

## Dr Edgar A. Hines and Early Research in Hypertension



It is fascinating to see the progress from the unknown to discovery, and there is no clearer demonstration of this than with Dr Edgar Hines' study of hypertension and monitoring blood pressure. In his article published on June 8, 1932, entitled "A Standard Stimulus for Measuring Vasomotor Reactions: Its Application in the Study of Hypertension," he noted that early attempts to discover the secrets of blood pressure involved using pain or other intrusive stimuli such as electric shock.

Hines' experience revealed that the results from these stimuli were too volatile and varied from patient to patient to be of use. He discovered that using cold stimuli provided the most constant and consistent result. Subjects would have one hand or one foot placed wrist or ankle deep into cold water, which resulted in a rapid rise in blood pressure. Patients with a family history of hypertension were found to respond at a 2 to 3 times higher rate than the normal response rate. Interestingly, if the patient had both hands or feet placed in the cold water, the response did not change much, and the results were ineffective. A small portion of the study population had a reaction to the tests that was attributed to the patient being hyper-reactive and responding to the stimuli of having their blood pressure taken,

but Dr Hines hypothesized that most patients with a higher reaction at a young age would develop hypertension later in life. His pioneering studies have an enduring legacy.

Dr Hines had a long and illustrious medical career. In 1914, he was editor-in-chief of the *Journal of the South Carolina Medical Board*, which had an annual subscription price of \$2.00.<sup>2</sup> He was noted as a presenter at the Society of Investigative Dermatology<sup>3</sup> and was the author of the book *Peripheral Vascular Diseases*. He retired from Mayo Clinic to Asheville, North Carolina, where he continued to study and publish research in hypertension.<sup>4</sup>

### References

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4. Allen VE, Barker NW, Hines EA. *Peripheral Vascular Diseases*. WB Saunders Co: 1946. <http://books.google.com/books?id=gUn8MgECAAJ&dq=edgar+A.+Hines,+MD+Mayo+Clinic&hl=en&sa=X&ei=tnXaU6afA86VyASblyHYDw&ved=0CCkQ6AEwAA>. Accessed July 31, 2014.