

Bowditch effect

The Bowditch effect (Treppe effect, staircase phenomenon) is one of the mechanisms of homeometric regulation of the heart.

- At a higher heart rate, the sodium-calcium pump is not enough to pump Ca^{2+} ions out of the cell to the original state.
- The concentration of ions gradually increases, which is manifested by **positive inotropia** (increased force of contraction).

Links

Related articles

- Homeometric regulation of the heart
- Frank-Starling mechanism

References

- GUYTON, Arthur C. – HALL, John E. *Textbook of Medical Physiology*. 11. edition. Elsevier, 2006. ISBN 978-0-7216-0240-0.
- KLABUNDE, Richard E. *Cardiac Inotropy (Contractility)* [online]. The last revision 2007-03-04, [cit. 2011-03-04]. <<http://www.cvphysiology.com/Cardiac%20Function/CF010>>.