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CycleConclusion; Chapter 7 Compartmentalised Brain Homeostasis in Sleep; Physiological Mechanisms Underlying Brain Cooling; Defence of Brain Homeothermy in Sleep; Defence of Brain's Blood Supply in Sleep; Systemic Functional Implications; Conclusion; Chapter 8 Ultradian Homeostasis-Poikilostasis Cycle; Ultradian Homeostasis-Poikilostasis Cycle; Behavioural Expression of the Ultradian Homeostasis-Poikilostasis Cycle; Sleep and Instinct; Functional Significance of Homeostasis and Poikilostasis in Sleep; Conclusion Chapter 9 Systemic Physiological Regulation in the Ultradian Wake-Sleep CycleHierarchical Functional Permutations; Influence of the Hierarchical Dynamics of the Ultradian Wake-Sleep Cycle on Physiological Functions; Chapter 10 Epilogue; References; Index

Sommario/riassunto

This book aims at presenting biologists and clinicians with a compact description of the physiologic manifestations of sleep that are significant from the viewpoint of the principle of homeostasis. In the jargon of the physiologic literature, the word 'homeostasis', introduced by W.B. Cannon (1926), refers to the existence of a constant state of extracellular body fluids with regards to their physical and chemical properties. Since normal cell function depends on the constancy of such fluids, in multicellular animals there are many regulatory mechanisms under the control of the central nervous