What is a Bainbridge reflex?

A Bainbridge reflex is an increase in heart rate due to an increased central venous pressure.

An increase in atrial pressure also causes an increase in heart rate, sometimes increasing the heart rate as much as 75 percent.

A small part of this increase is caused by a direct effect of the increased atrial volume to stretch the sinus node and such direct stretch can increase the heart rate as much as 15 percent.

An additional 40 to 60 percent increase in rate is caused by a nervous reflex called the Bainbridge reflex.

The stretch receptors of the atria that elicit the Bainbridge reflex transmit their afferent signals through the vagus nerves to the medulla of the brain. Then efferent signals are transmitted back through vagal and sympathetic nerves to increase heart rate and strength of heart contraction. Thus, this reflex helps prevent damming of blood in the veins, atria, and pulmonary circulation.

The *Bainbridge reflex*, also known as the atrial reflex