Over the last 20 years, it has become clear that an inflammatory response to a chronic stimulation is a major part of atherosclerosis, and most (all?) other chronic diseases of aging. In fact, the aging process itself, characterized in part by slow, progressive loss of end-organ function, likely contains a chronic low-level inflammatory component. We have also come to realize that “inflammation” is a fundamental system with deep connections to many other systems such as adaptive immunity, coagulation and fibrinolysis, oxidative stress and response, etc. Using epidemiological studies as our main platform, we propose a model whereby the slow, progressive loss of adaptive immune function with age leads to increased reliance on innate immunity and inflammation, thereby accelerating both the underlying aging process and the chronic diseases of aging.