



Department of Physics Colloquium

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3:00 PM

Medical Physics Helps Cure Hypertension and Prevent Atherosclerosis in Blood Vessels

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Severe hypertension comes with headaches, chest pain, shortness of breath, flushing, and visual changes. Without timely medical treatment, it will lead to heart attack and stroke. Here we report our discovery: Blood flow in blood vessels can be optimized by magneto-rheology (MR). A strong magnetic field along the blood flow direction will reduce viscosity significantly and suppresses turbulence, and blood pressure is lowered to the normal range. Our clinical trials have confirmed that this technology is effective for everyone. The effect lasts more than 24 hours and can be kept continuously if the magnetic treatment is repeated.

In addition, after MR, blood circulation in our body becomes laminar with the strong Segre effect, which prevents atherosclerosis plaque. Our tests with mice have confirmed this theoretical analysis.

Recently, we have also found that MR can disassemble blood clots to improve blood's oxygen function, and important goal of hematology.

This colloquium will be held in-person, in SERC 116