

**EXCITATION—THE PROCESS OF ELICITING THE ACTION POTENTIAL
MECHANICAL STIMULATION**

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“...IN SOME SKIN AREAS, ARTERIOVENOUS ANASTOMOSES, WHICH ARE LARGE VASCULAR COMMUNICATIONS DIRECTLY BETWEEN THE ARTERIES AND THE VENOUS PLEXUSES THE WALLS OF THESE ANASTOMOSES HAVE STRONG MUSCULAR COATS **INNERVATED BY SYMPATHETIC VASOCONSTRICTOR NERVE FIBERS THAT SECRETE NOREPINEPHRINE**. WHEN CONSTRICTED, THEY REDUCE THE FLOW OF BLOOD INTO THE VENOUS PLEXUSES TO ALMOST NOTHING; OR WHEN MAXIMALLY DILATED, THEY ALLOW EXTREMELY RAPID FLOW OF WARM BLOOD INTO THE PLEXUSES. THE ARTERIOVENOUS ANASTOMOSES ARE FOUND PRINCIPALLY IN THE VOLAR SURFACES OF THE HANDS AND FEET, THE LIPS, THE NOSE, AND THE EARS, WHICH ARE THE AREAS OF THE BODY MOST OFTEN EXPOSED TO MAXIMAL COOLING.”