Why don’t we (usually) faint when we stand up?

Mette Olufsen

Basic physics suggests that when we stand up, the blood pressure in our brain should drop dramatically. Such a pressure drop should cause us to faint. But most of us don’t faint when we stand up. In this talk I’ll discuss a mathematical model that explains why most of us don’t, and why some people do. The model is a compartmental model formulated as a system of ordinary differential equations. Another important question is: How do we make this model predict what is observed in a specific patient? Mathematically this relates to the question: How do we estimate a set of parameters that allow the model to predict responses observed in data?

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