

# Heart TALK

Heart-healthy and Stroke-free Living with Dr. Amy L. Doneen, DNP, ARNP

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## Chris Hemsworth Revelation is Opportunity to Discuss ApoE and Genetics



Thoughts  
from  
Dr. Amy

In a recent announcement, renowned actor Chris Hemsworth (of Marvel fame) shared his ApoE 4/4 genotype, igniting a very public conversation regarding genetic risk factors associated with Alzheimer's Disease. As the ApoE genotype plays a central role in the disease risk analysis we utilize here at the Prevention Center for Heart and Brain Health, Hemsworth's announcement provides an opportunity to review the importance of ApoE genotypes while highlighting the utility of the Bale Doneen Method to mitigate genetic risk through personalized medicine and intensive lifestyle modifications.

As a review, Apolipoprotein E — or ApoE — is a protein involved in the transport and metabo-

lism of cholesterol and other lipids. ApoE exists in different forms (with one inherited from each parent), ApoE2, ApoE3, and ApoE4. Research has clearly demonstrated a connection between the ApoE4 genotype and an increased risk for developing Alzheimer's Disease. Since each individual carries two copies of the ApoE gene, it is possible to carry not one, but two copies of the ApoE4 gene, a situation affecting about 2-5% of the American population, including Hemsworth.

Individuals who inherit one copy of the ApoE4 allele from either parent have roughly three times the risk of developing Alzheimer's Disease when compared to those without the allele. In fact, 45-

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Dr. John Borders

Dr. Gregory Hood

## ***Drs. Borders and Hood: A Providers' Perspective on the BaleDoneen Method***

**T**hose of you who are regular readers of the Prevention Center's Newsletter may be familiar with the patient stories that have been told over the past year. This month we are featuring a slightly different twist and providing the unique perspective of two BaleDoneen Method (BDM) providers.

We had the very good fortune to speak with Dr. John Borders and Dr. Gregory Hood, both internal medicine physicians who have been partners in a practice (Doctors Borders Hood and Associates) in Lexington, Ky., and members of the MDVIP network for the past 5 years. MDVIP is a network of physicians across the country who believe traditional healthcare has moved too far away from prioritizing individual patients' needs and instead focuses on individualized and specialized care.

Dr. Borders has been practicing medicine since 1982. Beginning in the 1990s, Dr. Borders wanted to continue practicing internal medicine but not the volume-based model that was becoming the norm across the country. He and Dr. Hood were both looking for something different and decided to join MDVIP. Instead of 20-30 patients per day under the routine standard of care, MDVIP physicians generally see 10-12 patients per day. The Cleveland Clinic had been monitoring outcomes from MDVIP patients and found that they were consistently in the top 10% of outcomes. However, at a conference hosted by MDVIP, Dr. Borders was asked if he wanted his patients to be in the top 1% of outcomes and was introduced to Dr. Bradley Bale and Dr. Amy Doneen (founders of the BDM). The highly specialized, patient-specific therapies and incredible patient outcomes offered through the BDM were very much in line with what Dr. Borders had grown accustomed to through MDVIP. He was

very impressed with what he heard and has been practicing the BDM with his patients ever since.

The BDM has been demonstrated to stop and actually cause regression of cardiovascular disease. However, the benefits of the BDM are not limited to cardiovascular disease but also improving brain health, kidney and liver function, reducing oxidative stress, inflammation and insulin resistance. The BDM approach creates genetically tailored therapy plans for individuals, not a one-size-fits-all approach like the current standard of care.

He and his partner Dr. Hood were very excited about the prospect of the BDM for even further improving their patients' outcomes. Adopting the BDM in their practice required a fair amount of time and energy, however.

"We had to spend considerable time wrapping our own heads around this method and explaining it to our patients," explains Dr. Hood. "Trying to explain the traditional numbers we've been monitoring to avoid cardiovascular disease weren't good enough (like only monitoring blood pressure and cholesterol)."

Dr. Hood continued, "However, in many respects the BDM was easier to administer because there was momentum building with colleagues and patient outcome data. Patients became convinced of the approach very quickly after they see the complete turnaround of their biomarkers. It's also easier because you're not treating heart attack

and stroke but rather stopping the atherosclerotic progression of disease. I strongly recommend all patients read *Healthy Heart, Healthy Brain* by Drs. Bale and Doneen."

Dr. Borders does recognize that most physicians have such high patient volumes that it's impractical to spend the time necessary to learn and embrace the BDM as well as educate patients, which he sees as a significant impediment. Dr. Hood relayed a story about his daughter, who is currently in medical school.

"Current med schools teach to the STEP ('board') exams which require students to know the current 'standard of care,'" he said. "The lecture my daughter received on cardiovascular disease was identical to what my wife and I received a generation ago. She questioned the lecturer's approach and it destroyed the lecture. She questioned the current standard of care knowing I practice the BDM. The lecture hall was buzz. The lecturer knew that cardiovascular disease could be stopped and even reversed but had to teach to the current standard of care on the test. Current med students aren't being taught the best available science."

However, he and Dr. Borders stated that other MDVIP physicians are keenly interested in the BDM, and this may be the mechanism through which the BDM becomes more widespread. Dr. Hood went further, challenging the trite excuse physicians give that they don't have time to practice BDM. "You have to use the right tools to fix things the right way as it always saves time and improves patient outcomes in the long run," he said.

Dr. Hood said that in order for the BDM to become the standard of care, a wholesale enhancement of initial



Salmon is a superfood for so many reasons. The healthy Omega-3 fats contribute to lower triglycerides, lower levels of Type 2 Diabetes, healthier blood sugar regulation, improved satiety and improved brain health! With this in mind, we are always looking for easy, cost-effective ways to incorporate more of this delicious fish into our diets. Enter these amazing gluten-free salmon sweet potato cakes! The option to use canned salmon can drastically decrease the cost associated with fresh fish, and the complex carbs from the sweet potato, healthy fat from the almond flour and fresh herbs create a rich and delicious meal that adults and kids will all enjoy!

**Ingredients**

- 1, 14.5 oz. canned salmon (bones are ok!) or leftover
- 1.5-2 cups of previously cooked salmon
- 1 cup cooked sweet potato/yam (canned or cook ahead)
- 2 eggs
- 1/2 cup almond flour
- 2 tbsp. fresh parsley leaves, minced
- 2 scallions, thinly sliced
- 1/2 tsp. paprika
- 1/4 tsp. salt
- 1 tsp. hot sauce (optional)
- 1/4 tsp. ground black pepper
- zest from 1 lemon (save the juice for the yogurt sauce)
- 2-3 tbsp. avocado oil

**Curried Yogurt Sauce**

- 1 cup plain Greek yogurt
- 1/2 tsp. curry powder
- 1 clove garlic, minced
- 1/4 tsp. salt (or more to taste)
- juice of lemon above

**Recipe Contributed by Monika Jacobson, Registered Dietician Nutritionist**  
[www.eatmovethrivespokane.com](http://www.eatmovethrivespokane.com)



**Instructions:**

- 1 Preheat the oven to 425F and cover a large baking sheet with parchment paper.
- 2 In a large mixing bowl, combine drained canned salmon, cooked sweet potato, eggs, almond flour, parsley, scallions, paprika, salt, hot sauce, black pepper and lemon zest. Mix well with fingers and break up all the bones (extra Vitamin D and calcium!).
- 3 Brush the parchment paper with avocado oil, then use 1/4 cup measuring cup to scoop the cakes and drop them onto the parchment lined baking sheet. The cakes should be about 2 inches wide and about 3/4- inch thick.
- 4 Brush the tops of the cakes with avocado oil, then bake for 20 minutes.
- 5 While the cakes are baking, prepare the yogurt sauce. In a smaller mixing bowl, combine all the sauce ingredients and stir well.
- 6 After 20 minutes in the oven, carefully flip each cake with a spatula and return to the oven. Bake an additional 10 minutes until golden brown and crisp.
- 7 Serve each salmon cake with a dollop of yogurt sauce, a wedge of lemon and a bed of greens or roasted veggies.

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testing and board certification will be needed. "It's not being operated in a model that supports current science," he said. "It will probably take the legal community realizing there is a new scientifically based, well-proven method for preventing most heart attacks and strokes that's not met by current standard of care."

Explains Dr. Borders, "Once you know there is something better, as a physician, you can't walk away from it and not practice what clearly has significantly improved patient outcomes and disease regression." To help educate their patients and family members, Drs. Borders and

Hood began hosting 2-3 hour presentations on the BDM. These presentations became so popular they haven't had empty seats at one for years.

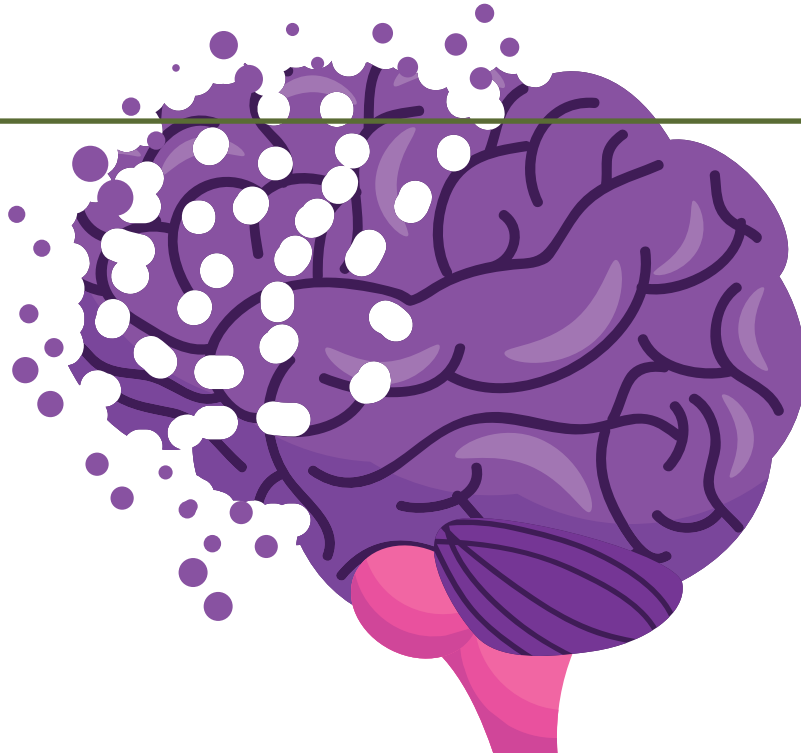
"In addition, we created considerable educational material for our patients and their families," said Dr. Borders. "We have documented incredible health turnarounds in our patients and have some of the best patient outcomes in our region of the country by using the BDM."

Dr. Borders is very excited about the timeframe for which he evaluates his patients. "Instead of slowing disease over 2-3 years," he said, "our patients are planning to live a long time, into their 80s and 90s. The BDM stops disease.

Instead of worrying about one's health in the short-term, the BDM challenges our patients with a whole new mindset like, "Are you financially prepared to live into your 90s?"

He added, "Apply the best knowledge you know to the most effective way it can be delivered. If you truly believe it you have to preach the gospel. Once you convince yourself, you have to make that message be known."

Both Dr. Borders and Dr. Hood are convinced the BaleDoneen Method should be the standard of care today. They are working to support, promote, and encourage current and prospective patients to embrace the BDM.



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60% of those diagnosed with Alzheimer's Disease [have at least one copy of ApoE4](#).

Hemsworth's decision to make his ApoE genotype public was a brave, unexpected, and important step toward raising public awareness of the genetic risk factor, encouraging others to learn more about their individualized risk. However, reports that he will step back from his acting career based on his Apo E 4/4 genetics (which he has since clarified) reveal a huge opportunity to remind both the public and the medical community that genetics are not our destiny. While the ApoE4 risk is well-established, genetics are just one piece of the puzzle.

In the now dual-award winning *Healthy Heart Healthy Brain*, Drs. Doneen and Bale emphasize the strong connection between genetics, cardiovascular health and brain health. The book outlines several targeted genetic markers associated with increased or decreased risk for disease, while emphasizing lifestyle, diet, targeted supplementation and appropriate medical therapy as a part of a comprehensive and individualized prevention program.

We know from decades of research utilizing the Bale Doneen Method that genetics should play a key role in identifying individuals at increased risk for disease, subsequently driving individualized recommendations. For instance,

initial genetic testing may reveal one copy of ApoE4 and one copy of 9P21 ("the heart attack gene"). This testing provides us with information about potential future risk, allowing for the personalization of treatment and monitoring. This individual, for example, would want to be extremely proactive in terms of preventing insulin resistance and Type 2 Diabetes, as newer research has highlighted the connection between insulin resistance and the development of Alzheimer's Disease.

In our most recent publication, "[The critical issue linking lipids and inflammation: Clinical utility of stopping oxidative stress](#)," Drs. Doneen, Bale and Leimgruber discuss the impact of oxidative stress (inflammation) on the manifestation of disease in those at a genetically increased risk. It is vital to partner any conversation about genetic risk factors with a conversation about monitoring and lowering inflammation. Maintaining optimal health to lower levels of inflammation has a significant and positive impact on the future development of both cardiovascular and brain diseases such as Alzheimer's.

If an individual becomes aware of a high-risk genotype such as ApoE4/4, the first response may understandably be fear. At the Prevention Center, however, we encourage a paradigm shift, seeing this information as a roadmap to plan a highly personalized prevention plan. Genetic markers essentially give patients and their healthcare providers

a "heads up" for what may be lurking in the future if oxidative stress, inflammation and other risk factors are not well-managed. Along with stabilizing vascular disease, it is well documented that maintaining optimal oral health, optimal blood pressure management and treating sleep apnea are key factors in reducing Alzheimer's risk.

The recent media attention surrounding ApoE genotypes will undoubtedly continue to spur important conversations about genetics and disease risk; it is our job to remind the public that genetics are only part of the story. A personalized prevention program based on a healthy lifestyle and targeted interventions can absolutely impact the expression of genes, even high-risk ones, throughout the lifespan.

If you, or someone you love, are experiencing fear regarding the future risk for either cardiovascular or brain disease, genetic testing is helpful but regardless of results, there is hope. *Healthy Heart, Healthy Brain* has recently been awarded the American Society for Journalists and Authors' (ASJA) 2023 June Roth Memorial Award for Outstanding Medical Book, along with the 2023 Nautilus Award. The book offers a wealth of knowledge on the personalization and prevention of arterial disease, which includes both cardiovascular and brain disorders, and will provide a great deal of direction and hope for anyone experiencing anxiety regarding their genetic testing results.