



Mean systemic filling pressure

From Guyton to the ICU, and back again

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Mean systemic filling pressure (MSFP) is the equilibrated vascular pressure at zero blood flow. As a recoil pressure, it is determined by the size and elastic properties of the vasculature containing the blood volume. It is thereby a manifestation of the volume state. If it could be accurately measured at the bedside, it would hold the potential of being a key variable in the care for hemodynamically unstable patients.

Over the last decades, methods for the estimation of MSFP have been introduced into clinical research. The results have raised interest but also stirred controversy. In a series of animal experiments, we have addressed fundamental questions related to heart-lung-circuit-interactions and venous return physiology with the aim to better understand the clinical role of mean systemic filling pressure.



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