



SHORE CARDIOLOGY CONSULTANTS

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What is (EECP) Enhanced External Counterpulsation?

EECP is a mechanical procedure in which long inflatable cuffs (like blood pressure cuffs) are wrapped around both of the patient's legs. While the patient lies on a bed, the leg cuffs are inflated and deflated with each heartbeat. This is accomplished by means of a computer, which triggers off the patient's ECG so that the cuffs deflate just as each heartbeat begins, and inflate just as each heartbeat ends. When the cuffs inflate they do so in a sequential fashion, so that the blood in the legs is "milked" upwards, toward the heart.

EECP has two potentially beneficial actions on the heart. First, the milking action of the leg cuffs increases the blood flow to the coronary arteries. (The coronary arteries, unlike other arteries in the body, receive their blood flow after each heartbeat instead of during each heartbeat. EECP, effectively, "pumps" blood into the coronary arteries.) Second, by its deflating action just as the heart begins to beat, EECP creates something like a sudden vacuum in the arteries, which reduces the work of the heart muscle in pumping blood into the arteries. Both of these actions have long been known to reduce cardiac ischemia (the lack of oxygen to the heart muscle) in patients with coronary artery disease. Indeed, an invasive procedure that does the same thing, intra-aortic counterpulsation (IACP, in which a balloon-tipped catheter is positioned in the aorta, which then inflates and deflates in time with the heartbeat), has been in widespread use in intensive care units for decades, and its effectiveness in stabilizing extremely unstable patients is well known.

While a primitive form of external counterpulsation has also been around for a long time, it has not been very effective until recently. Thanks to new computer technology that allows the perfect timing of the inflation and deflation of the cuffs, and produces the milking action, modern EECP has been greatly enhanced.

EECP is administered as a series of outpatient treatments. Patients receive 5 one-hour sessions per week, for 7 weeks (for a total of 35 sessions). The 35 one-hour sessions are aimed at provoking long lasting beneficial changes in the circulatory system.

Pre-Treatment Instructions

- **Take all medications as directed by physician.**
- **Do not eat or drink anything 1 ½ hour before your treatment.**
- **If you're taking a water pill, take it after your treatment.**
- **Wear a t-shirt and tight fitting underwear. Our office will supply you with a special pair of "EECP" pants to wear for each of your treatments.**