



## **Title: Hypertension Risk from Iron Brake Particulate Matter**

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Of 12 moon walkers, James Irwin on day after return from Apollo 15 mission, showed extraordinary bicycle (B) stress test (ST) hypertension (275/125) after 3 minutes exercise; supervising > 5000 maximum treadmill ST, author never witnessed ST- blood pressure approaching this level. Symptom-limited maximum B stress test showed "cyanotic fingernails"; possibly venous blood trapped peripherally, supporting author's "Apollo 15 Space Syndrome," postulating that severe fingertip pain during space walks, triggered by plasma fluid, trapped distally; mechanism could be related to endothelial dysfunction, providing "silent ischemia" warning. Neil Armstrong returned to Earth with severe diastolic hypertension (160/135), consistent with ischemic left ventricular dysfunction; 50 mm increase in comparison with resting BP 110/85. With inhalation of lunar dust, brought into habitat on space suit, with high lunar iron (I) this dust inhalation, along with reduced (R) space flight- transferrin, R antioxidant, calcium (Ca) blocker - magnesium, conducive to severe oxidative stress, Ca overload with potential endothelial injuries. Using moon walker studies as example, my recent editorials show that I dust, released from brakes, with over 90% of brakes made of I, is a major hypertension factor and may also contribute to myocardial infarctions.

### **Biography**

William J. Rowe M.D. FBIS (Fellow British Interplanetary Society), FACN (Fellow American College of Nutrition, Retired Fellow Royal Society of Medicine), is a board certified specialist in Internal Medicine. He received his M.D. at the University of Cincinnati and was in private practice in Toledo, Ohio for 34 years. During that time he supervised over 5000 symptom - limited maximum hospital-based treadmill stress tests. He studied 3 world class extraordinary endurance athletes and published their exercise-related magnesium deficiencies. This triggered a 20 year pursuit of the cardiovascular complications of Space flight. All his publications are posted on his website [www.femsinspace.com](http://www.femsinspace.com).