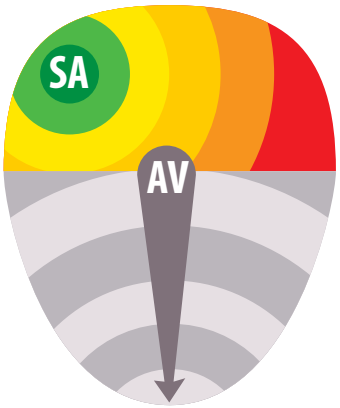
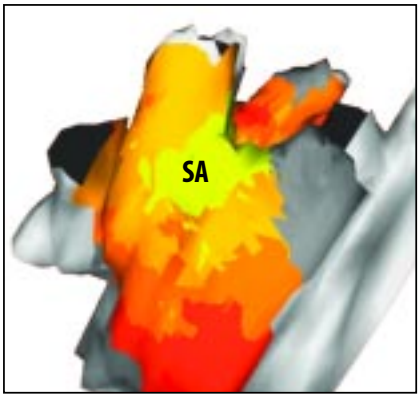
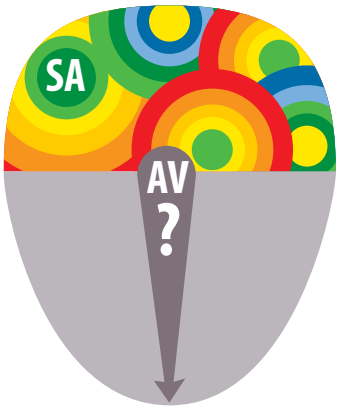
Creating the right ripple effect for a healthier heart



Anatomy of a healthy heartbeat

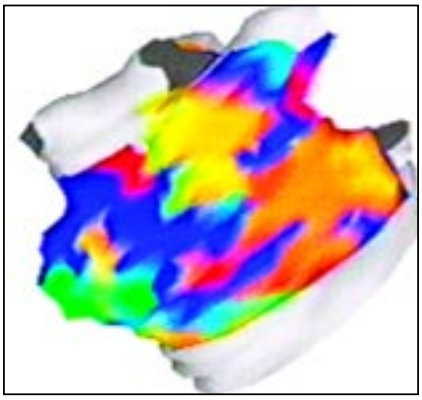
The electrical impulse begins at the sinus node (SA), then spreads across the upper chambers, the atria, like ripples on a pond. Next, the ripples reach the atrioventricular node (AV), signaling the ventricles to contract from the bottom up. Right: The impulse spreads from the sinus node in this computer image of a heart in action.

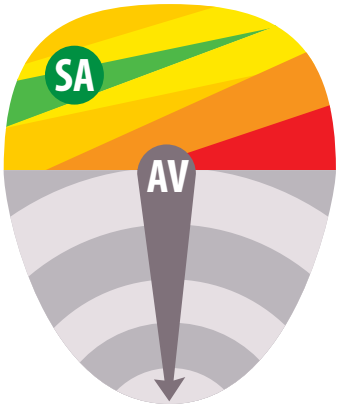




Havoc: An electrical firestorm

Atrial fibrillation is like too many ripples on the pond. The atria convulse with erratic electrical charges, the AV node gets mixed signals about when to "fire," and the result is a dangerously rapid, irregular heartbeat. Blood pools in the atria; clotting is possible, leading to a stroke. Right: The firestorm in progress.





A-Maze-ing results

School of Medicine researchers developed the Maze procedure, which directs the atrial electrical impulses through a surgically created "maze" of scar tissue. The highly effective procedure is technically challenging, however. Now, researchers are perfecting new, minimally invasive techniques, using the Atricure Bipolar Handpiece™ (right), to complete the operation more quickly and with less disruption of heart tissue.

Information graphic by Eric Young
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