THE HEARTSUMMET 2018

ARKANSAS HEART HOSPITAL®

Culinary Medicine Food is at the CORE of our Health

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What is Culinary Medicine?





Understanding Culinary Medicine

"Food is our greatest asset...but how we discuss it, present it, explain it, and prepare it, is the biggest hurdle, and yet the biggest opportunity..."

-Amanda Archibald, The Genomic Kitchen





Understanding Culinary Medicine

• The objective of culinary medicine is to attempt to empower the patient to care for herself or himself safely, effectively, and happily with food and beverage as a primary care technique.





Understanding Culinary Medicine

- Certain eating patterns have been found to be as or more effective than prescription medication for some conditions: an anti-inflammatory eating pattern for rheumatoid arthritis; a ketogenic diet for epilepsy; a low-carb diet for blood sugar control.
- FOOD is Medicine!





Growing field of Culinary Genomics

Culinary Genomics is the revolutionary union of genomics and nutrition science (nutritional genomics) with the culinary arts. It is the art of choosing, preparing and cooking ingredients in a language recognized by your DNA with the goal of reducing the primary causes of chronic disease and accelerated aging.





Culinary Genomics Terminology

- Genetics the study of heredity & variations of inherited characteristics
- Genomics study of genes and their functions, and related techniques
- Nutrigenomics the study of the effects of foods and food constituents on gene expression
- Bioactives Constituents in foods other than those needed to meet basic human nutritional needs which are responsible for changes in health status – example: quercetin –onions, garlic, leeks, shallots



Culinary Genomics & Centenarians

- Centenarians those that live to be 100 & over
- Blue zones geographic pockets where people live to be over 100
 - Italy, Costa Rica, California, Japan, Greece
 - Traits of the blue zones
 - =connectivity –never alone
 - =friends for life
 - =respected for being an elder
 - =purpose in life
 - =physical activity from daily activities such as gardening
 - =mostly plant-based diets –all diets high in bioactives



Diet in Ikaria Greece





Culinary Genomics Roadmap





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Broccoli with Cherries & Feta

- Serves: 4
- Ingredients
 - 4 cups broccoli florets cut into 1-inch chunks (frozen broccoli florets work just as well)
 - ½ cup crumbled feta cheese
 - ½ cup sliced almonds
 - ¹/₂ cup coarsely chopped walnuts
 - ½ cup dried cherries (unsweetened if possible)
- Place broccoli and cherries in steamer; cook until broccoli turns bright green and is crisptender, about 5 minutes.
- Transfer to serving bowl. Add feta cheese, wait 1-2 minutes to let the cheese melt slightly.
- Add the nuts and stir to mix. Serve and enjoy.
- www.genomainternational.com



Genomics & Metabolism

- The Human Apolipoprotein E (APOE) gene is a predictor of metabolism and plays a critical role in blood lipid metabolism.
- ApoE is involved in the metabolism of cholesterol and triglycerides, and variants in this gene can have clinically relevant implications for disease risk as well as one's response to statin therapy, dietary fat, and other risk factors. There are 6 variants...E2, E3, E4
- Approximately 45% of individuals carry one or more of the high risk variants within the ApoE gene. The results of the genotyping of Apolipoprotein E have important implications in the treatment strategies for individual patients in reducing cardiovascular disease risk.



Culinary Genomics & Metabolism

- "According to (Amanda) Archibald, incorporating more <u>resveratrol</u> into your diet—the anti-aging bioactive found in the skin of red grapes wakes a master gene that helps the body burn energy more efficiently."
- "Resveratrol turns on the master gene Sirt-1, which works in tandem with other genes to fine-tune how the body handles fat and carbohydrates," Archibald explains.
 "The gene <u>helps increase insulin</u> <u>sensitivity</u>, so that we can perfect how the body uses fat and carbs."





Culinary Genomics/Medicine

- Understanding how to prepare & serve specific foods to influence our gene's best behavior is a crucial step in Culinary Genomics
- As well as the source of your foods





AHH Garden

- 1)Locally grown organic foods are optimum choice in anyone's diet
- 2)At AHH, we are serving foods to our patients that are picked the same day, making them the highest quality and freshest foods available
- 3)We have a gardener on our treatment team that not only is very knowledgeable about food and gardening techniques but shares this knowledge with the patients and is a great tool in the conversation our Practitioners have with the patients









Garden Vision

Our commitment,

- To produce the highest quality, organic ingredients for the hospital's plant based menu items and cooking demonstrations
- To be a center for learning and inspiration. All patients, families, students and staff are invited to the garden
- To reaffirm and enhance the hospital's core values of quality, care and innovation



Closing

- Culinary Medicine is all about having real conversations with patients about food, cooking, cooking techniques and gardening
- Brings to the table the practitioner, the dietitian, the chef, the grower to really help shape the care of the patient





Resources

- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4739343/
- Anti-inflammatory effects of a low arachidonic acid diet and fish oil in patients with rheumatoid arthritis.[Rheumatol Int. 2003]Adam O, Beringer C, Kless T, Lemmen C, Adam A, Wiseman M, Adam P, Klimmek R, Forth W Rheumatol Int. 2003 Jan; 23(1):27-36.
- <u>Ketogenic diet and other dietary treatments for epilepsy.</u>[Cochrane Database Syst Rev. 2012]Levy RG, Cooper PN, Giri P Cochrane Database Syst Rev. 2012 Mar 14; (3):CD001903.
- <u>https://www.genomickitchen.com/culinary-genomics</u>



Resources

- Genomics and World Health: Report of the Advisory Committee on Health Research, Geneva, WHO (2002)
- WHA 57.13: Genomics and World Health, Fifty Seventh World Health Assembly Resolution; 22 May 2004
- <u>https://www.nationalgeographic.com/people-and-culture/food/the-plate/2015/01/29/food-medicine-health-super-bowl-sunday/</u>
- <u>https://www.corporatewellnessmagazine.com/upload/file/CULINARY</u> <u>GENOMICS_COOKING_FOR_YOUR_GENES.pdf</u>
- <u>http://www.danielvitalis.com/rewild-yourself-podcast/eat-like-a-</u> centenarian-culinary-genomics-amanda-archibald-95



Resources

- <u>https://www.nytimes.com/2012/10/28/magazine/the-island-where-people-forget-to-die.html?pagewanted=all&r=1</u>
- <u>https://blogs.scientificamerican.com/food-matters/blue-zones-what-the-longest-lived-people-eat-hint-it-8217-s-not-steak-dinners/</u>
- <u>https://www.mayomedicallaboratories.com/test-</u> catalog/Clinical+and+Interpretive/35358
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- <u>https://www.spectracell.com/clinicians/products/apolipoprotein-e-genotyping/</u>
- <u>https://www.ncbi.nlm.nih.gov/pubmed/18494374</u>



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