EECP NOW

Issue #2 | August 2021.







In this issue:
EECP as a Multipurpose
Treatment

Welcome

Welcome to **EECP** NOW. a triennial publication dedicated to the exciting world of enhanced external counterpulsation. In this second issue we take a look at the versatility of EECP treatment, answer frequently asked questions about EECP, and offer an annotated case presentation of a patient for whom the treatment has proven highly beneficial. We also take a glimpse into what lies ahead in EECP clinical studies and publications, and interview BPHC's lead EECP technician for her thoughts on the present state and the future of EECP.

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1 Enhanced External Counterpulsation: A Multipurpose Treatment

In the last several decades, the rapidly-evolving world of medical technology has provided us with a number of disease-specific treatments and therapies that have greatly improved and extended the lives of countless patients worldwide. The success of these technologies has progressed in tandem with our increased knowledge of the diseases themselves, and armed physicians with a growing list of targeted treatment options for afflictions that were once difficult or even impossible to treat. Rare is the advent of an apparatus that proves efficacious in the treatment of a wide variety of diseases, particularly across a spectrum of body systems. Enhanced External Counterpulsation (EECP) is one such modality, with applications that quite literally extend from head to toe. In the following article, we touch down on some of the many ways in which this dynamic treatment is benefitting patients across the world.

Treatment of Refractory Angina Pectoris

EECP is best known as a safe and effective therapy for patients with refractory angina pectoris. While its precise mechanism of action merits further study, angiographic and Doppler tests have proven that the treatment's benefits are at least in part derived from providing increased blood flow to the coronary arteries during diastole. EECP is also believed to stimulate angiogenesis, or the formation of new collateral vessels in the heart, earning it the "natural bypass" moniker. The treatment has been shown to have a significant positive impact on the quality of life of angina patients, greatly increasing their exercise tolerance while substantially lowering their use of medications, such as nitroglycerin. In the United States, EECP is offered as a safe and cost-effective a Iternative o ption to r efractory a ngina patients for whom further revascularization is not possible, while in China the treatment is often favored over invasive CABG surgery and percutaneous coronary intervention (PCI), and even offered as a prophylaxis against coronary artery disease.



Treatment of Hypertension

In patients with baseline hypertension, EECP has been proven to reduce systolic and diastolic blood pressure, while having no significant impact on heart rate. Perhaps even more remarkably, sustained benefits of the treatment have been demonstrated following a single session of EECP and indeed well after a full seven-week therapeutic course, wherein a significant drop in blood pressure was observed after the first treatment, and more modest reductions were recorded across remaining 34 sessions. In patients with coronary artery disease with left ventricular (LV) dysfunction, EECP's improvement function is believed to be responsible for lower brachial systolic pressures1.

Treatment of Erectile Dysfunction

EECP has shown significant promise as a treatment for erectile dysfunction (ED). It is assumed that the treatment's ability to augment peripheral blood flow is responsible for the marked improvements recorded in test subjects with vascular ED. In a 1998 study, EECP was shown to increase sexual intercourse ability in 69% of participants for an average of seven months post-treatment, thus rivaling Sildenafil, which was also 69% effective in clinical trials³. Increased arterial perfusion offers an additional explanation for the possible mechanism through which the treatment achieves this effect, as it is believed to open existing channels or stimulate the formation of new collaterals.

Treatment of Congestive Heart Failure

EECP has offered clinically demonstrable benefits to patients with ischemic and non-ischemic cardiomyopathy without any major adverse effects. Marked improvements to resting heart rate and left ventricular function have been recorded, as well as significant increases in peak oxygen uptake, resulting in greatly improved exercise tolerance over baseline. EECP has also been shown to provide significant improvements to the quality of life of heart failure patients, particularly with respect to emotional dimension metrics².



^{1.} Subramanian R, Nayar S, Meyyappan C, Ganesh N, Chandrakasu A, Nayar PG. Effect of Enhanced External Counter Pulsation Treatment on Aortic Blood Pressure, Arterial Stiffness and Ejection Fraction in Patients with Coronary Artery Disease. J Clin Diagn Res. 2016;10(10):OC30-OC34. doi:10.7860/JCDR/2016/23122.8743

^{2.} Jan R, Khan A, Zahid S, Sami A, Owais SM, Khan F, Asjad SJ, Jan MH, Awan ZA. The Effect of Enhanced External Counterpulsation (EECP) on Quality of life in Patient with Coronary Artery Disease not Amenable to PCI or CABG. Cureus. 2020 May 6;12(5):e7987. doi: 10.7759/cureus.7987. PMID: 32523843; PMCID: PMC7273423.

^{3.} Froschermaier SE, Werner D, Leike S, Schneider M, Waltenberger J, Daniel WG, Wirth MP. Enhanced external counterpulsation as a new treatment modality for patients with erectile dysfunction. Urol Int. 1998;61(3):168-71. doi: 10.1159/000030315. PMID: 9933838.

Treatment of Ocular Ischemic Diseases

EECP therapy has shown great promise in clinical studies as a treatment for patients suffering from a variety of ocular diseases, including retinal central branch vein occlusion, optic nerve disorders, external ophthalmoplegia, ocular ischemic syndrome. and acute retinal artery occlusion. Test groups showed significant improvements in a number of areas, including increased retinal perfusion, greater larger visual fields, and increased hemodynamics. The treatment is believed to achieve these effects by increasing blood flow and perfusion pressure of ciliary arteries, while simultaneously decreasing ischemia and optic nerve oxygen insufficiency⁴.

Treatment of Liver Cirrhosis

In a 2005 study⁵, EECP proved effective in increasing renal excretory function both healthy volunteers and patients with cirrhosis. The treatment resulted in decreased plasma renin concentration, which led to an improvement in urinary flow rate as well as increased chloride and sodium excretion. These increases in diuresis and natriuresis are thought to result primarily from an enhancement of diastolic blood flow to the renal artery, as well as an increase in mean arterial pressure. It is also theorized that increased venous return from the legs may account for the observed increase in atrial natriuretic peptide, in a process similar to the treatment's proven augmentation of right atrial pressure.

Treatment of Ischemic Stroke

EECP has also shown appreciable effects on ischemic stroke patients, by increasing blood pressure and cerebral blood flow⁶. This improvement of cerebral perfusion and collateral supply is thought to result from significant increases in mean blood pressure produced by EECP treatment. While undergoing EECP, patients have been known to experience mean blood flow velocity increases in both the ipsilateral and contralateral sides over baseline. Blood pressure and flow velocity then return to baseline when EECP treatment concludes.



Future Implications of EECP Treatment

EECP's demonstrable ability to provide increased perfusion to a number of organs suggests further applications for the therapy may emerge for the treatment of diseases on which EECP has not yet been tested. Thus, what has already proven an incredibly versatile treatment modality may yet become more diverse in its functions as we continue to explore the abilities of this remarkable therapy.

^{4.} Yang, Y., Zhang, H., Yan, Y., & Gui, Y. (2013). Clinical study in patients with ocular ischemic diseases treated with enhanced external counterpulsation combined with drugs. Molecular Medicine Reports, 7, 1845-1849. https://doi.org/10.3892/mmr.2013.1445

^{5.} Werner D, Trägner P, Wawer A, Porst H, Daniel WG, Gross P. Enhanced external counterpulsation: a new technique to augment renal function in liver cirrhosis. Nephrol Dial Transplant. 2005 May;20(5):920-6. doi: 10.1093/ndt/gfh755. Epub 2005 Mar 23. PMID: 15788437.

^{6.} Lin W, Xiong L, Han J, Leung TW, Soo YO, Chen X, Wong KS. External counterpulsation augments blood pressure and cerebral flow velocities in ischemic stroke patients with cerebral intracranial large artery occlusive disease. Stroke. 2012 Nov;43(11):3007-11. doi: 10.1161/STROKEAHA.112.659144. Epub 2012 Sep 20. PMID: 22996956.

2 Case Presentation: Peter Moskowitz



A 78-year-old male with severe CAD and refractory class III angina pectoris has refused CABG surgery, opting instead for EECP for 10 years, ongoing,

PMH: Arterial hypertension, hypertensive heart disease with diastolic dysfunction, diabetes mellitus, mixed hyperlipidemia, hypothyroidism, and family history of premature coronary artery disease (CAD).

"I have had chronic angina pectoris since 2005, but I was treated for GERD (gastric acid reflux) instead."

March 2010 — Age 67

Angina pectoris on walking < one block and climbing a flight of stairs, relieved by rest and/or 0.4 mg of SL nitroglycerin. Had abnormal exercise stress test for myocardial ischemia.

April 5, 2010 — Cardiac CATH

- Right coronary artery (RCA): 100% chronic occlusion proximal third. (Figure 1)
- **Left anterior descending (LAD):** 90% stenosis middle third, near origin of D1 (Figure 2); 80% stenosis of D1 (Figure 3); 90% stenosis of D2 (Figure 4).
- Left circumflex (LCX): mild diffuse disease.

Collateral circulation with retrograde filling of distal RCA via transseptal branches from the LAD (Figure 5). EF= 65%. (Figure 6)

Coronary artery bypass grafting (CABG) surgery was recommended because patient had "Widow Maker" CAD.

"I was told that my CAD was so severe that I could die at any minute; and I should go home and make an appointment with a heart surgeon."

Two weeks later—second opinion—another cardiologist and another CV surgeon recommended CABG as soon as possible.

"I made an appointment for surgery, which was not available for 2 weeks."

"Even my two physician sons advised me to have coronary bypass surgery."

In the meantime, patient investigated the ramifications of having a CABG surgery and learned about EECP therapy as a unique modality of treatment for symptomatic CAD.

Patient cancelled bypass surgery and decided to have EECP therapy plus guideline-directed medical therapy (GDMT) instead.

2010-2011

Patient received sequential treatments of EECP therapy in 35 hour-long sessions in Los Angeles county.

2013-2014

In 2013, Mr. Moskowitz became our patient. Since then, he has received several sequential EECP treatments in our facility, in addition to optimal medical therapy as allowed and tolerated by the patient.

October 29, 2014

On the First Annual EECP Symposium on Refractory Angina Pectoris in Anaheim, California, patient presented the following slide:

What has EECP done for me?

Before EECP	After EECP	
Angina on walking 100 feet	Walk one mile without angina	
Every time I eat could precipitate angina	I am able to eat without angina	
Unable to exercise because of angina and shortness of breath (SOB)	Able to walk twice a day with no angina or SOB	
Take nitroglycerin spray 2-3 times a week.	Take nitroglycerin spray < 1 time every 3 weeks.	
Take 2 slow-release tablets of nitro a day.	No longer take slow-release nitro tablets.	
Marked limitation of ADL	Mild limitation of ADL	
Fatigue, decreased energy	Increased energy and more active	
Angina CCS Class III	Angina CCS Class I	

[&]quot;My recent PET scan showed reversible ischemia involving the LAD and RCA with normal EF at rest and during stress of 64%."

2015-2018

Patient continued with GDMT and EECP therapy about twice a year. He refused to have another selective coronary angiogram, despite abnormal stress echocardiograms compatible with myocardial ischemia and/or regadenoson myocardial PET scan on September 24, 2018, showing a total perfusion defect of 19% with reversible ischemia involving the LAD and RCA with a normal LVEF of 64%.

2019

Patient received EECP therapy in a facility closer to his home, and he is followed by a cardiologist in a teaching institution.

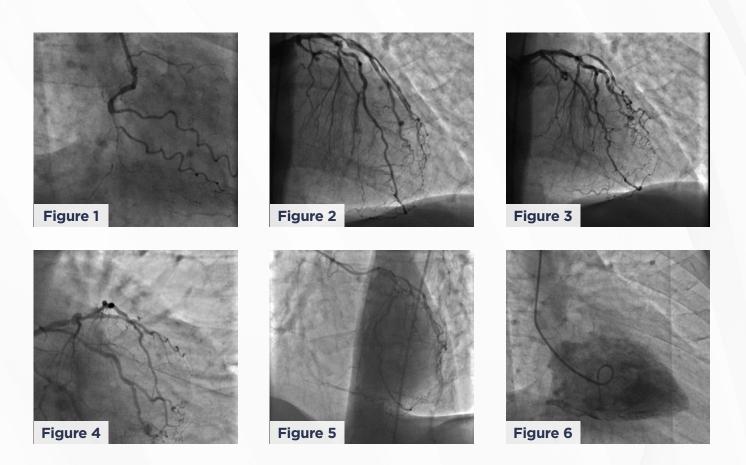
2020

Patient had no further EECP treatment because of the COVID-19 pandemic. Patient was able to drive with his wife cross-country to New York on a 3 week vacation trip to visit his relatives.

May 15, 2021—(conversation via telephone)

- "I still have angina, but not always, such as walking <2 blocks or going upstairs. I sit down, take a few deep breaths, and feel better. I take nitroglycerin SL once every two months or so."
- "My BP is under control, but it is high sometimes."
- "I am no longer exercising because I developed degenerative arthritis in one hip."
- "My last HbA1c was 7.1%. My total cholesterol, LDL, and triglycerides are still high, but I do not want to take any medications, including statins. I used to take medications for high triglycerides, but I discontinued them"
- "I am reluctant to take medications, but I am still taking 325 mg of aspirin on a daily basis, as well as 100 mg of metoprolol succinate, 100 mcg of levothyroxine, 100 mg of allopurinol, 1,000 mg of Ranexa (only in the morning), benfotiamine 150 mg bid, and other different vitamins and supplements."
- "I have an 'oxygen concentrator' at home, and I take oxygen through my nasal cannula, as needed. This has helped with my medical conditions."
- "I am not taking metformin 1,000 bid anymore."
- "I have not done EECP therapy since 2019."
- "I am clear in my cognitive faculties, and I am still able to drive."
- "I will make an appointment to see you (Dr. Caceres) soon, so, you can evaluate my heart condition once again."

Pictures and testimony provided with the express permission of the patient.



3 Enhanced External Counterpulsation (EECP) FAQ:

Q: What is the purpose of EECP?

A: EECP, or Enhanced External Counterpulsation, is a non-invasive treatment most commonly prescribed to patients suffering from angina symptoms that persist in spite of guideline-directed medical therapy. EECP is offered as an alternative to surgery in coronary artery disease (CAD) patients whose coronary anatomy is not amenable to revascularization, as well as patients for whom surgery poses a high risk. Multiple clinical studies have shown that EECP can significantly reduce angina symptoms and allow patients to live more active lives.

Q: How does EECP differ from other CAD treatments? Does it offer any special advantages over them?

A: EECP is a non-invasive outpatient treatment with no recovery time, making it a convenient alternative to revascularization procedures. Rather than requiring a trip to the hospital, EECP can be performed in the comfort of a physician's office, and requires only roughly one hour of the patient's time.

Q: Can a patient who has already had bypass surgery/angioplasty/stents still receive EECP treatment?

A: Absolutely. The majority of patients on EECP therapy have already had coronary angioplasty with stents (PCI) and/or CABG surgery. These patients are prescribed EECP therapy because of recurrent angina pectoris or similar symptoms, despite medical therapy and/or revascularization.

Q: How long do the clinical effects of EECP last?

A: The clinical benefits of EECP extend beyond the time period of any acute hemodynamic beneficial effects. For example, the participants treated with EECP in the Multicenter Study of Enhanced External Counterpulsation reported a reduction in angina episodes and decrease in

nitrate use well beyond the duration of therapy (sometimes several years).

Q: What is the mechanism of action of EECP?

A: EECP improves endothelial function through increased vasodilatation and decrease of intimal hyperplasia. The treatment leads to improved coronary blood flow derived from increased shear stress, which in turn leads to increased endothelial nitric oxide release and resultant vasodilation.

EECP enhances collateral capillary development by increasing blood flow to the ischemic region of the myocardium, and increases capillary density. Shear stress is a known stimulus for coronary collateral development and recruitment. Vascular endothelial growth factors (VEGF) and platelet-derived growth factors (PDGF) that are crucial in angiogenesis are up-regulated by vascular shear stress.

EECP improves neurohormonal factors by increasing nitric oxide and decreasing B-type natriuretic peptide (BNP), atrial natriuertic peptide (ANP), and angiotensin II.

EECP also reduces aterial stiffness, which leads to a decrease in vascular resistance and blood pressure, and an increase in cardiac efficiency.

Q: Is there a difference between EECP and ECP?

A: Yes. EECP is a registered trademark of Vasomedical, Inc., the leading manufacturer of EECP equipment in the United States. Vasomedical has a patent on the timing mechanism of the machine (when the cuffs squeeze and release in time to the patient's EKG, the most critical part of the treatment). This timing mechanism distinguishes them from those who make other external counterpulsation (ECP) equipment, and makes the EECP machine by far the most clinically effective device on the market. Every published U.S. study (and most studies originating in countries around the world) in the leading medical journals have used Vasomedical EECP equipment.

Q: Can a patient with atrial fibrillation have EECP therapy?

A: Uncontrolled atrial fibrillation, atrial flutter, and frequent PVCs may interfere with the triggering of the EECP system. The average beats should be 50-100/min; however, if the heart rate is controlled and no faster than 100 bpm, atrial fibrillation will not interfere with EECP.

Patients with frequent and irregular heartbeats with a high heart rate (HR) >100 or low HR <50 should delay EECP until rate control has been achieved.

Q: Can a patient with varicose veins have EECP?

A: Yes. Varicose veins do not preclude individuals from receiving EECP. We often use extra padding in patients with varicose veins to ensure maximum comfort. If a diagnosis of deep vein thrombosis is entertained, however, a venous US Doppler study of the lower extremities should be performed in advance of EECP therapy.

Q: Can a patient with peripheral artery disease have EECP?

A: Yes. EECP improves blood flow throughout the entire body, including the lower extremities. In our experience, patients with this condition—if not severe—may require more than 35 EECP sessions to obtain the full benefit of the therapy. We have documented (with arterial Doppler studies) the circulation of the lower extremities before and after EECP in some patients with diabetes, with marked improvement in response to EECP.

Q: If angina returns after a patient finishes an EECP treatment course, can he/she come back for more?

A: Yes. EECP is not a once-in-a-lifetime treatment. Heart disease is a chronic inflammatory illness, and symptoms may return at some point in the future. In such a case, a myocardial perfusion study is performed to document reversible ischemia, and EECP therapy can be repeated sequentially with three month

intervals in between, according to Medicare guidelines.

Q: Does EECP aggravate high blood pressure (hypertension)?

A: No. As a matter of fact, EECP has a therapeutic role in the management of arterial hypertension and hypertensive heart disease. If you have hypertension that is properly managed, vou may undergo **EECP** without difficulty. Sometimes. patients hypertension find that their blood pressure improves as they proceed with EECP. Patients with uncontrolled hypertension are advised to seek medical care to regulate blood pressure with proper medications before proceeding with EECP.

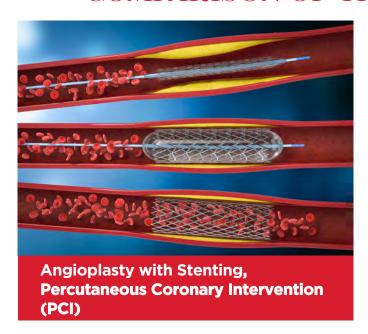
Q: Can EECP dislodge plaque and cause a stroke or heart attack?

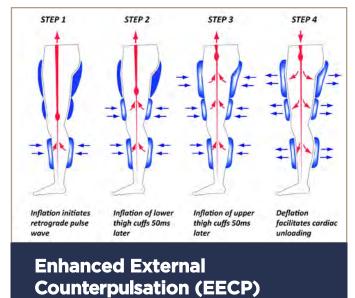
A: No. Atherosclerotic plaques are calcified and hard, and they create an obstruction that detours the blood through alternate routes of least resistance. During EECP, when blood is flowing to the heart, it will naturally bypass arteries with significant plaque and enter healthy, non-diseased blood vessels to go around the blockages. In time, these new pathways are reinforced and become lasting routes for blood to reach the heart beyond the blockages. This is why EECP is often called the "natural bypass."

Q: How many EECP sessions are in a typical treatment cycle, and what happens if a patient misses an EECP session?

A: EECP is typically prescribed in a series of 35 treatments, each one hour in duration. Missing a single day of EECP therapy will not have a negative effect on a patient's overall treatment, but as with any other therapy, patients are encouraged to attend all prescribed appointments as diligently as possible. The more consistently a patient attends his/her prescribed EECP schedule, the better the results will be. A missed session will be added to the end of a patient's program, to ensure he/she receives a total of 35 sessions.

COMPARISON OF TREATMENT OPTIONS





The ("guilty") most severe stenosis is treated, while other stenoses are left untreated.	All stenosis (mild to severe) and the areas involving infarction receive therapy.	
May require additional PCI or coronary bypass surgery.	Sustained benefits in the short- and long-term.	
Invasive. Performed in cardiac catheterization lab. Operator-dependent.	Noninvasive. Performed in physician's office. Not operator-dependent.	
Drugs (inhibitors of platelet aggregation, in addition to aspirin) are advised.	N/A	
High cost and resources required.	Low cost and limited resources required.	





Buena Park Heart Center (BPHC) proud to announce the formation of the BPHC Clinical Research Team, a selffunded division of the center devoted to conducting and publishing clinical research with an emphasis on enhanced counterpulsation. Led principal investigator Samantha Ang and overseen by medical director Joe M.D., the Clinical Research Caceres. Team's goal is to engage in projects that will bring greater attention to confidence in EECP treatment, providing the scientific community with robust data and regularly-published articles exploring various aspects of the therapy.

Projects currently underway include an investigation of the long-term effects of EECP on patient quality of life (QOL). Assessments are performed via administration of the Seattle Angina Questionnaire (SAQ7) at various intervals pre-and post-treatment. Also in progress is a review of the perceived mechanism(s) of action of EECP (see right panel).

Please visit www.eecphearttherapy.com to stay up-to-date on future projects, announcments, and newsletters.



Enhanced external counterpulsation: Perceived mechanism(s) of action: past and present

In this forthcoming article, we examine a wealth of existing literature and chronicle changes in the perceived mechanism(s) of action of EECP over the last several decades. Beginning with early experiments in counterpulsation technology and stretching to the present day, this article attempts to provide a comprehensive look at the various proposed MOAs researchers have attributed to EECP since its inception. For further insight, we delve into clinical studies documenting EECP's applications for non-cardiac conditions, such as ocular ischemic diseases and erectile dysfunction, as EECP's sometimes unexpected efficacy in aiding with these conditions may hold the key uncovering the treatment's complex mechanism of action.

Issue #1 | March 2021.

5 Buena Park Heart Center Staff Spotlight



Samantha Ang, Buena Park Heart Center Lead EECP Therapist

1. Question: How did you get started in EECP? Do you enjoy it?

Answer: Before I started administering EECP, I was trained by technicians from VasoMedical, the developers of EECP technology. I then attended a conference presented by Dr. Caceres, which helped me better understand EECP's mechanism of action and the benefits of the treatment could have for patients with coronary artery disease. I do enjoy administering treatments to our patients because over the course of 35 days we are really able to get to know our patients and support them as their heart condition improves.

2. Question: How many years have you been performing EECP therapy?

Answer: I have been performing EECP for more than 10 years now.

3. Question: Are there any EECP success stories that really stand out to you?

Answer: A patient with restless leg syndrome (RLS) stands out the most for me, because she was really struggling with the condition when she first visited us, but by the end of her 35 sessions of EECP, her condition had improved so much that she was visibly happier. This was so wonderful to see, and I felt so happy when the patient mentioned that she no longer had to take her three RLS medications.

4. Question: Despite all the wonderful benefits the treatment offers patients, it is still not widely used in the United States. Why do you think that is, and what do you think can be done about it?

Answer: I think the number one thing that we must do is bring greater awareness to EECP. Once patients and providers are able to see the therapy in action, the results speak for themselves. At Buena Park Heart Center, we are doing everything we can do to inform more people about the treatment and its many benefits, in the hope that one day patients everywhere will be able to benefit from EECP as a mainstream therapy for refractory angina pectoris.

5. Question: What would you say to a patient who is unsure if EECP is right for him/her?

Answer: If a patient has had EECP recommended by his/her doctor, I would ask them to keep in mind that EECP is a noninvasive treatment, unlike the revascularization alternatives, and assure the patient that I have seen the benefits of the treatment firsthand hundreds of times. If my own dad were still alive, I would wholeheartedly have recommended that he receive EECP therapy for his recurring angina pectoris. That is how confident I am in the treatment.

6. Question: What, in your opinion, is the most important quality for an EECP therapist to have?

Answer: I would say that compassion is important. Having a genuinely kind and caring attitude toward patients helps build trust and comfort, which is essential not just to EECP treatments but healthcare in general.

7. Question: What do you see for the future of EECP? What are your hopes?

Answer: I would like to see EECP reach mainstream status, so that any symptomatic coronary artery disease patient has the treatment available as an option. At the moment, in the United States it is a specialty treatment offered by only select providers. It would be wonderful one day to see EECP centers in every city in the country.

8. Question: Finally, what is the most rewarding thing about administering EECP treatment to patients?

Answer: To see patients progress from feeling apprehensive, limited, and worried about their heart conditions on their first visit to feeling energetic, happy, and so much more mobile as their treatments progress is such a rewarding experience. And to have the honor of being there to guide patients on their journeys to better health and to really get to know them along the way is truly special. I wouldn't trade it for anything.

6 EECP at Buena Park Heart Center Testimonials:





One thing that has really changed for me since I started EECP therapy only three weeks ago is I have more energy. Before the therapy, I used to go home at the end of the day feeling tired, but since starting EECP, I haven't felt tired anymore.

I would surely recommend EECP therapy, because it is definitely working for me, and I believe it would work for others, too.

- Ernesto Torres





EECP is very relaxing. I've fallen asleep a few times because it's so relaxing. I really enjoy it. I find a lot of comfort in coming in [for my appointments].

The therapy is very reassuring. The staff is wonderful. If I have a problem, I can press a button and they're there immediately. When EECP is finished, the staff is there immediately to take care of me, and if I have any questions, the staff is happy to answer them.

I noticed that before I had EECP therapy, I had a little shortness of breath. I didn't really have pain, but I noticed I was tiring much more easily and didn't have the energy I used to have. When I had the therapy, it seemed to give me a new lease on my day. I had the energy to take on the day. It was like my battery was recharged.

I believe EECP has really improved my quality of life. I feel so much better when I'm done with it, and I feel like I'm ready to take on the world!

- Larry Ledvina



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I would absolutely recommend EECP to anyone who has angina, heart disease, or cardiovascular disease. It's an alternative. I've known people who needed heart surgery but didn't want to get it because they were afraid of it. They had EECP instead, and have gone on living for years. And it is also there for people like me, who have had the heart surgeries and cannot have them anymore. I recommend it to anybody to better their life.

I continue to have EECP therapy, and I'm grateful for all the benefits it's had on me, and I recommend it a lot.

- Steve Ezell



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The therapists and staff are wonderful. They treat you like family here. You lie in a bed that squeezes your legs for an hour and watch TV, but sometimes I just want to take a nap, so I go to sleep. It's a great experience. The staff remember things we talked about from weeks before, and are concerned with my health and how they treat me.

I've even talked about EECP with people who don't have heart problems, so if they or anyone they know needs it in the future, they'll know where to come.

The experience with Caceres Medical Group and Dr. Caceres is night and day over anyone else to me. He treats people with respect. It's almost like being a family member coming here. Having him and his staff treat me like a person rather than just a number makes me look forward to coming to my appointments.

- Larry Timmins











"Patients and health professionals working together to maintain a vigorously pumping heart."









EECP Therapy at Buena Park Heart Center provides excellence in cardiovascular care with an attitude of compassion for each patient. Our mission is to alleviate angina pectoris and improve the quality of life of patients with heart disease.

We have 20 EECP beds and dressing rooms with HD televisions and headphones, six certified EECP therapists, and three patient care providers.

Indications for EECP (CMS Guidelines): Patients with angina pectoris responding inadequately to antiischemic agents and coronary revascularization, who are inoperable or at high risk for operative complications or postoperative failure, who are poor candidates for PCI or CABG, or continue to have disabling angina despite revascularization.

Referral Process: A prescription for EECP. No further heart studies are conducted. We will write a letter of medical necessity for EECP. Upon completion of EECP therapy, a report is sent to the patient's cardiologist.



