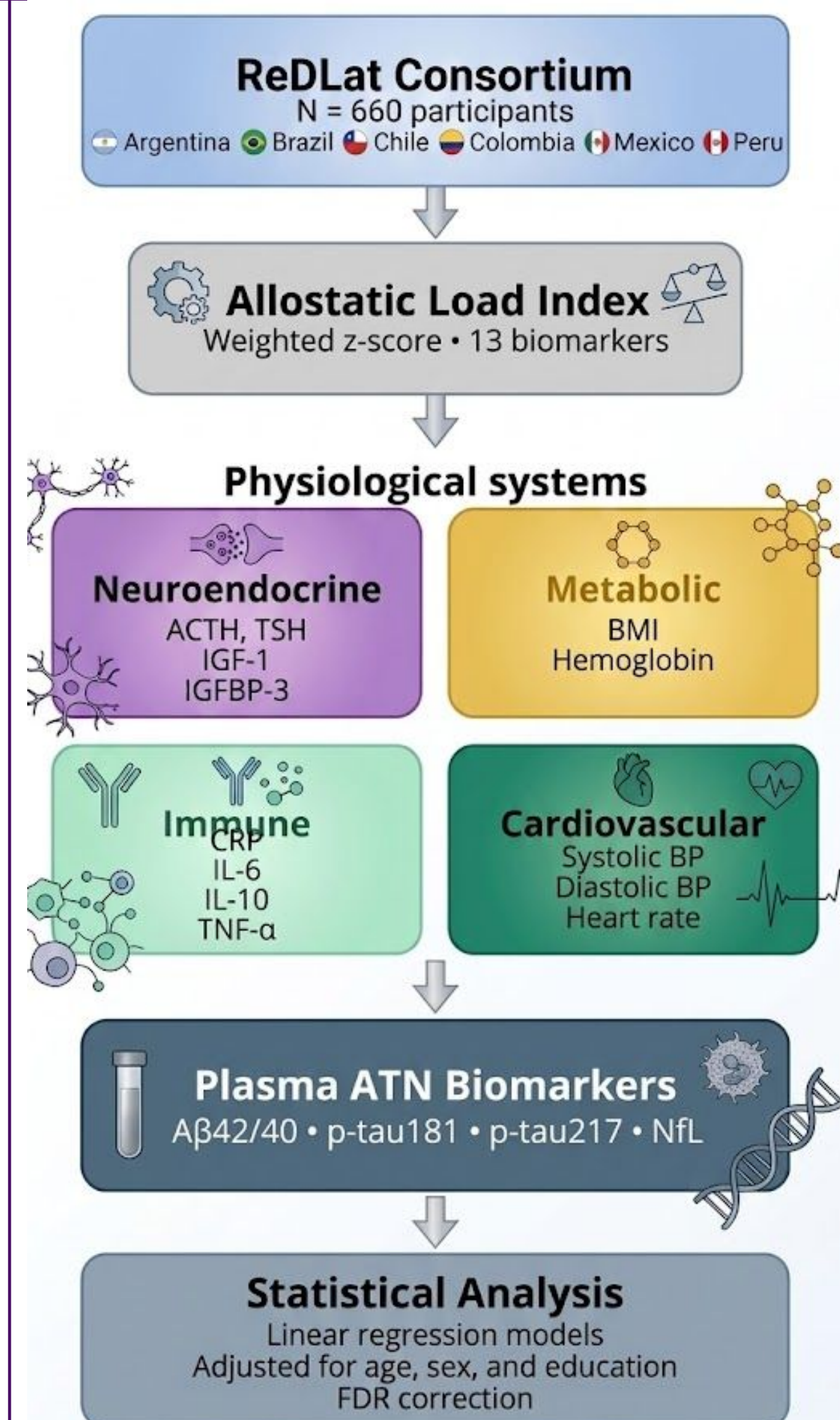
INTRODUCTION

Chronic stress may contribute to Alzheimer's disease (AD) through cumulative physiological dysregulation, known as allostatic load. However, its relationship with AD biomarkers remains poorly understood, particularly in Latin American populations.

We investigated the association between total and system-specific allostatic load and plasma ATN biomarkers in participants from the ReDLat Consortium.

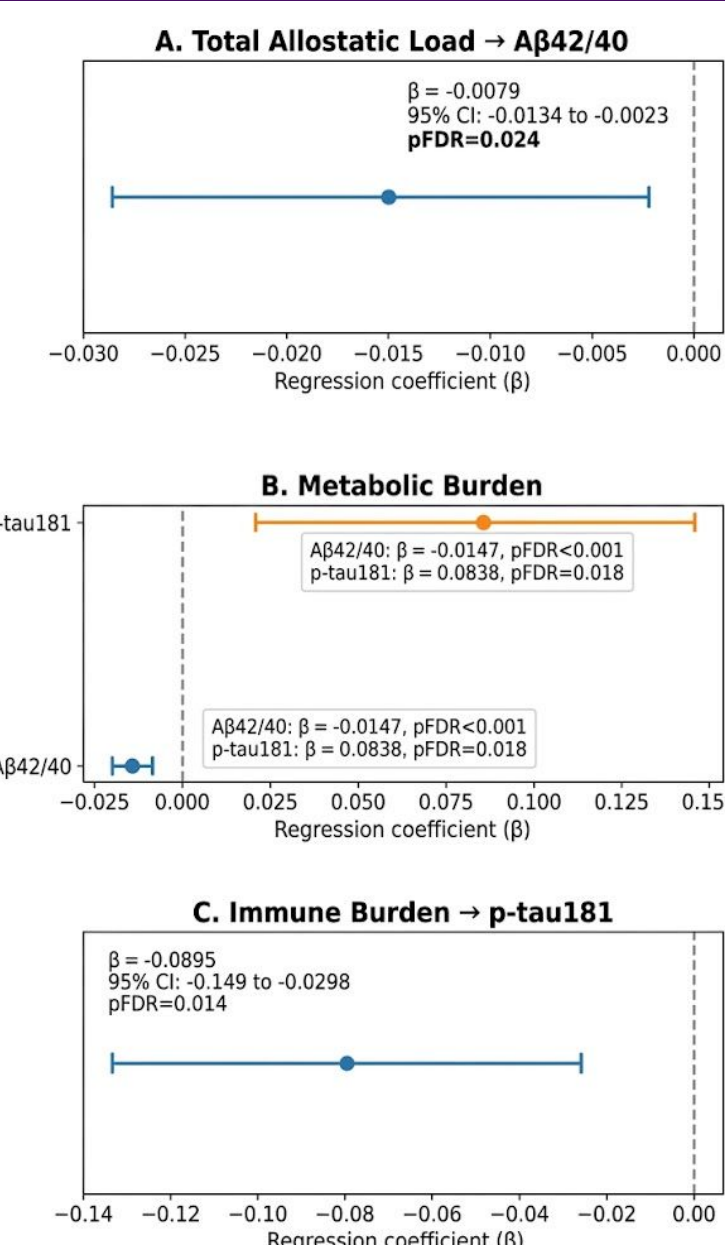


METHODS



RESULTS

Higher total and metabolic burdens are linked to reduced amyloid levels (Aβ42/40), metabolic burden also associates with increased tau levels (p-tau181). Conversely, an elevated immune burden correlates with a decrease in p-tau181,



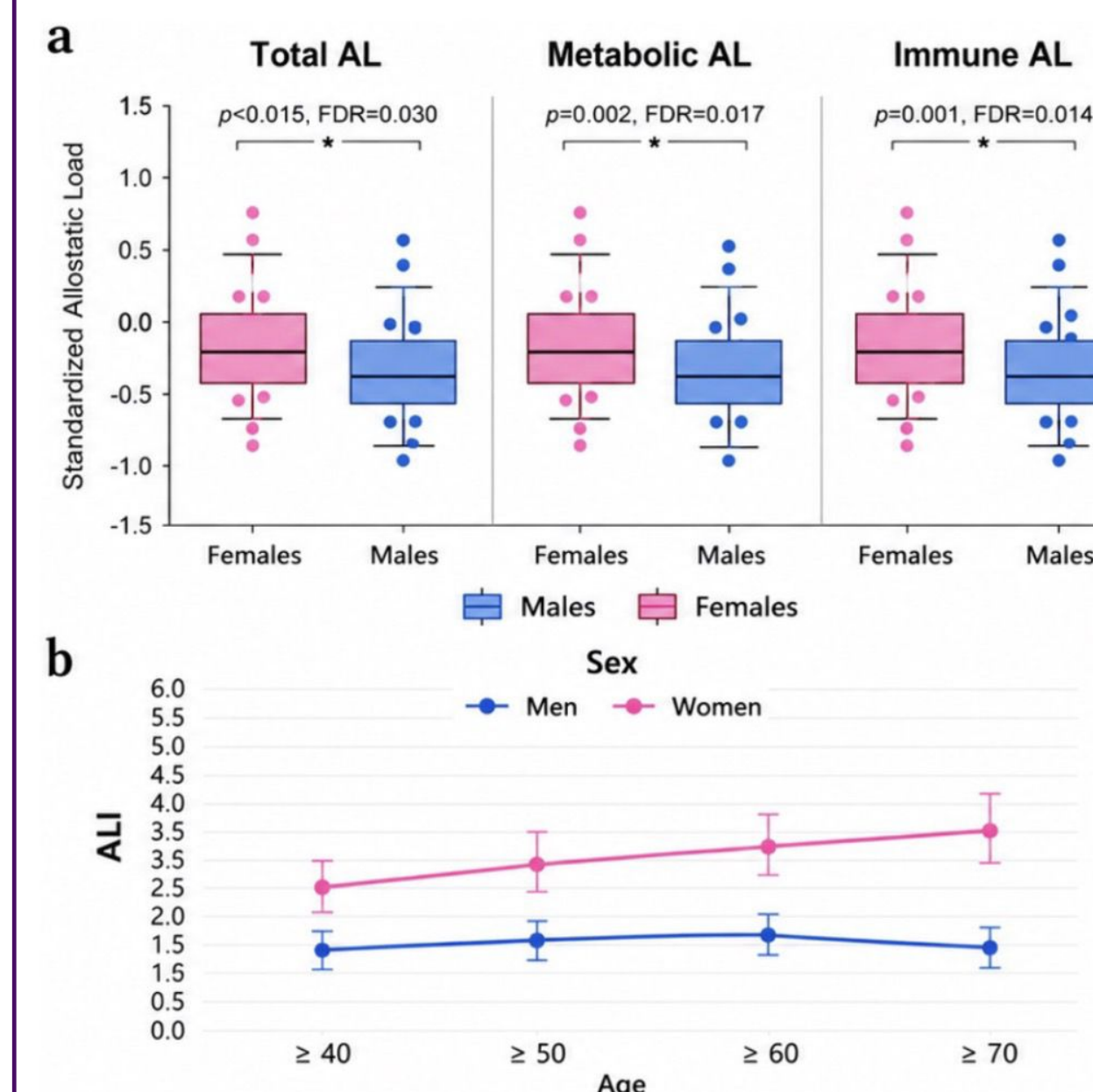
CONCLUSION

Highlighting that distinct stress pathways uniquely influence amyloid and tau pathologies.

- 1. Chronic Stress and AD**
Higher allostatic load was associated with a more adverse Alzheimer's disease biomarker profile.
- 2. Metabolic Burden**
Metabolic dysregulation showed the strongest associations with amyloid and tau pathology.
- 3. Clinical Implications**
Allostatic load may represent a relevant marker for risk stratification and prevention in Latin America.

Sensibility analysis

We found differences in AL in women vs men Latin america in RedLat cohort.



- Women exhibited significantly higher total, metabolic, and immune allostatic load than men (all FDR < 0.05). Across all age groups, women consistently showed higher allostatic load index values than men.
- Across all age groups (≥40, ≥50, ≥60, and ≥70 years), women consistently showed higher allostatic load index (ALI) values than men

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