

PRESIDENT'S ADDRESS



WE WELCOMED SPRING IN WITH LOTS OF RAIN BUT IT IS PROVING TO BE QUITE NICE WITH SOME RATHER WARM TEMPERATURES, MORE LIKE SUMMER WHICH IS STILL YET TO COME. OF COURSE YOU NEVER KNOW WHAT TEMPERATURE YOU WILL GET ON ANY GIVEN DAY... BUT THAT'S NEW ENGLAND FOR YOU!

I want to welcome some new faces to the leadership of the MACVPR. Diane Gaughran, BS, ACSM-RCEP, CCRP from Norwood Hospital Cardiac Rehab has stepped into the role of Membership Chair in February. We also have two new members on the Education Committee, Arlene Gaw, RN, MS

BC and Jackie Pierce, PT, CCS both from Miriam Hospital who have already had an impact in securing the two fabulous speakers for our May meeting.

We are still in need of filling our President-Elect position. It is a great opportunity to sit on the Executive Committee for the year and learn how the Executive Committee functions and the role and responsibilities of the President. It is a great opportunity to advance yourself both personally and professionally as well as help out your organization... the MACVPR! This is your opportunity to play a larger role in the MACVPR, assist with the direction of the association and share your expertise. Remember that the MACVPR benefits all of us and that is in large part due to the Executive Committee, which relies on volunteers to help out. Please consider giving some of your time and talent to the President-Elect or any other position on the Executive Committee. Feel free to contact me or anyone else on the Executive Committee for information or questions regarding responsibilities etc.

As far as state updates, we had 11 participants complete the CCRP exam on April 28th at the American Cancer Society Building. This continues to be a great benefit to our members to be able to take this exam locally. I would also like to alert you to the fact that we will be awarding the MACVPR Distinguished Service Award this year. It is awarded bi-annually to an MACVPR member who has made outstanding contributions to the field of cardiac and/or pulmonary rehab and to the MACVPR/AACVPR. The award will be given out at our Fall meeting on October 27, 2016.

National Updates include four more affiliate societies have become Joint Affiliates with the AACVPR since the first of the year, now totaling 15. I believe many other affiliates are seeing the many benefits that Joint Affiliation offers to the membership, and I think we will see many more affiliates following suit in the future. Day on the Hill in March was well attended by a number of MACVPR members. This year's push was once again to get a legislative correction with U.S. Senate bill, S.488, and U.S. House bill, HR3355 which would amend title XVIII (Medicare) of the Social Security Act to allow physician assistants, nurse practitioners, and clinical nurse specialists to supervise cardiac, intensive cardiac, and pulmonary rehabilitation programs. We are urging anyone who is a constituent of Richard Neal from the western part of the state, to please contact his office and set up a meeting and ask him to support this bill. His support is particularly important as he is on the House Ways and Means

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MACVPR EXECUTIVE COMMITTEE:

- PRESIDENT**
Lynne MacDonald, PT
- IMMEDIATE PAST PRESIDENT**
Karen LaFond, MSN, RN, CCRP
- PRESIDENT ELECT**
Open Position
- TREASURER**
Donna Hawk, RRT, AE-C
- EDUCATION CHAIRS**
Deirdre Proudman, MSN, RN-BC, CCRN
Judy Flannery, RN, BSN
Arlene Gaw, RN, MS BC
Jackie Pierce, PT, CCS
- NEWSLETTER EDITOR**
Melissa Tanguay, ACSM-CEP
- MEMBERSHIP CHAIR**
Diane Gaughran, BS, ACSM-RCEP, CCRP
- ADMINISTRATIVE ASSISTANT**
Jessica Dion

MISSION:

The mission of the MACVPR is to promote the practice of high standards of care in cardiovascular and pulmonary rehab in Massachusetts.

Committee. This correction is very important to all of our programs, it may not affect you now but economics may result in a change for your program in the future.

We had a phenomenal Member Meeting on May 19th with two dynamic speakers. Please see the Educational Update for a summary of the topics. Thank you to our Education Co-Chairs Deirdre Proudman and Judy Flannery as well as the Education Committee for once again providing us with an informative program. We are currently in the process of planning the agenda for our MACVPR New England Symposium on October 27, 2016 and so far it's shaping up to be a dynamic line up of speakers! So save the date... it's not to be missed!

I hope each of you has a happy and safe summer, and are able to find time to relax and enjoy your family and friends. I look forward to seeing you again at our Fall meeting.

Warm Regards,
Lynne MacDonald, PT
President MACVPR
lynne.macdonald12@gmail.com

SAVE THE DATE!

2016 MACVPR New England Cardiovascular and Pulmonary Rehabilitation Symposium

Thursday October 27, 2016
Hampton Inn & Executive Conference Center
319 Speen Street, Natick, MA 01760

KEY NOTE LECTURE & SPEAKER:

Cardiac Rehab 2016: Implementing the Science of Prevention
Gary J. Balady MD

Dr. Balady is Professor of Medicine and an Assistant Dean of Admissions at Boston University School of Medicine, and is the Director of Preventive Cardiology and Director of the Non Invasive Cardiac Laboratories at Boston Medical Center/ Boston University Medical Campus. He is an associate editor for the journal *Circulation*, and is past Editor in Chief of the *Journal of Cardiopulmonary Rehabilitation*.

ADDITIONAL PROGRAMS SUCH AS:

Exercise Prescription for Cardiac and Pulmonary Populations
Julianne DeAngelis, MS, CCRP, RCEP

Julianne is an AACVPR Certified Cardiac Rehab Professional (CCRP) and an ACSM certified Registered Clinical Exercise Physiologist (RCEP). As an exercise physiologist at the Miriam Hospital's Center for Cardiac Fitness, Julianne has provided exercise prescription, education and behavioral modification for both cardiac and pulmonary patients across many demographics and comorbidities. She has also presented exercise prescription lectures to the doctoral physical therapy candidates at the University of Rhode Island and presented at the 2006 and 2014 AACVPR National Conferences.

E-Cigarettes and Other Tobacco Products
Ann Ottalagana, BS

Ann is the Health Promotion Manager at the American Lung Association of the Northeast. The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease, through research, education and advocacy.

...and more to come! Hope to see you there!

LETTER FROM THE EDITOR

Working in cardiac or pulmonary rehabilitation, it can be easy to get caught up in the day-to-day operations. And why wouldn't it? We have multiple patient groups to run, referrals to follow up on, incoming patients to evaluate, meetings with our medical directors, ITPs to fill out, and more. Additionally, many of our programs are relatively isolated from each other, which further adds to the tendency to get caught in the narrow focus of our own work. This issue of the MACVPR newsletter provides a good reminder why it is so important to take the time to look beyond the walls of our programs to what is happening within the broader scope of our cardiac and pulmonary rehabilitation community.

One issue highlighted is that of changing patient populations, as discussed in the Education Update about Exercise Training in LVAD patients. As technology for treating cardiac patients expands, and as evidence emerges to support the efficacy of cardiac and pulmonary rehabilitation for a broader range of patient populations, as we saw with the fairly recent approval for reimbursement for CHF patients, we need to keep informed on best practices for these patients as they will inevitably be referred to our programs.

On a broader level, this issue also reminds us of the importance for advocating for our field from a public policy standpoint. In this issue, Wayne Reynolds provides a tremendously informative article regarding bills HR3355/S.488, which are incredibly relevant to individuals working in cardiac and pulmonary rehabilitation. His article highlights the important steps we can ALL take to help secure the future of our field for us and our patients.

As usual, if there is a topic you'd like to learn more about in the newsletter, I not only welcome, but encourage feedback. Please feel free to send suggestions or questions to mtanguay@partners.org.

Melissa Tanguay, ACSM-CEP
Exercise Physiologist, Massachusetts General Hospital

TREASURY REPORT

Donna Hawk, RRT, AE-C

Treasurer

AS OF JUNE 6, 2016:

- Checking - \$14,123.56
- Money Market - \$2,635.14
- Total - \$16,758.70

MEMBERSHIP REPORT

Diane Gaughran, BS, ACSM-RCEP, CCRP

Membership Chair

AS OF JUNE 6, 2016:

The MACVPR currently has 87 members. Just a reminder, your AACVPR Joint Affiliate Membership includes

- Access to the MACVPR.org website "Members Only" section which includes:
 - Tri- annual MACVPR News" Newsletters
 - Reimbursement Updates
 - On-line Networking Forum
- Two half -day complimentary Membership Meetings
- Reduced registration fee at the Fall Full-day Membership Meeting
- Access to the AACVPR.org website



**RIGHT: 2014
Award Recipient,
Esther Burchinale
MS,RES,RCEP,
accepts her plaque**



NOW ACCEPTING DISTINGUISHED SERVICE AWARD NOMINATIONS

**Deadline for nominees
is August 15, 2016!**

The Massachusetts Association of Cardiovascular and Pulmonary Rehabilitation (MACVPR) strives to recognize members for their accomplishments in the fields of cardiac and/or pulmonary rehabilitation and presents a

biannual achievement award at the October MACVPR New England Cardiovascular and Pulmonary Rehabilitation Symposium. This award is given to a member in good standing who has made outstanding contributions to the field of Cardiac or Pulmonary Rehabilitation, the MACVPR/ AACVPR and/or has demonstrated commendable efforts toward clinical advancement in primary and secondary prevention of people with cardiovascular and/or pulmonary disease.

Nominations will be accepted starting spring 2016! Nominations must be written and include a paragraph stating why the nominee should be considered for this award. The Executive Committee will review nominations and vote on the recipient. The recipient will be announced at the October MACVPR New England Cardiovascular and Pulmonary Rehabilitation Symposium. The recipient receives a plaque and the fee for the October meeting will be waived.

CRITERIA:

- Must be a MACVPR Member
- Based on contributions and service to MACVPR
- Based on contributions and service to the profession

Please submit nominations to Jessica Dion, MACVPR Administrative Assistant via email at admin@MACVPR.org. Nominations due by August 15, 2016.

MACVPR does not accept responsibility for the accuracy of the information produced herein. The statements and opinions contained in the articles of the MACVPR Newsletter are solely those of the individual authors and contributors and not of MACVPR. We do encourage comments, articles, and other contributions while reserving the right to reject or edit the material. The articles in the newsletter are for readers to use as they deem necessary in their programs of clinical practice and are not necessarily standards of care by MACVPR.

HR 3355/S.488 Update: Why These Bills Matter to YOU



YOUR HOSPITAL MAY NOT NOW BE INCLINED TO USE NON-PHYSICIAN PRACTITIONERS (NPPS) TO COVER CARDIAC AND PULMONARY REHABILITATION, BUT THE REALITY IS THAT HEALTH CARE ECONOMICS ARE FORCING THE INCREASED USE OF NPPS. At some point, cardiology or pulmonary practices will need to realize the increased flexibility in the day-to-day coverage provided by the use of NPPs. Imagine closing a program due to the physician's

inability or lack of interest to cover the programs! This is a very real possibility in the near future given the trend for decreasing Medicare reimbursement amounts for many services, and is why actively supporting the HR 3355/S.488 bills is so important.

For those unfamiliar with HR 3355/S.488, these are bills to promote the supervision of cardiac and pulmonary rehabilitation programs by non-physician practitioners. It's important to note that this bill does NOT change the requirement for a physician to be the Medical Director, it merely allows the use of physician extenders to cover the programs' sessions. For more information, a recent American College of Cardiology Newsletter included an article promoting the bill, entitled, "Rehabilitating the Heart of the Nation" written by AACVPR past Board member, Dr. Richard A. Josephson, who serves on ACC's Prevention of Cardiovascular Disease Section.

The American Heart Association held a one-day advocacy day in May to carry the message of support for the bill to Congressional members of the House and Senate. Representatives from the patient organization, WomenHeart, also participated in the event. Some of our "Day on the Hill" participants even made a second trip back to DC for that event! Additionally, some of our very dedicated AACVPR members continue to promote the bill to Congress. It's critical to keep in mind that this is not a one-and-done activity. Rather, it's an "ask and ask again" until a response is obtained.

Thanks to the persistence of our members, your peers, efforts by ACC and AHA, and hopefully you, support for HR 3355 has grown to 47 bipartisan cosponsors and S.488 has 20 bipartisan cosponsors. However, this is not enough. Recruiting additional cosponsors in both the house and senate are crucial to get this "fix" passed.

So, let's be ready with a show of strong support from our legislators. When Congress re-convenes in the fall and the elections are behind us (finally), there is likely to be a window of opportunity for our bill to be part of a larger "vehicle" that will include a number of non-controversial, smaller Medicare bills, like

ours, before Congress adjourns in December. There are ample opportunities this summer for you to make Home District visits with fellow cardiac and pulmonary rehab practitioners in your district and state.

In Massachusetts, Senators Edward Markey and Elizabeth Warren were early co-sponsors of S-488, so our concentration now is on the House of Representatives, particularly Richard Neal, D-1 as he is a member of the House Ways and Means Committee, which is where support for this bill is most needed.

IT'S CRITICAL TO KEEP IN MIND THAT [THIS BILL] IS NOT A ONE-AND-DONE ACTIVITY. RATHER, IT'S AN "ASK AND ASK AGAIN" UNTIL A RESPONSE IS OBTAINED.

Please get together with colleagues or on your own and make appointments in your congressman's local offices to speak with their healthcare staff person and request co-sponsorship of HR3355 as soon as possible. The AACVPR has a page on the website dedicated to our efforts and has everything needed, including letter templates and links to Congress's website to get phone numbers, email addresses and other information for of your House representative as well as excellent explanations of the necessity and utility of HR3355. Furthermore, I am happy to do what I can to assist with preparation and even accompany you on these visits. Please contact me at wayner1956@comcast.net. However, I alone cannot make it happen. We need a serious show of numbers in order for these bills to stay alive in congress.

DO YOUR PART! GET INVOLVED IN THE AACVPR'S EVERY DISTRICT EVERY MEMBER CAMPAIGN

To get involved in AACVPR's "Every District-Every Member" Campaign and really make some headway, copy and paste the following link to go directly to the Advocacy/Day On The Hill page for step-by-step instructions: www.aacvpr.org/Advocacy/Advocacy-Day-on-the-Hill

AACVPR encourages members to meet with their legislators and legislation staff at their State Capitol.

Judy Flannery RN, BSN & Deirdre Proudman MSN, RN-BC, CCRN
Education Co-Chairs

THE MACVPR MAY 2016 MEMBER MEETING WAS HELD THURSDAY, MAY 19 AT THE AMERICAN CANCER SOCIETY IN FRAMINGHAM, WITH FORTY-ONE ATTENDEES PRESENT. The thirty-five evaluations returned expressed a unanimous response that speakers were knowledgeable and the meeting content applied directly to clinical practice. The knowledge shared came from within our own MACVPR network, specifically the Miriam Hospital in Rhode Island - special thanks to Arlene Gaw, Jackie Pierce, and Loren Stabile for their contributions and for connecting us with the tremendous speakers. The program offered 4.0 free continuing education units from the American Association of Critical Care Nurses (AACN).

SESSION 1: EXERCISE TRAINING WITH LEFT VENTRICULAR ASSIST DEVICES

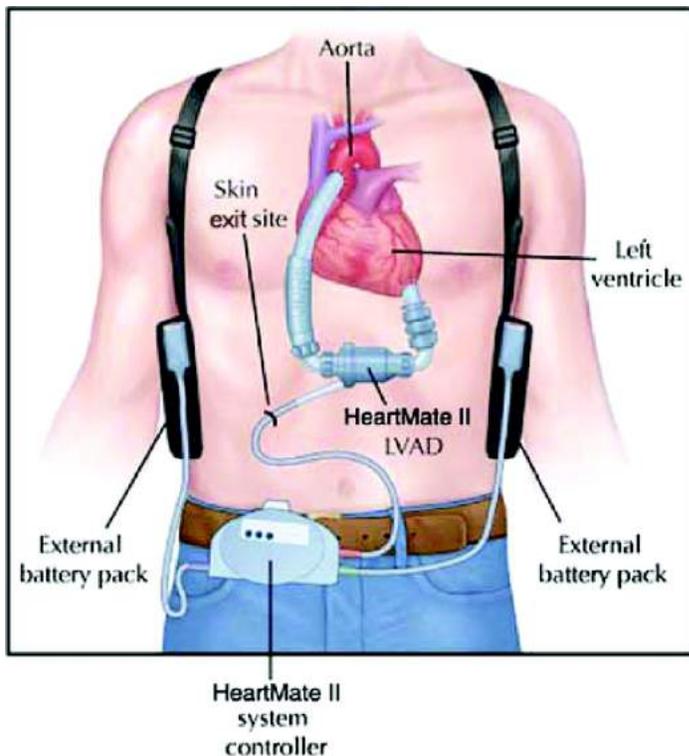
Harsha Ganga MD, Cardiologist at Miriam Hospital, presented Exercise Training with Left Ventricular Assist Devices with support from Hank Wu, MD Assistant Professor of Medicine at Brown University and Attending Cardiologist at Providence Veterans Affairs Medical Center in Providence, RI. Left Ventricular Assist Devices, or LVADs, are used as bridge to transplant (BTT) therapy in patients awaiting heart transplant, as 'destination therapy' (DT) for long-term support in patients ineligible for heart transplant, or even as a bridge to recovery in some patients. Most importantly, they have been shown both to prolong life and improve quality of life in patients. As the use of LVADs as final therapy for end stage heart failure becomes increasingly more common, we are seeing more LVAD patients referred to cardiac rehabilitation, calling for greater focus on methods to improve exercise tolerance in this population.

Dr. Ganga opened his presentation with the history the artificial heart, moving to heart transplant statistics today, and subsequent emergence of continuous flow LVADs (CF-LVAD). A CF-LVAD consists of a pump connected to the heart and aorta via an inflow and outflow cannula, with power provided through a driveline that exits the skin on the right, connected to a system controller typically worn on a belt. These units are typically powered by external batteries or a power-based unit. Total cardiac output in CF-LVAD patients during exercise is predominantly determined by pump speed, the pressure difference across the pump, and in some cases ejection through the aortic valve. The fixed pump speed utilized in CF-LVADs may sometimes provide insufficient support, resulting in a moderate cardiac output increase during increased physical strain. Therefore, in currently used devices, evidence suggests focusing on optimizing non-cardiac peripheral



LEFT: Dr. Harsha Ganga and Dr. Hang Wu, presenters for our Exercise With Left Ventricular Assist Device Session

BELOW: Components of a typical Continuous-Flow Left Ventricular Assist Device. Copyright © 2009, Elsevier.



parameters of exercise to improve ability to perform ADLs. Additional improvement can come from improving non-cardiac factors, such as anemia with low oxygen-carrying capacity, obesity, and general deconditioning with skeletal muscle wasting. Exercise prescription in LVAD patients begins with watching the drive line during exercise! General sternotomy precautions apply the first 6 weeks after implantation.

Continued on next page...

According to the AACVPR Manual 5th Edition, initial exercise prescription should be at 2.5 METs or below and a BORG Rating of Perceived exertion of 11-13, progressing with gradual increase in intensity. Light intensity resistance training may begin after 12 weeks, including higher repetitions with low weight, i.e. 3-5 sets of 12-15 repetitions. LVAD patients benefit from strengthening and conditioning the shoulders and back due to the increased strain from carrying batteries and the controller. Exercise precautions include avoidance of exercise that increases intra-abdominal pressure, excessive stretching, as this can dislodge the drive line or affect the insertion site, and rapid changes in position, which can effect venous return and overall LVAD function. Contact sports and water activity are contraindicated.

The exercise Policy at Miriam Hospital begins with a brief initial assessment. No exercise is recommended if baseline mean arterial pressure (MAP) is less than 70mmHg, low flow alarm is activated, or if the patient exhibits intolerance to activity. Following the initial assessment, MAP is used to determine exercise intensity and intensity is reduced when MAP exceeds 100 mmHg. LVAD flow (liters/minute), power (watts), and RPMs are monitored before and during exercise. The professional staff of Heart Mate and Heart Ware LVADS manufacturers provide on-site in-service to the cardiac rehabilitation program before the first patient arrives. Important take home points include that LVAD patients are profoundly decompensated and have poor exercise capacity, despite LVAD implantation. Evidence suggests LVAD patients may need longer rehabilitative intervention followed by a maintenance program of regular physical activity to maintain fitness and quality of life. In the future, an automatic speed change function in response to varied loading conditions may enable LVADs to provide sufficient support even during strenuous exercise, although this functionality is not currently available.

SESSION 2: INTRODUCTION TO BASIC TRAINING IN MOTIVATIONAL INTERVIEWING AND WORKSHOP

The Motivational Interviewing Workshop, presented by Maria Buckley, Ph.D. from Miriam Hospital, provided useful information and techniques that can be utilized in Cardiac and Pulmonary Rehab programs. This interactive presentation gave participants a chance to practice some of her interviewing techniques and become familiar with Motivational Interviewing terminology; including trying appropriate phrases, persuasion tactics, and learning how to elicit meaningful answers. Along with the lecture Maria provided several very informative handouts and journal articles that reinforced her lecture material and provided further information on motivational interviewing.

The foundation of Motivational Interviewing is OARS, which stands for *Open-Ended Questions, Affirmations, Reflective Listening, and Summarizing*. *Open-Ended Questions* are those that cannot be answered with a yes or no answer, but rather are those that cast a broad net and ask just one question. Some

starters you can use when asking open ended questions are: "to what extent...", "how often...", "tell me about...", and "what else...". *Affirmations* build rapport, reinforce open exploration, and are statements of appreciation and understanding.

Reflective Listening is a way to check with the patient to make sure you understand what they mean, emphasize their positive statements or handle resistance. *Reflective Listening* is expressed as a statement, not a question, and affirms and validates what an individual is saying. For example, using a phrase such as "if I understand you correctly, it sounds like...". And finally, *Summarizing* highlights key point said by the patient. Using

THE FOUNDATION OF MOTIVATIONAL INTERVIEWING IS OARS, WHICH STANDS FOR "OPEN-ENDED QUESTIONS", "AFFIRMATIONS", "REFLECTIVE LISTENING", AND "SUMMARIZING".

phrases such as: "Let me make sure I understand what you have told me so far...", or "This is what I heard..." are examples of summarizing statements.

Some additional key principles of Motivational Interviewing are DEARS, which stands for *Develop Discrepancy, Express Empathy, Avoid Argumentation, Roll with Resistance, and Support Self-Efficacy*. *Developing Discrepancy* asks about future goals, what gets in your way of achieving these goals, and what current behaviors aid or hinder achieving goals. *Empathy* is a process of "communicative attunement", using such statements as: "You mentioned some worries about quitting" or "So you are feeling pretty frustrated about trying to quit". The result of expressing empathy is an increased and deeper self-exploration and accurate understanding of the patient. *Rolling with Resistance* is important because confrontation and persuasion are ineffective. The final principle, *Supporting Self-Efficacy*, helps the patient realize that it is never too late to make a change, that past attempts are learning experiences not failures, and that it commonly it takes a person several attempts to be successful at behavior changes, such as stopping smoking.



ABOVE: Maria Buckley, Ph. D. presents on Motivational Interviewing

Mind-Body Connection and Pain Relief

Pamela Katz Ressler, MS, RN, HNB-BC



PAIN IS THE PRIMARY REASON INDIVIDUALS SEEK MEDICAL CARE IN THE UNITED STATES. AS WE HAVE BECOME MORE AWARE OF THE DIFFICULTIES WITH OVERUSE OF PHARMACEUTICALS, OTHER NON-PHARMACEUTICAL INTERVENTIONS HAVE BECOME THE FOCUS OF RESEARCH STUDIES. Recently, researchers (funded in part by the NIH's National Center for Complementary and Integrative Health) investigated how mindfulness meditation may play a role in the comprehensive treatment of pain.

Mindfulness meditation, specifically Mindfulness Based Stress Reduction as introduced by Dr. Jon Kabat Zinn at the University of Massachusetts Medical School in 1979, has been shown to reduce pain in those with chronic pain syndromes. Mindfulness meditation can be described as bringing awareness, without judgment, to the present moment. Mindfulness meditation involves training the individual to respond versus react to emotions, sensations, and stressors with heightened observation and awareness. Yet, until now the mechanism by which pain reduction occurred had not been fully examined.

In a paper recently published in *The Journal of Neuroscience*, researchers at Wake Forest School of Medicine and Cincinnati Children's Hospital Medical Center studied the response of 78 adults during painful stimuli and intravenous administration of naloxone (to block the transmission of endogenous opioid activity in the brain) or placebo administration of intravenous saline. Half of the participants were taught mindfulness meditation techniques and the other half were placed in control groups with the instruction to "close your eyes and relax until the end of the experiment"

The participants were randomized into four groups: 1. mindfulness meditation plus naloxone; 2. mindfulness meditation plus placebo; 3. control plus naloxone; 4. control plus placebo. Results revealed that those participants who meditated either with naloxone or with placebo had a greater reduction of pain than those participants in either of the control groups; leading researchers to surmise that mindfulness meditation's pain reducing benefits are mediated using non-opioid pathways. This may prove to be seminal research as we in healthcare try to reduce the amount of opioid medications currently prescribed long term to patients. Further research is needed to generalize the results, but it is interesting to consider how the mind-body connection may play a measurable role using non-opioid mediated neurological pathways allowing for reduction of opioids and pain for a large number of people.

To learn more: *F Zeidan, AL Adler-Neal, RE Wells et al. Mindfulness-meditation-based pain relief is not mediated by endogenous opioids. Journal of Neuroscience. March 26, 2016. <http://www.jneurosci.org/content/36/11/3391.short>*

Pamela Katz Ressler, MS, RN, HNB-BC is the founder of Stress Resources (StressResources.com) located in Concord, MA. Stress Resources specializes in providing individuals and organizations with strategic, sustainable tools to build resilience and mindfulness. She is a faculty member at the Tufts University School of Medicine teaching courses in pain research, education and policy, as well as stress management, palliative care, and mindfulness for healthcare providers. Pam serves on the Consumer Health Council of the Massachusetts Health Quality Partners (MHQP) and on the Executive Leadership Board of Stanford University's Medicine X Program.

BUILDING MINDFULNESS:

Adapted from StressResources.com

- Take five minutes every morning to gently release any tension by doing some gentle stretches or concentrating on your breathing.
- Shift waiting time (commuting traffic, waiting on hold on the phone, waiting in line at the grocery, etc) to mindful mini time.
- Schedule "mindful minis" during your day. Step outside and notice the temperature or simply close your eyes and be present in the moment.
- Choose to S.T.O.P. S=stop; T=take a breath; O=observe your mind and body; P=proceed with your tasks. Allow yourself to be more centered and aware.
- Spend one mealtime each week eating mindfully and silently without distraction such as reading, checking email, listening to music. Slow your eating, becoming aware of all the senses—sight, sound, taste, smell and touch.
- Practice mindful communication for 5 minutes. Are you in "talk" or "listen" mode most of the time?
- At the end of the day, acknowledge and congratulate yourself for what you have accomplished and try not to focus on what you have not done.

As always, Pam loves comments and feedback from readers. What topics of mind/body/spirit would you be interested in exploring in future columns? Let Pam know at pressler@StressResources.com

Holly Brassett MS, RD, LDN

Outpatient Dietitian, Lahey Hospital and Medical Center



DID YOU KNOW THAT ON AVERAGE, AMERICANS EAT MORE THAN 3,400 MILLIGRAMS OF SODIUM EACH DAY? The American Heart Association recommends having no more than 1,500 milligrams of sodium per day. A simple can of Progresso soup can have up to 500 mg of sodium per serving which would make an entire can around 1000mg. This is 500 mg less than what is allowed for an

entire day! Many of us think that since we do not add salt to foods that we are in the clear and need not pay attention to food labels. But in reality most of the sodium we consume is already in the foods we eat. The food industry adds salt to foods in order to preserve it, maintain flavor, texture and enhance the color of the food.

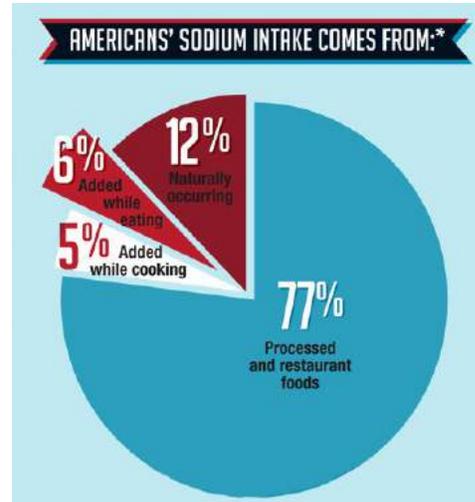
The downfall of having excess sodium is that it takes a toll on your heart. As you take in more sodium your heart has to work harder to pump the blood throughout the entire body. As your sodium intake increases, water is pulled into your blood vessels, which increases the total volume of blood pressure inside the vessels. This increase in pressure stretches the blood vessels and creates damage overtime. Reducing your daily intake by making small changes and limiting high salt foods will make a difference in your overall heart health.

Reading food labels can be confusing but if you understand the food claims it will be easier to know how much sodium you are actually taking in.

FOOD LABELS DECODED

- **Sodium-free** – Less than 5 milligrams of sodium per serving and contains no sodium chloride
- **Very low sodium** – 35 milligrams or less per serving
- **Low sodium** – 140 milligrams or less per serving
- **Reduced (or less) sodium** – At least 25 percent less sodium per serving than the usual sodium level
- **Light (for sodium-reduced products)** – If the food is “low calorie” and “low fat” and sodium is reduced by at least 50 percent per serving
- **Light in sodium** – If sodium is reduced by at least 50 percent per serving

Sodium and Heart Health



TIPS TO REDUCE SODIUM

- Cook pasta, rice and hot cereal without salt.
- Choose packaged and prepared foods carefully. Drain and rinse canned items to reduce the sodium; choose

no salt added. Compare labels and make sure you look at “per serving.” If there are 2 servings and you have the entire can you will need to double the sodium.

- Pick fresh and frozen poultry that hasn’t been injected with a sodium solution. Cook by grilling, braising, roasting, searing and sautéing
- Choose condiments carefully and when able you should try and use fresh herbs and seasonings such as onions, garlic, spices, citrus juices and vinegars.
- Look for products with the American Heart Association’s Heart-Check mark To learn more about the Heart-Check Food Certification Program, visit www.heartcheck.org.
- If you choose to dine out specify the following
 - Ask for your food to have no salt added
 - Use fresh lemon, lime or pepper to season foods
 - Limit foods that contain words such as brined, barbecued, cured, smoked, broth, au jus, soy sauce, miso or teriyaki sauce
 - Add in extra vegetables whenever you can to limit portion sizes on proteins and starches
 - Use fitness pal when dining out or restaurant websites as nutrition facts can sometimes indicate sodium levels.

Make these changes one at a time and before you know it you will not even miss the added sodium. Foods will begin to taste too salty and you will enjoy the natural flavor of the food without all of the added saltiness.

Calcium Channel Blockers: What To Know

Yue See Lee RPh

Pharmacist, Beth Israel Deaconess Hospital - Milton

IN THIS INSTALLMENT, WHICH IS THE THIRD IN A SERIES OF ARTICLES ABOUT DRUGS USED IN CARDIOVASCULAR DISEASE, WE WILL DISCUSS THE USES AND SIDE EFFECTS OF CALCIUM CHANNEL BLOCKERS OR CCBs.

Calcium helps regulate blood pressure because it affects muscles in certain parts of your body such as the heart and arteries (arteries have a muscles too!). Just as the name suggests, CCBs block calcium from entering heart muscles, which causes your heart to beat slower and to contract with less force. Also, muscles in the arteries relax (dilate) which allow blood to flow through with less pressure. Knowing a bit about how CCBs work will help you understand some of their uses and side effects. Most commonly, CCBs are used to treat hypertension (high blood pressure), chest pain (angina), and certain heart conduction problems (arrhythmias). It is important to remember that many of the side effects are related to the dose of the medication and the type of medication itself. Some common side effects include swelling, constipation, dizziness, headache, fatigue, hypotension, and exercise intolerance.

Because CCBs can affect overall fluid and blood circulation, peripheral edema, which is swelling of the extremities such as the feet and ankle, may occur. There are certain ways to deal with this problem. Starting with a lower CCB dose and gradually increasing over time can help determine what is a tolerable dose that minimizes swelling. Taking your CCB in the evening may help control swelling in some patients. Also, keep in mind that edema occurs more often towards the evening, and can be worsened by standing all day. Wearing compression socks, getting off your feet and periodically elevating them may help decrease swelling. Another possibility is to ask your physician about whether dose adjustment or a change in drug might be helpful because CCBs like amlodipine or nifedipine can cause more edema than diltiazem or verapamil.

POTENTIAL SIDE EFFECTS OF CCBs INCLUDE:

- Peripheral Edema
- Hypotension
- Constipation

RARE, BUT SERIOUS SIDE EFFECTS INCLUDE:

- Sexual side effects
- Jaundice (yellowing of skin/eyes)
- Rash
- Increased chest pain

Please talk to your physician if you have any concerns about side effects.

As with most other medications that decrease blood pressure, CCBs can cause hypotension (excessively low blood pressure). Some symptoms include dizziness, fatigue, and unsteadiness after getting up from a sitting or sleeping position. If these side effects are persistent and disruptive for your daily activities, again it is important to consult with your physician. Adjusting the medication dose or switching to a different medication or a long-acting form (verapamil and diltiazem are least likely to cause hypotension) may be helpful. Another consideration is to ensure that you are taking in enough fluid.

Constipation can be a bothersome side effect of certain CCBs, especially verapamil. The best recommendation is to increase the amount of natural fiber in your diet (e.g. vegetables). You can also use over-the-counter products that have a gentle laxative effect such as psyllium (Metamucil) or methylcellulose (Citrucel).

It is not recommended to eat grapefruit (or grapefruit juice) while on CCBs, although amlodipine, diltiazem, and verapamil have the least interaction with this food. The concern with this interaction is that grapefruit can enhance all the effects of the CCBs, including the side effects. Also, if you are put on new medications, such as antibiotics or medications for heartburn, make sure to let your physician know since there are potential drug interactions that may change the effects of your CCBs. **Lastly, you should never stop your medication abruptly without notifying your physician.**

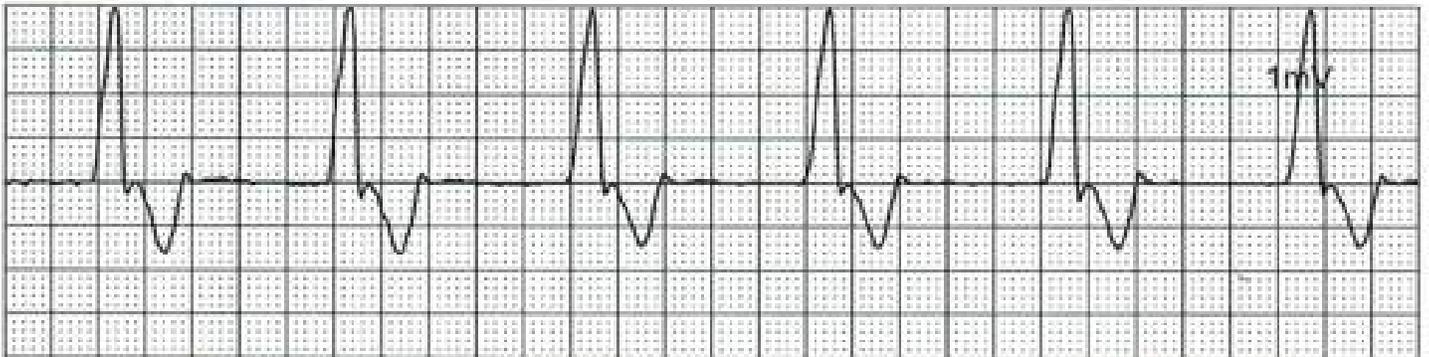
Uncommon side effects such as sexual side effects, jaundice (yellowing of skin/eyes), rash, and increased chest pain, may occur but have not been discussed in this article. Because this is not an exhaustive review, talk with your physician if you have further questions about other side effects.

EXAMPLES OF COMMONLY PRESCRIBED CALCIUM CHANNEL BLOCKERS:

- Amlodipine (Norvasc)
- Diltiazem (Cardizem, Tiazac)
- Felodipine
- Isradipine
- Nicardipine (Cardene SR)
- Nifedipine (Procardia)
- Nisoldipine (Sular)
- Verapamil (Calan, Verelan, Covera-HS)



Mr. T is a 64 year old male who had a stent to his left anterior descending coronary artery four weeks ago. He is starting your cardiac rehab program today and presents with the following rhythm:



Your patient is asymptomatic with a BP of 128/74, heart rate of 60 beats per minute (bpm), oxygen saturation on room air of 99%. He took all his morning medications which included aspirin, ticagrelor, lisinopril and metoprolol.

QUESTION 1 - This rhythm represents:

- Sinus bradycardia
- Junctional rhythm
- Accelerated ventricular rhythm
- Complete heart block
- Ventricular tachycardia

Team huddle and review of the notes in the rehabilitation chart provided the staff with an awareness and understanding of this rhythm. This rhythm was documented on several occasions, initially on the pre-participation exercise tolerance test and again when the patient had his intake evaluation with 12 lead ECG, which captured this intermittent abnormality. Expert opinion was sought from the patient's cardiologist and documentation for the management of this rhythm was communicated in the electronic medical record.

QUESTION 2 - Medication change was initiated by his cardiologist. This included:

- Amiodarone 200 mg twice daily
- Reduction in his beta blocker
- Addition of digoxin
- Potassium and magnesium supplements
- All of the above

ANSWER TO QUESTION 1: Accelerated Ventricular Rhythm

Accelerated ventricular rhythm (AVR) is also known as accelerated idioventricular rhythm (AIVR), and is sometimes referred to as slow ventricular tachycardia (Wagner, 2013), perhaps erroneously. Wagner (2013) describes the cause of this rhythm as being related to enhanced automaticity in the bundle branches or the fascicles of the ventricular Purkinje system. Diagnosis is based on the morphology of the QRS, the absence of a preceding P wave as it may be buried in the QRS complex, and the rate.

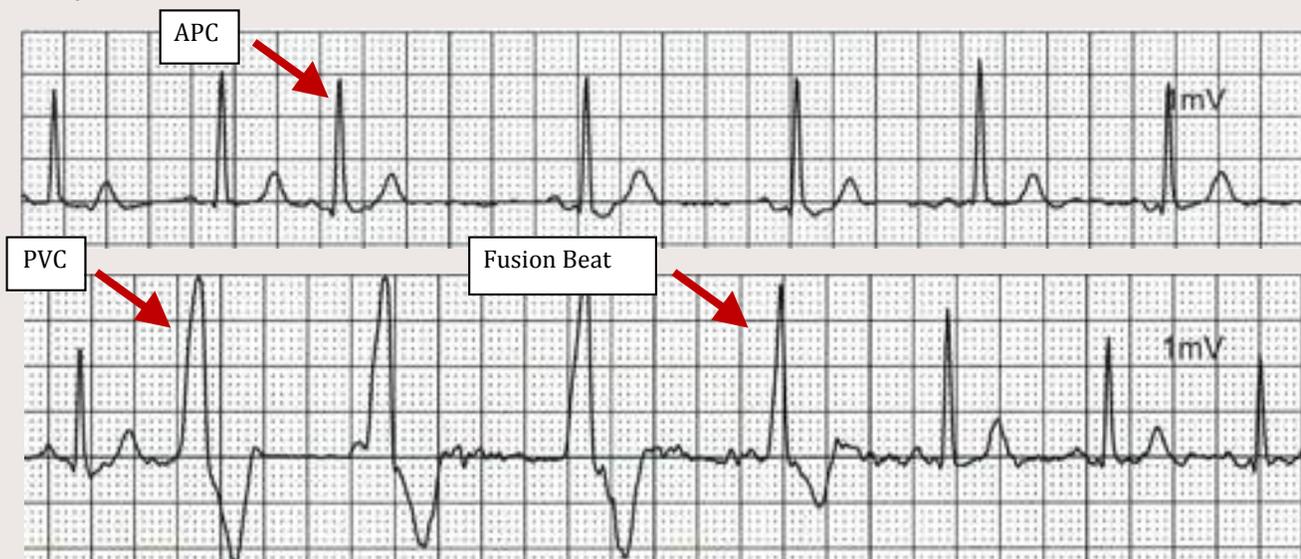
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According to Braunwald (2008) unique characteristics of AVR include the following:

- It is a wide QRS ventricular rhythm
- Rate commonly between 60-110 bpm; usually hovers within 10 beats of the sinus rhythm
- Control shifts between the two competing pacemaker sites (SA node and impulse formation in the ventricles)
- Ectopic beat, either a fusion beat or premature ventricular contraction (PVC), occurs at the onset and termination
- Occurs when the ventricular rate exceeds the sinus rate secondary to slowing of the SA node, AV block or the ectopic ventricular focus accelerates to overtake the sinus rhythm
- Precipitation of a more rapid ventricular rhythm is extremely rare
- This rhythm occurs in patients with heart disease, acute MI, digitalis toxicity or at the moment of reperfusion of a previously occluded artery
- Usually transient and intermittent
- Does not have a profound effect on clinical course or prognosis
- May be found during resuscitation

ANSWER TO QUESTION 2: Reduction in his Beta Blocker (B)

Management for this particular patient was discontinuation of his beta blocker in an attempt to increase the sinus rate. As noted in the second rhythm strip, the patient's sinus rate increased and took over as expected during the exercise session. An incidental atrial premature beat (APC) can be noted. Misdiagnosis as slow ventricular tachycardia or complete heart block may lead to inappropriate therapies and subsequent complications. Treating with lidocaine or other anti-arrhythmic may lead to asystole (Pezeshkian, 2015).



In an acute situation, or if the patient is symptomatic with AVR, atropine or atrial pacing may be indicated to suppress the AVR (Braunwald, 2008). Because the rate of the AVR is slow the competing sinus rhythm will eventually take over without intervention and terminate the abnormal rhythm (Knechtel, 2013). Of note, AVR is usually benign and has no profound effect on BP nor does it normally lead to other, more malignant arrhythmias. Most often it spontaneously ceases. However there may be a loss of the normal atrial contribution or "atrial kick" to ventricular filling and this may create a feeling of weakness or unsteadiness in your patient (Wagner, 2013). Patient education for self care management should include recommendations regarding follow up with the health care provider for progressive symptoms. Questions or comments are welcome on this vignette and can be sent to Deborah.sullivan@lahey.org

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Reimbursement Update:

AACVPR Health Policy & Reimbursement Update June 6, 2016

Adapted from www.aacvpr.org

Since January of this year, partially in response to an audit of one program by the Office of Inspector General (OIG), there has been renewed discussion about what programs must do to meet compliance with Medicare regulations for cardiac and pulmonary rehabilitation (CR and PR). Turns out, there is a fair amount of discretionary interpretation of Federal regulations to local Medicare contractors that provide varied management services (claims processing, payments, audits, etc.) of the Medicare program.

Medicare regulations for CR and PR are found in the Federal Register (also posted on the AACVPR web site under Regulatory & Legislative Information). Each set of rules outline, for example, eligible diagnoses for the service, components expected to be included in the ITP (Individualized Treatment Plan) and responsibilities of both the medical director and the supervising physician. CMS leaves a degree of latitude for the local Medicare contractors, called MACs, to interpret and enforce these provisions.

In the fall of 2015, AACVPR established a MAC Liaison Task Force (TF) to establish or foster existing communication with each MAC Medical Director. The Medicare Administrative Contractors webpage lists the AACVPR member who represents your MAC on the TF and the name(s) of your state representative(s) who assist(s) the TF member over your state.

What's New in my MAC section posts updates on policy and reimbursement information that is specific to your MAC. If you have questions related to CMS information, you may find the CR FAQ and PR FAQ sections helpful. Some of the MAC-specific issues surrounding Medicare compliance in your MAC currently being addressed are:

- Variance between MACs on flexibility and what is expected regarding "30-day MD signature" on ITPs (initial, each month, and at program completion)
- Qualifying PFTs for PR: any time line for when obtained prior to enrollment, post bronchodilator measurement
- Written OK that nonphysician practitioners are able to independently order CR-PR services (i.e., MD co-signature not necessary)

As interpretation and clarification specific to your MAC is learned, that information will be posted on the AACVPR MAC web page and communicated to you through your MAC Resource Group members. To assist the TF and MRGs in prioritizing your policy and reimbursement issues, programs should have recently received a brief survey from your state MRG representative and affiliate leadership. **If you did not receive one, please contact your state MRG representative to participate.** The results will help identify AACVPR policy/advocacy priorities.

To further assist this analysis of current reimbursement trends, cardiac rehabilitation program directors will receive a brief 1-2 question survey in the near future regarding the number of CR sessions typically covered for your patients with commercial insurance. This information will be very useful in helping us identify whether most commercial plans are following Medicare coverage practices or not. Thank-you in advance for your input on these surveys!

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