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**HEAT STRESS, POLYPHARMACY AND THERMOREGULATORY DYSFUNCTION
IN OLDER ADULTS: AN EMERGING PRIORITY**

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Increase in global temperatures and the rising prevalence of chronic disease among older populations are considered emerging problems of the current generation and provides a pressing problem for future medical professionals. Thermoregulatory function, considered a deeply relevant function of the body- more so in its aid to maintain homeostasis of the body, and thereby control the major functionings of the systems- deteriorates with age. Cases such as a reduction in sweat gland output, cutaneous vasodilatory capacity, autonomic responsiveness, and environmental thermal perception, renders older adults disproportionately susceptible to heat-induced physiological strain. These deficits are further increased by frailty, a geriatric syndrome marked by decreased homeostatic reserve, which amplifies susceptibility to heat-related morbidity and mortality.

Pathophysiological effects of thermoregulation in older adults are seen due to rapid increase of chronic diseases, most commonly, diabetes mellitus and cardiovascular diseases. Each of these diseases have a undesirable effect on the body, causing pathomorphological changes in the body, which systematically affects the thermolytic functioning of the body. Pharmacological agents routinely prescribed for such chronic conditions such as beta-blockers, diuretics, and anticholinergic compounds are known to independently compromise thermoregulation through different mechanisms.

However, the cumulative thermoregulatory impact of concurrent polypharmacy and guidance for medication management during extreme heat events in functionally compromised older adults has received remarkably little investigative attention. Furthermore, studies reveal that frailty functions not as an independent variable but rather an amplifier which weakens compensatory mechanisms upon which medicated patients depend on during such discrepancies in thermoregulation.

This study aims to explore the effects of chronic diseases with associated polypharmacy and how it affects the dynamics of thermoregulation in the body of older adults, spanning across geriatric medicine, clinical pharmacology, and thermal physiology.