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Arterial Stiffness

Implications and Interventions

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Preface

Large elastic artery stiffness is a novel and emerging cardiovascular disease risk factor shown to predict future cardiovascular-related events and mortality. Our primary intention is to provide a concise overview for students, researchers, and clinicians by exploring the basic physiological and pathophysiological concepts and mechanisms underlying arterial stiffness. In Chap. 1, we define arterial stiffness, review the myriad ways it can be assessed, and summarize the causes, whereas in Chap. 2, we take a more in-depth look at putative cellular and molecular mechanisms of arterial stiffness. In Chap. 3, we present epidemiological factors that contribute to arterial stiffness and highlight the “bigger picture” implications for increased arterial stiffness, including the damaging effects for target organs such as the heart, brain, and kidneys. Finally, in Chap. 4, we conclude by examining clinically relevant interventions to reduce arterial stiffness that, in turn, may reduce cardiovascular disease risk and target organ damage.

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