



Chronomics and Continuous Ambulatory Blood Pressure Monitoring : Vascular Chronomics : From 7-Day/24-Hour to Lifelong Monitoring

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- Abstract:** This fascinating volume applies the concept of chronomics to the medical treatment of hypertension. It starts with the recent updates on chronomics, the analytic techniques, and their application to community-based assessments. The authors advocate the use of 7-day/24-h records of blood pressure, which is effective for finding masked hypertension, masked morning surge, and other rhythm abnormalities. Most organisms, from cyanobacteria to mammals, are known to use the circadian mechanism. However, our body systems also demonstrate circaseptan (roughly weekly), circannual (roughly yearly), and even longer rhythms. Chronomics monitors the physiological data and then analyzes the superimposed rhythms, isolating the cycles mathematically to determine how organisms and their environment interact. It is the study of interactions among time structures (chronomes) in and around us.

Contents: 1. From chronobiology to chronomedicine: Days of creation – 2. From chronomics to chronoastrobiology: Many rhythms are control information for whatever we do – 3. Chronobioethics: what is life? – 4. Chronobiology – 5. Chronomics of heart rate variability – 6. Chronomics of life for improving the quality of health – 7. Chronomics of tree rings gauge climate change – 8. Introduction to Chronobioengineering – 9. What community-based glocal comprehensive assessment tells us: chronoecology is far superior to evidence-based medicine (EBM) – 10. Community-based comprehensive geriatric assessment – 11. Chronomic community screening: depressive mood, heart rate variability and cardiovascular outcomes in a community – 12. Chronoecological "glocal" (global and local) comprehensive health-watch at high altitude – 13. Chronoastrobiology – 14. Heart rate variability reflecting the dynamics of solar activity – 15. A transdisciplinary near-transyear in sudden cardiac death validates its counterpart in the solar wind and geomagnetics – 16. Diagnosing vascular variability disorders and vascular variability syndromes – 17. Among-day blood pressure variability assessed by 7-day/24-hour ambulatory blood pressure monitoring and prognostic value of vascular variability anomalies – 18. Case presentations I. Within-day BP variations observed using 7-day/24-hour ambulatory BP monitoring – 19. Case presentations II. Vascular variability syndrome – 20. Case presentations III. Among-day variability of circadian profiles of 24-hour ABP – 21. "What is life?" Cycles tipping the scale between death and survival – 22. Astro-glocal spatially and temporally (global & local) comprehensive health watch especially at high altitude – 23. Chronobioethics and Alerting Chronobiological Ambulatory Blood Pressure Monitoring (C-ABPM; stress/strain-test) For preventing cardiovascular and for understanding and avoiding/evading societal and natural cataclysms by personalized and generalized chronospheres – Closing Remarks.

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