Key Climate-Health Associations

Novel Findings from Urban African Cohort (N = 18,205)

Biomarker	Climate Variable	Lag (days)	n	r	p-value	Clinical Significance
Systolic BP	Temperature	**21**	4,957	-0.114***	<0.0001	**Novel:** 3-week adaptation
Systolic BP	Apparent Temp	**21**	4,957	-0.113***	<0.0001	Extended vascular response
Fasting Glucose	Land Temperature	3	2,731	0.131***	<0.0001	Acute metabolic stress
Fasting Glucose	Temperature	0	2,731	0.118***	<0.0001	Immediate glucoregulation

Key Discovery: First report of 21-day cardiovascular adaptation to temperature in African populations
Methods: Pearson correlations with bootstrap CI (1000 iterations) • Permutation testing (10,000) • Bonferroni correction
Effect Sizes: All associations show small but clinically meaningful effects (|r| = 0.10-0.29, Cohen's convention)
Statistical Robustness: All associations survived FDR adjustment • *** p < 0.0001

Positive correlation (harmful)

Negative correlation (adaptive)