



# Gas Bubble Dynamics in the Human Body

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# Gas Bubble Dynamics in the Human Body

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*Gas Bubble Dynamics in the Human Body* equips researchers working within hyperbaric medicine with modern physical and mathematical methods to optimize their findings and ultimately deliver new therapies. These methods point to a deeper understanding, more accurate predictions, and improved treatment modalities by injecting modern applied math (particularly differential equations) and physical chemistry (particularly diffusion kinetics and thermodynamics) into the field. By bringing these disciplines to bear on the problems in the field, the work aims to add significantly to its applied, theoretical, and interpretive components.

### Key Features

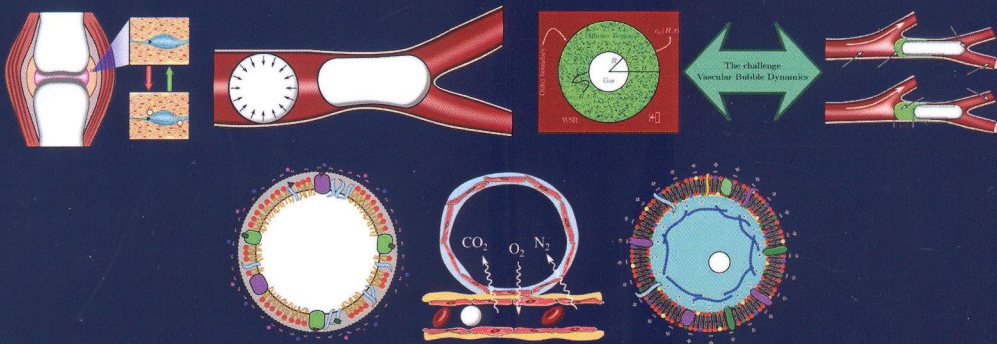
- Demonstrates how physical and mathematical tools help to solve underlying problems across physiology and medicine.
- Helps researchers extend their competence and flexibility to the point that they can personally contribute to the field of hyperbaric medicine and physiology, or to other related biological problems that may interest them.
- Provides clinicians with explicit examples of how mathematical modeling can be integrated into clinical treatment and decision making.

### About the Authors

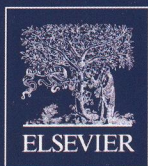
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$$\frac{dR}{dt} = \frac{1}{3P_h R + 4\gamma} \left[ 3RTD\mathfrak{X} \left( \frac{\partial c}{\partial r} \right)_{R,t} - R^2 \frac{dP_h}{dt} \right]$$



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