

# The Little Hospital That Could

Mark Cucuzzella MD

Professor of Family Medicine

West Virginia University

Lt Col USAF Reserves

# Objectives

- West Virginia- no where to go but up 😊
  - The Top Down and Bottom Up of Hospital Change
  - What is a Healing Community
  - Next Steps Change on a Global Scale
- 
- Disclosures – own small retail store selling minimal shoes and a few LC products
  - Patients and Staff in presentation gave permission for use of images

This should be Standard of Care

Dedicated to my Friend DT

5 months ago

wt 600 +

A1c 15

Creatinine 7

ICU patient

Now

Wt 540

A1c 5.5

metformin only

NML renal and discharged from

renal clinic

Energy Back!

Hope- Just got a Promotion!



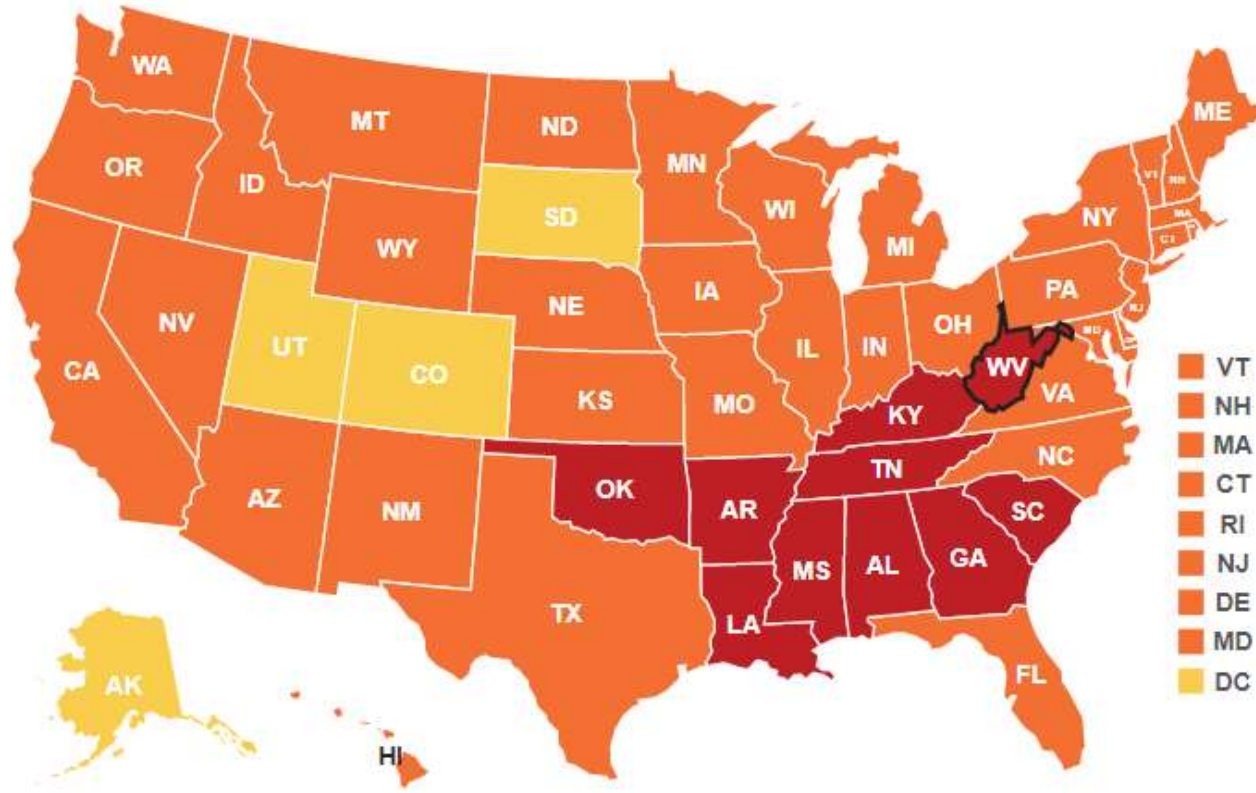


# Diabetes Rate by State, 2016

Select years with the slider to see historical data. Hover over states for more information. Click a state to lock the selection. Click again to unlock.

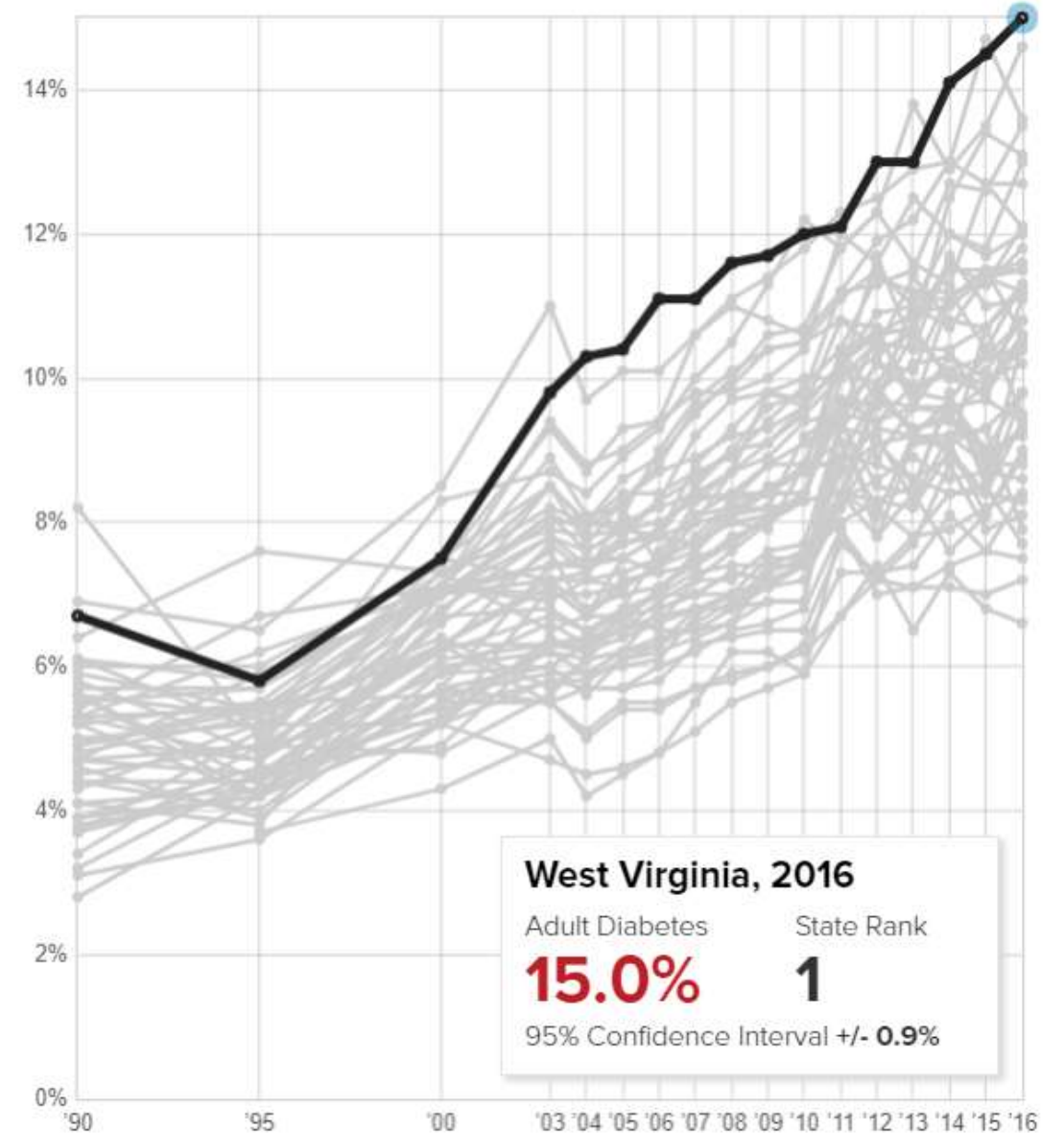
## Percent of adults with diabetes

0 - 3.9%   4 - 7.9%   8 - 11.9%   12 - 15.9%   16%+



All States   West   Midwest   South   Northeast

# Diabetes among adults, 1990 to 2016









Video- Charleston WV 1981- 82  
<https://youtu.be/w6zv43BXs>  
Where are the obese people?

You can't connect the  
dots looking  
**FORWARD;**  
you can only connect  
them looking  
**BACKWARDS.**

Learn from the past, prepare for the future.



Sir- We have a problem



**The U.S. military has a huge problem with obesity and it's only getting worse**

By: Andrew Tilghman, September 11, 2016



## AN ATHLETE'S GUIDE TO EVERYDAY NUTRIENT TIMING

Pre-Workout Fueling	Exercise Hydration	Post-Workout Refueling	Daily Fueling
<p>Choose foods low in fat and fiber to prevent digestive upset.</p> <p><b>WHAT</b></p> <ul style="list-style-type: none"><li>• Jam*/jelly* on bread*</li><li>• Fruit*, low-fat granola*, low-fat milk*</li><li>• First Strike Bar**/**</li><li>• Pudding cup* or low-fat Greek yogurt with fruit</li><li>• Small muffin (muffin top*), low-fat milk*</li></ul> <p><small>*IN MEAL READY TO EAT (MRE) **IN FIRST STRIKE RATION (FSR)</small></p>	<p>Weigh before and after working out; replace 16-24 oz fluid per pound lost throughout the day (not more than 12 quarts per day).</p> <p><b>WHAT</b></p> <ul style="list-style-type: none"><li>• Water</li><li>• Sports drinks**/**</li></ul> <p><b>Where do you find these foods?</b> <b>Anywhere!</b></p> <p><b>Home, chow halls, even fast-food restaurants!</b></p>	<p>Choose easily digestible foods and beverages that provide electrolytes and fluids.</p> <p><b>WHAT</b></p> <ul style="list-style-type: none"><li>• Low-fat yogurt with fruit and granola, juice</li><li>• Chocolate milk, fruit</li><li>• Pita with hummus, tomatoes, cucumbers, tea</li><li>• Tuna, crackers, fruit, water</li><li>• Pocket sandwich**, sports drink**</li><li>• Fruit and nut mix**, sports drink**</li><li>• Chicken fajita with tortilla, beans, salsa*, water</li><li>• Stir-fried tofu with veggies, rice, soymilk</li></ul>	<p>Choose lean protein (such as meat, poultry, fish, beans, nuts, or eggs), whole grains, fruits and vegetables, and low-fat dairy products.</p> <p><b>MEALS</b></p> <ul style="list-style-type: none"><li>• Egg-white omelet with spinach and mushrooms, whole-grain bread, jam, low-fat milk*</li><li>• Whole-wheat pita sandwich with turkey and veggies, pretzels, applesauce, low-fat milk*</li><li>• Cheese tortellini in tomato sauce*, tossed salad, grapes, water</li><li>• Lamb kebabs, pita, spinach, mango-yogurt beverage</li></ul> <p><b>SNACKS</b></p> <ul style="list-style-type: none"><li>• Yogurt or cottage cheese with fruit</li><li>• Granola bar and milk</li><li>• Trail mix</li></ul>

# Combat Controllers and USAF PJs Lackland AFB



"Diabetes is a complex, chronic illness requiring continuous medical care with multifactorial risk-reduction strategies beyond glycemic control."

AMERICAN DIABETES ASSOCIATION

STANDARDS OF  
MEDICAL CARE  
IN DIABETES—2017



# Incidence of Remission in Adults With Type 2 Diabetes: The Diabetes & Aging Study (Kaiser Study 120,000 pts)

- In community settings, remission of type 2 diabetes does occur without bariatric surgery, *but it is very rare*.
- the rate of prolonged remission was extremely rare (0.007%)
- To provide context, 1.7% of the cohort died, while only 0.8% experienced any level of remission.
- Thus, the *chances of dying were higher than the chances of any remission*.

# CDC/AMA/ADA Joint Position on PreDiabetes

<https://doihaveprediabetes.org/reverse-prediabetes.html>

- ...try and cut down on foods with saturated fat or trans-fat, and hydrogenated fat or partially hydrogenated fat.
- Choose foods with less sodium than your usual choices.
- ...keeping track of your daily fat grams and calorie intake should be a breeze!

WAIT.....NOT ONE WORD ABOUT CARBOHYDRATE EVEN THOUGH THESE GROUPS ACKNOWLEDGE THAT CARBS ARE THE GREATEST INFLUENCE ON INSULIN

# A low-carbohydrate survey: Evidence for sustainable metabolic syndrome reversal



TABLE 4: Proportion of participants with HbA1c levels in the normal, pre-diabetes or type 2 diabetes ranges before and after initiation of a low-carbohydrate diet ( $N = 495$ ).

HbA1c	Before, $N$ (%)	After, $N$ (%)	$p$
< 5.5 (Normal)	82 (16.6)	241 (65.3)	< 0.001
5.5–6.4 (Pre-diabetes)	173 (34.9)	137 (27.7)	< 0.001
> 6.5 (Type 2 diabetes)	240 (48.5)	35 (7.1)	< 0.001

Note: Statistical results determined by chi-squared tests for proportion of people in each category. This includes only participants with before and after values.

**Authors:**Mark T. Cucuzzella<sup>1</sup>Justin Tondt<sup>2</sup>Nancy E. Dockter<sup>3</sup>Laura Saslow<sup>4</sup> Thomas R. Wood<sup>3</sup>



# PURE Study and AMA Response-*Suggests*??



Good morning. Here are today's top stories.

August 30, 2017

## LEADING THE NEWS

High carbohydrate consumption may be harmful, research suggests

# Say What ?!





“We cannot change  
what we are not aware of,  
and once we are aware,  
we cannot help  
but change.”

- **Sheryl Sandberg**





# Meat Countdown

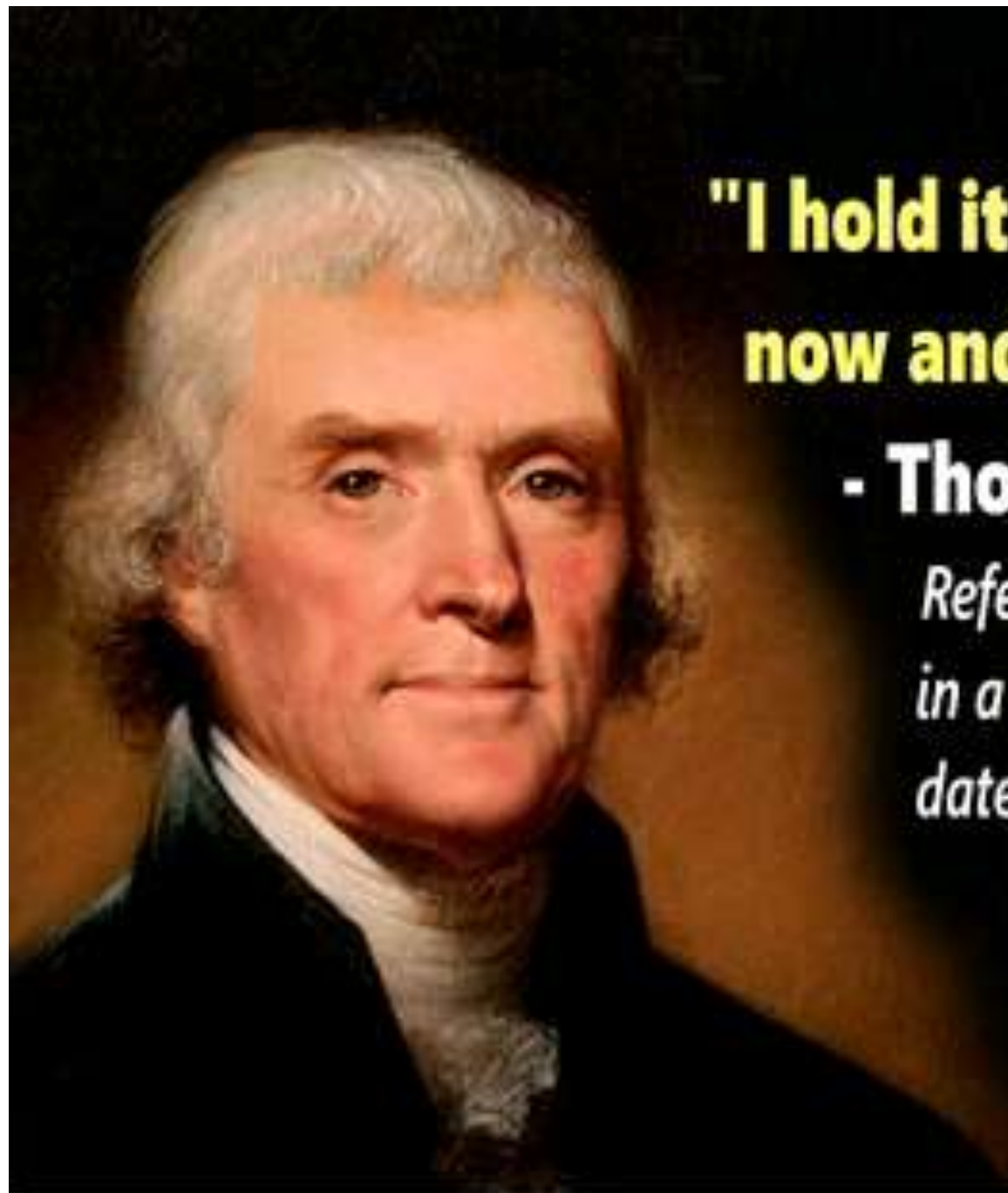
||||| ||||| ||||| |||||  
||||| ||||| ||||| |||

Lbs left  
to eat

38

Nov 10

Does your  
family poke  
fun at you 😊



**"I hold it that a little rebellion,  
now and then, is a good thing..."**

**- Thomas Jefferson**

*Referring to "Shays' Rebellion"  
in a letter to James Madison,  
dated January 30, 1787*

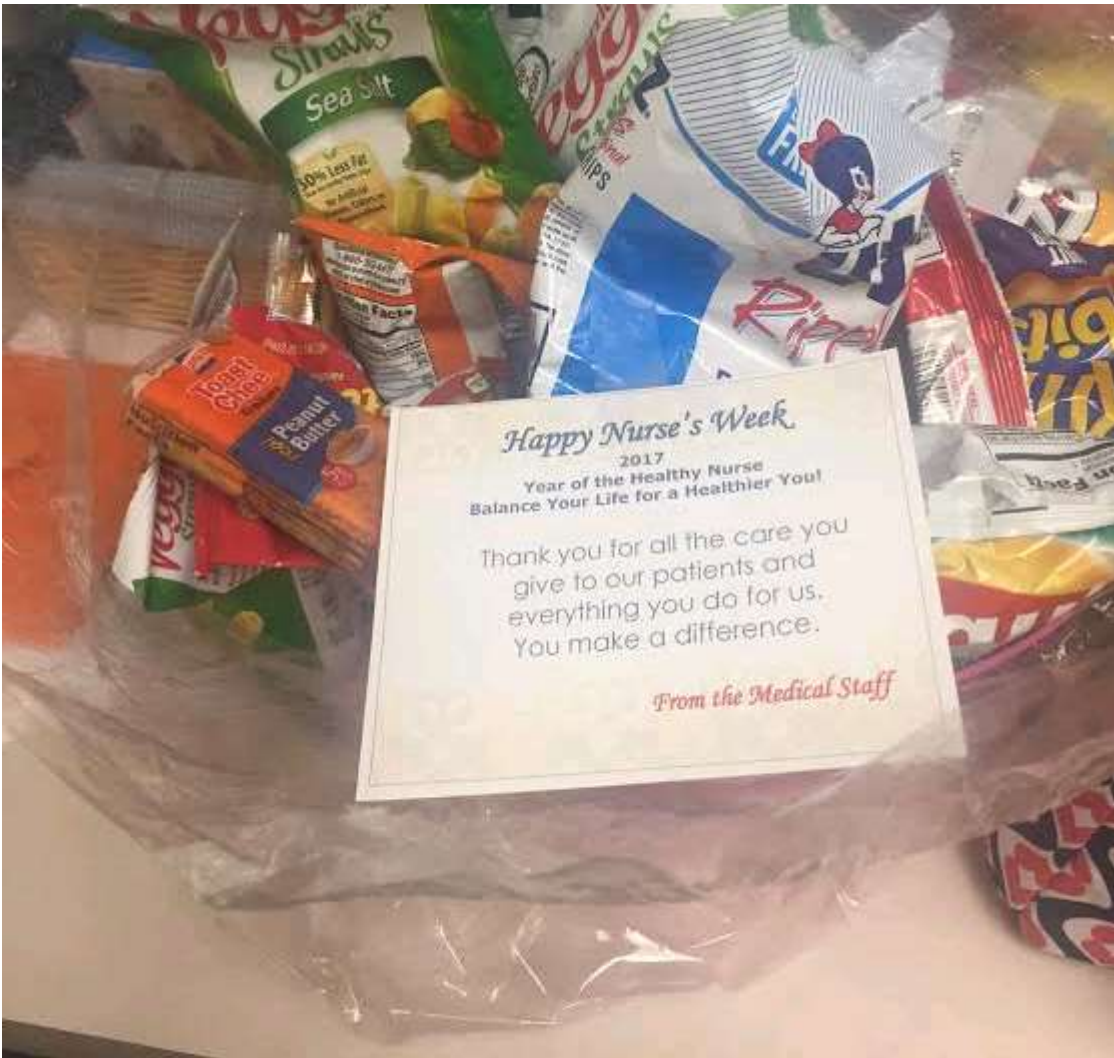


# Weapons of Mass Destruction JMC and BMC





# Balance Your Life For a Healthier You? Brought to you from your local hospital



# Which Road Do You Take?

## Readers Digest Version of Reversing Diabetes

<http://www.rd.com/health/conditions/reversing-type-2-diabetes/>



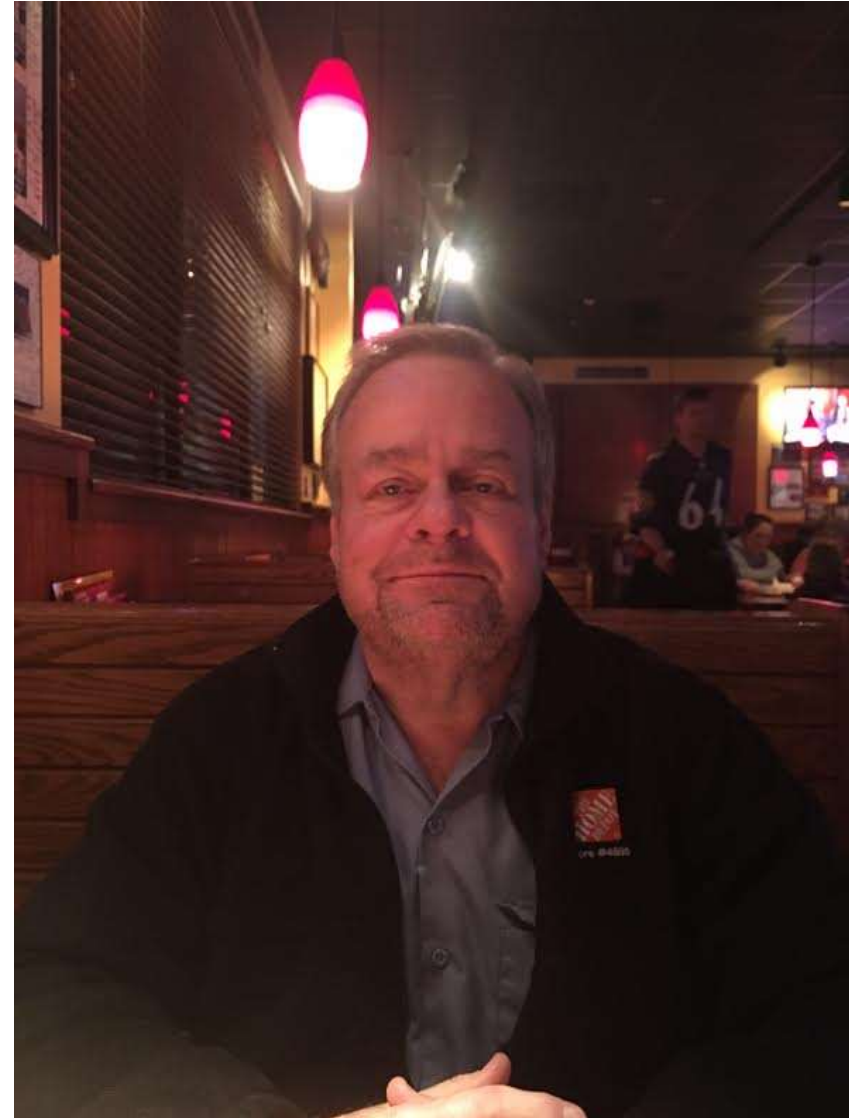


Terry C  
50 lbs and over 12 inches  
2 years DM in Remission





# Steve W 85 lbs – One Year Later “Meds in the Trash”



# Anita N- Healing Severe Lymphedema 40 plus pounds down 3 months





# Passing the Stress Test and NO Diabetes





Charles R- Over 100u Insulin Removed  
70 Pounds Gone Playing Again w 5 Kids



# In the lead for World's greatest reduction in A1c- Sam W 23 to 5



Sam

Roughly 23.7 blood sugar was 750+ and it is currently 5.6 A1C

S

Or 5.3 David said

Holy cow that is amazing

Sam


S

My God loves me 😊

Not only that Sam you love yourself and you wake up every day and tell yourself that and when exposed to a doughnut you know it will kill you so you avoid it.



# Who has helped T2D patients attain the greatest drop in HbA1c?

World Wide race		HbA1c in %			HbA1c in mmol/mol			Drs aiding Type 2 Diabetes with a low carb diet	
		Before	After	Change	Before	After	Change		
<b>1st</b> 	<b>USA</b>	23.7	5.3	<b>18.4</b>	235	34.4	<b>201.1</b>	<b>Dave Didden/Mark Cucuzzella</b>	
<b>2nd</b>	<b>USA</b>	18.3	6.7	<b>11.6</b>	176.5	49.7	<b>126.8</b>	<b>Amy Savagian</b>	<b>In 6 months</b>
<b>Jt.3rd</b>	<b>UK</b>	17.9	7.3	<b>10.6</b>	172	56	<b>116</b>	<b>Kesar Sadhra</b>	<b>In 4 months</b>
<b>Jt.3rd</b>	<b>USA</b>	16.2	5.6	<b>10.6</b>	153.6	37.7	<b>116</b>	<b>Ted Naiman</b>	<b>In 8 months</b>
<b>4th</b>	<b>UK</b>	13.9	5.2	<b>8.7</b>	128	33	<b>95</b>	<b>Clare Bailey</b>	<b>In 4 months</b>
<b>Jt.5th</b>	<b>Aus</b>	13.7	5.7	<b>8.0</b>	126	38.8	<b>87.2</b>	<b>David Nixon</b>	<b>In 5 months</b>
<b>Jt.5th</b>	<b>USA</b>	13.7	5.7	<b>8.0</b>	126	38.8	<b>87.2</b>	<b>Eric Westman</b>	<b>Off 180u insulin</b>
<b>6th</b>	<b>UK</b>	14.5	6.6	<b>7.9</b>	135	48	<b>87</b>	<b>Simon Tobin</b>	<b>In 9 months aged 85</b>
<b>7th</b>	<b>UK</b>	13.1	5.9	<b>7.2</b>	120	41	<b>79</b>	<b>David Unwin</b>	<b>In 5 months off Liraglutide</b>



Steven R  
3 months into a New Life  
50 pounds off no T2D



**Our Clinic is Adopting Low Carb**  
Victor R- Father of 3 Packer Fan  
A1C 17 to 6 in 4 months No Meds- 70 lbs Gone







# The Kitchen Sample Low Carb Hospital Meals started 2013



# Sample ~ 10g carb per meal menu

## Breakfast

### Entrees

Scrambled Eggs

Cheese Egg Omelet

### Side Meat

Bacon (3 Strips)

Sausage Patty

Fresh Blueberries

### Beverage

Coffee or Tea

Lunch 12:00 p.m.

Circle If You Choose

Please Circle One Entrée or One Sandwich

### Entrees

Pork Chop

Baked Cod

Tuna Salad

Chicken Salad

Sliced Turkey

### Side Dishes

Asparagus

Cauliflower

Garden salad



Dinner 5:30 P.M.

Circle If You Choose

Please Circle One Entrée or One Sandwich

### Entrees

Hamburger on a bed of lettuce

Tuna Salad

Chicken Salad

Sliced Turkey

### Side Dishes

Stewed Tomatoes

Spinach

Garden Salad



# No Longer on the Tray



# Low Carb Meal

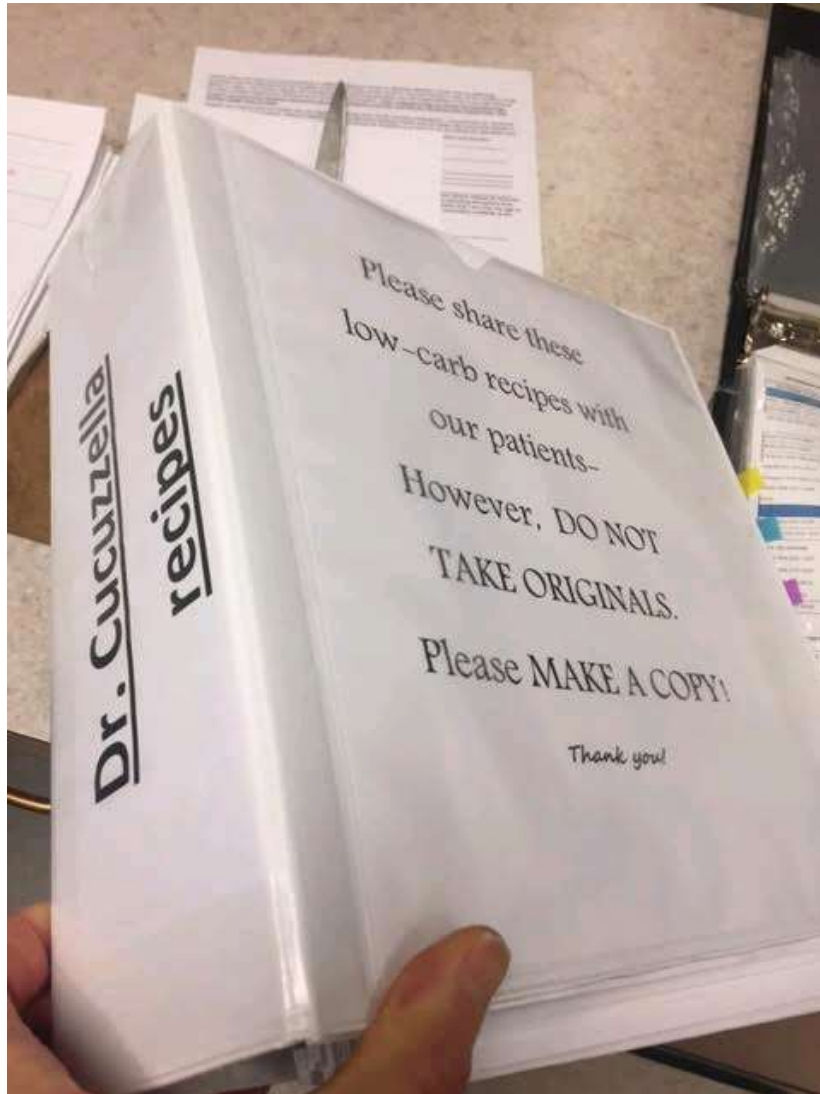




# Low Carb Laptop and Patient/Staff Ed Binders

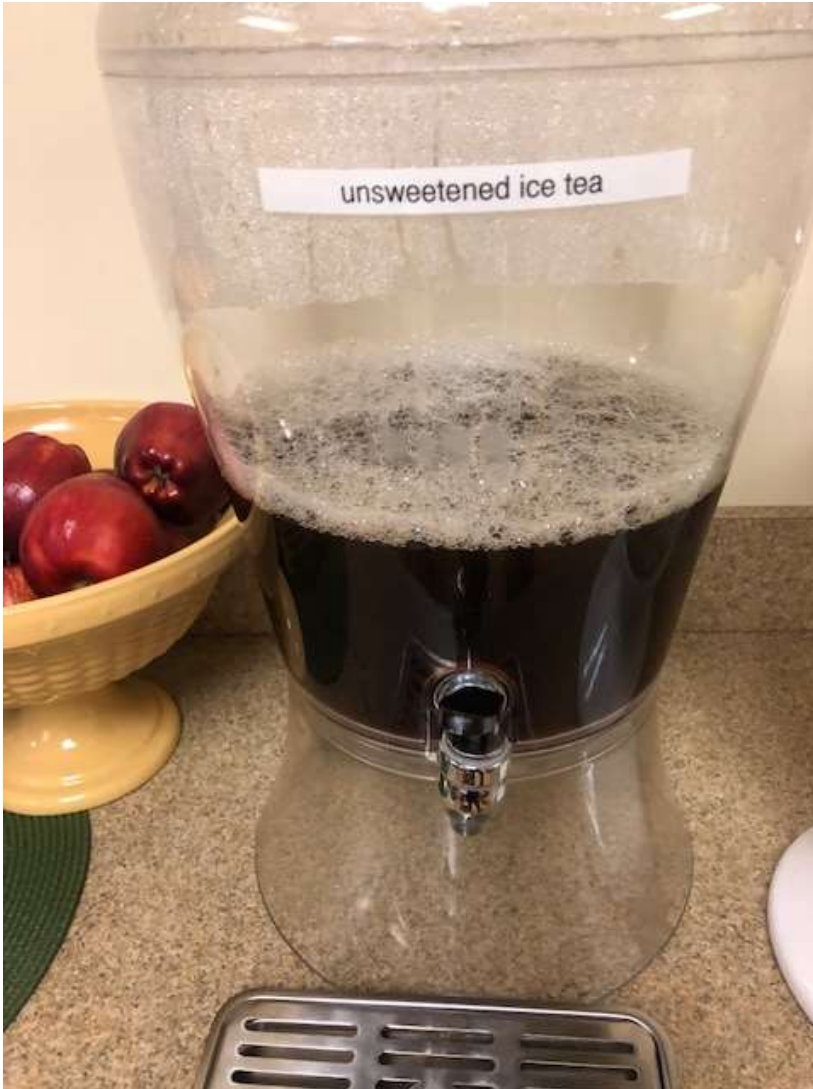


# WVU Jefferson Medical Center





# Free Drink Options in Cafeteria







# What's In within Coke Contract

- ✓ diet and zero calorie soda
- ✓ 100 percent fruit juice (small)
- ✓ diet and unsweetened teas
- ✓ zero calorie Powerade and Vitaminwater
- ✓ regular and decaffeinated coffee
- ✓ unflavored milk
- ✓ water incl zero calorie flavored waters

# What's Out

- ❖ regular soda
- ❖ sugar added fruit juices
- ❖ sugar sweetened teas
- ❖ sugar added energy drinks
- ❖ bottled sugar added iced coffee drinks
- ❖ flavored milks

# Top Down Change

Clay Marsh- President of WVU Health Sciences Center  
Believes in Health





# Dean KC Nau with Gary Taubes at Try This WV

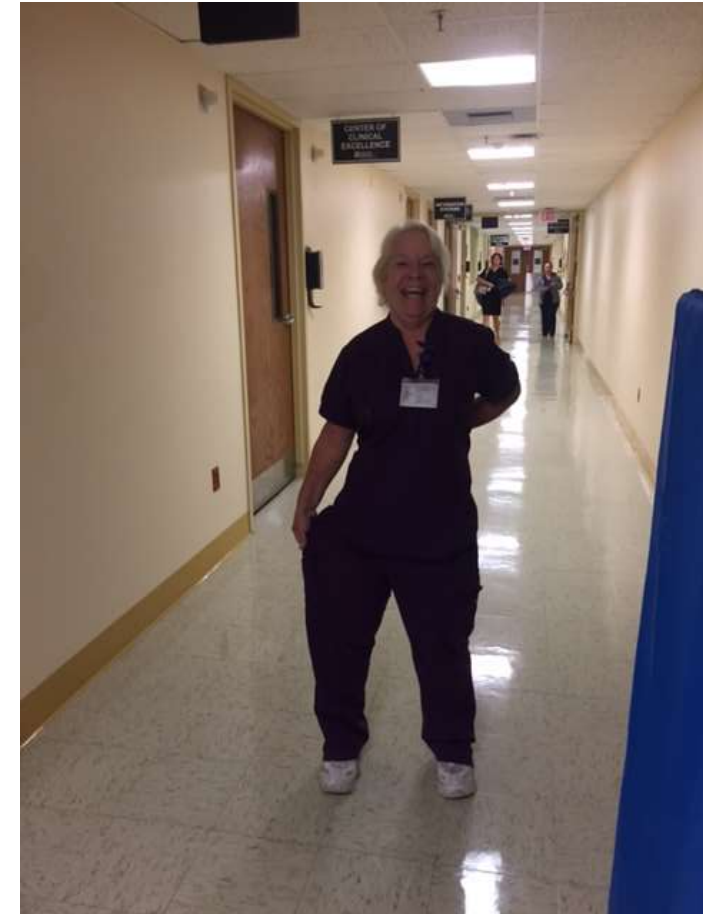


# The Disruptive Orthopedist – Dr Brad Wright Finding Joy in NOT Operating!



# Most Change Starts Bottom Up

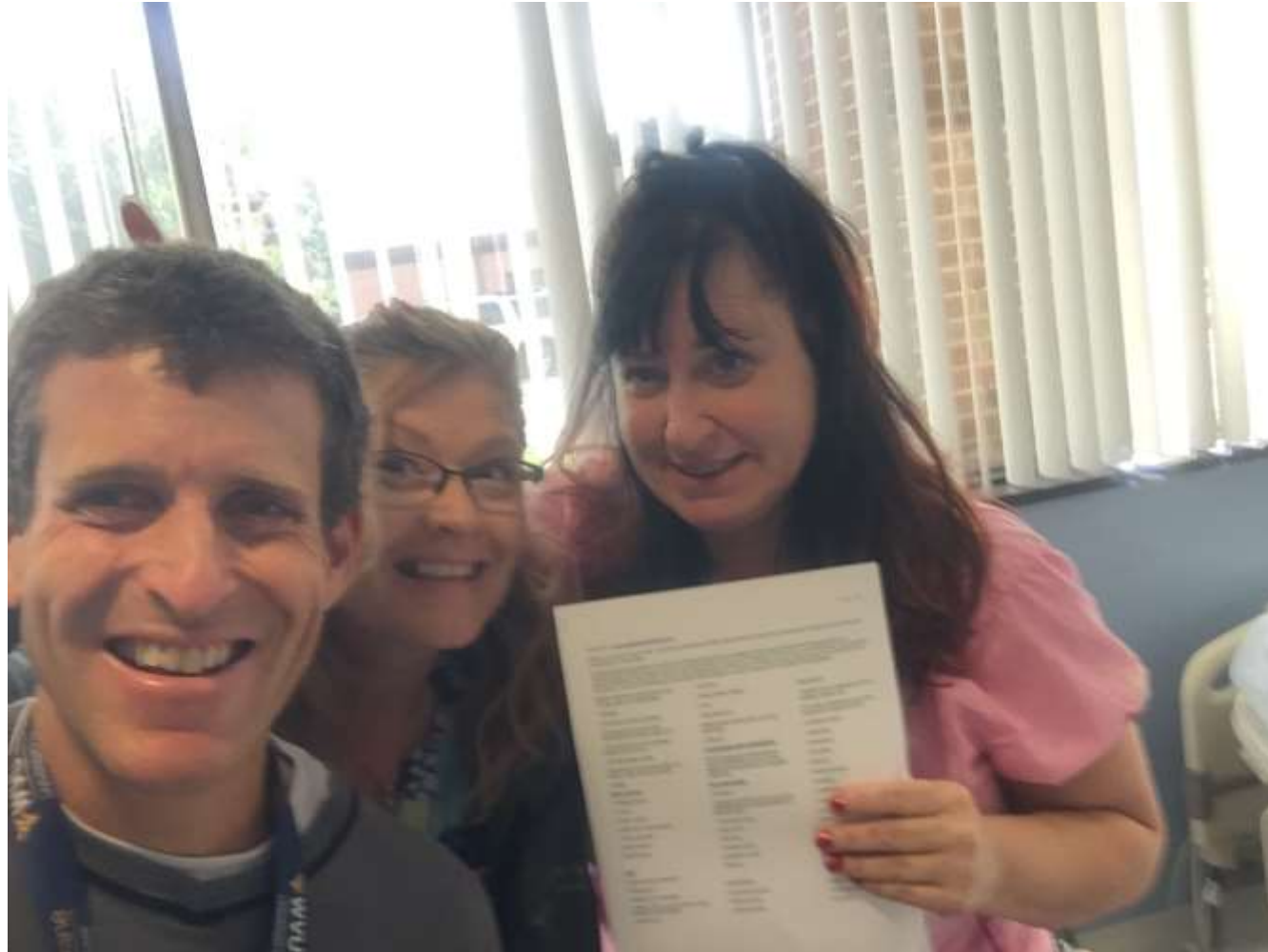
Nancy H- Environmental Services  
over 100 lbs Down and 20,000 steps/day





# Reversing Diabetes in the Stress Test Lab

Colleen and Sarah share the love daily with me  
near 100% have MetS – none have any idea what MetS is



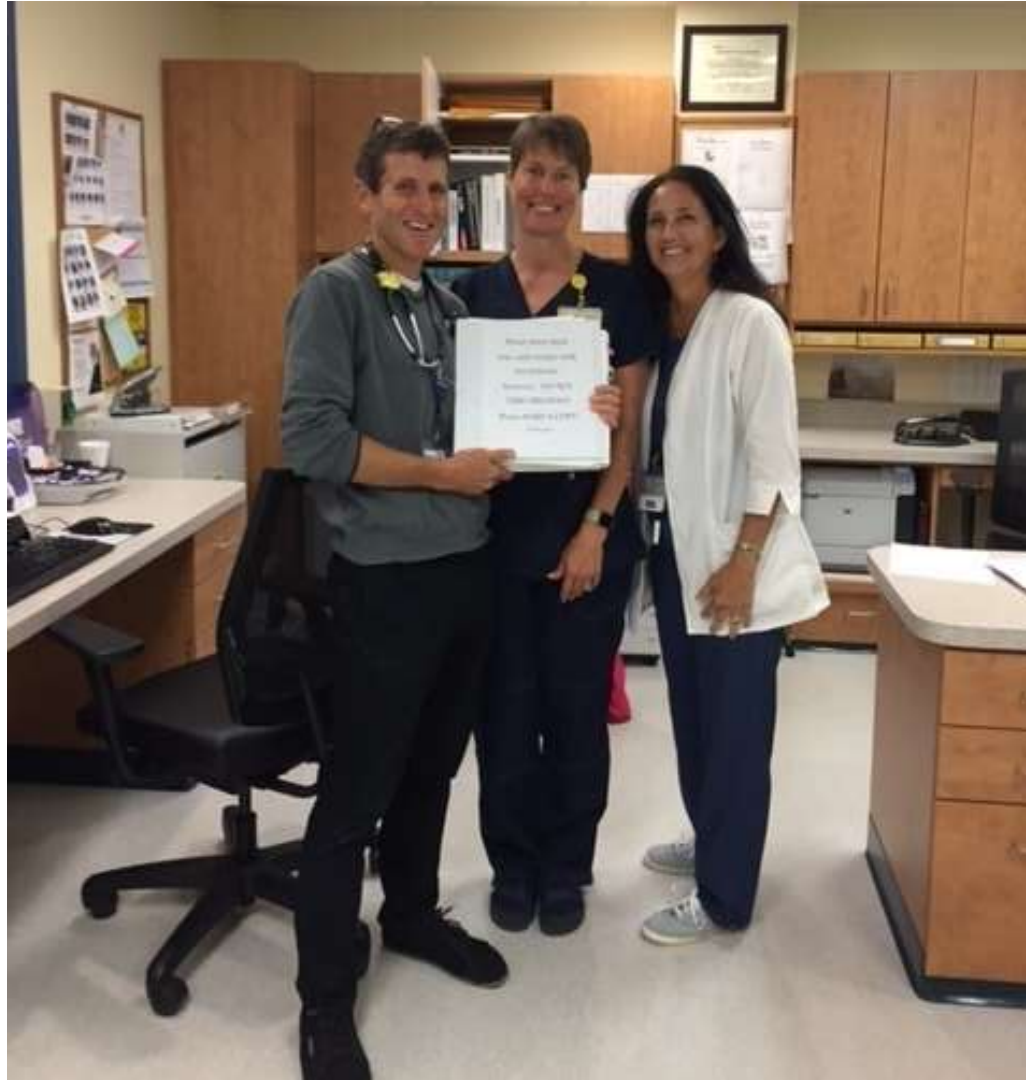
# MedSurg Nursing Staff

Amanda W down 100 pounds

Cindy F- Husband A1c 13 to 6 and 40 pounds off



# Nursing Leadership Advocate for Better Care Tina M and Jean B- Agents of Change





# Lunch-N-Learn



“Can Diabetes be put in Remission?”

Presented by

Dr. Mark Cucuzzella

**When:** July 5, 2017

**Where:** Third floor classroom

**Times:**

11am – 12 noon or 12 noon – 1pm

JEFFERSON MEDICAL CENTER IS AN APPROVED PROVIDER OF CONTINUING NURSING EDUCATION BY THE STATE OF WV BOARD OF EXAMINERS FOR REGISTERED PROFESSIONAL NURSES.

WVBRN provider number WV1996-0012RN.

AND WV BOARD OF RESPIRATORY CARE PROVIDER NUMBER WV16-18-023

# Early Adopter LCHF Dr. Phil Maffetone





# Opening of WVU Center for Diabetes and Metabolic Health September 2017







## WVU MEDICINE CENTER FOR DIABETES AND METABOLIC HEALTH

is an interdisciplinary initiative to prevent and treat obesity, diabetes, and related metabolic disorders across the life span. We provide expertise to meet the unique needs of each patient and family.

- Highest quality of care from obesity to complex type 1 and type 2 diabetes
- Services for all ages – pregnancy to childhood, adolescence and adulthood
- **Team based care for patients and families**
- Low carb, Mediterranean, and other dietary approaches tailored to patient needs
- Individual and group visits available

Individually tailored plans contain state-of-the-art medical treatment as well as the 4 pillars of our lifestyle approach: food, movement, sleep and stress reduction.



CENTER FOR DIABETES AND METABOLIC HEALTH  
Operated by University Healthcare Physicians, Inc.

To schedule an appointment, call 304.596.5038

1001 Sushruta Drive, Martinsburg, WV

## Our Team

<b>Endocrinology</b> Emma Morton-Eggleston, MD James Field, MD	<b>Family Medicine</b> Mark Cucuzzella, MD Rosemarie Canarella-Lorenzetti, MD	<b>Pediatrics</b> Sarah Moerschel, MD	<b>Psychology</b> Jonathan Deiches, PhD	<b>Nurse Practitioner</b> Heather Wright, FNP
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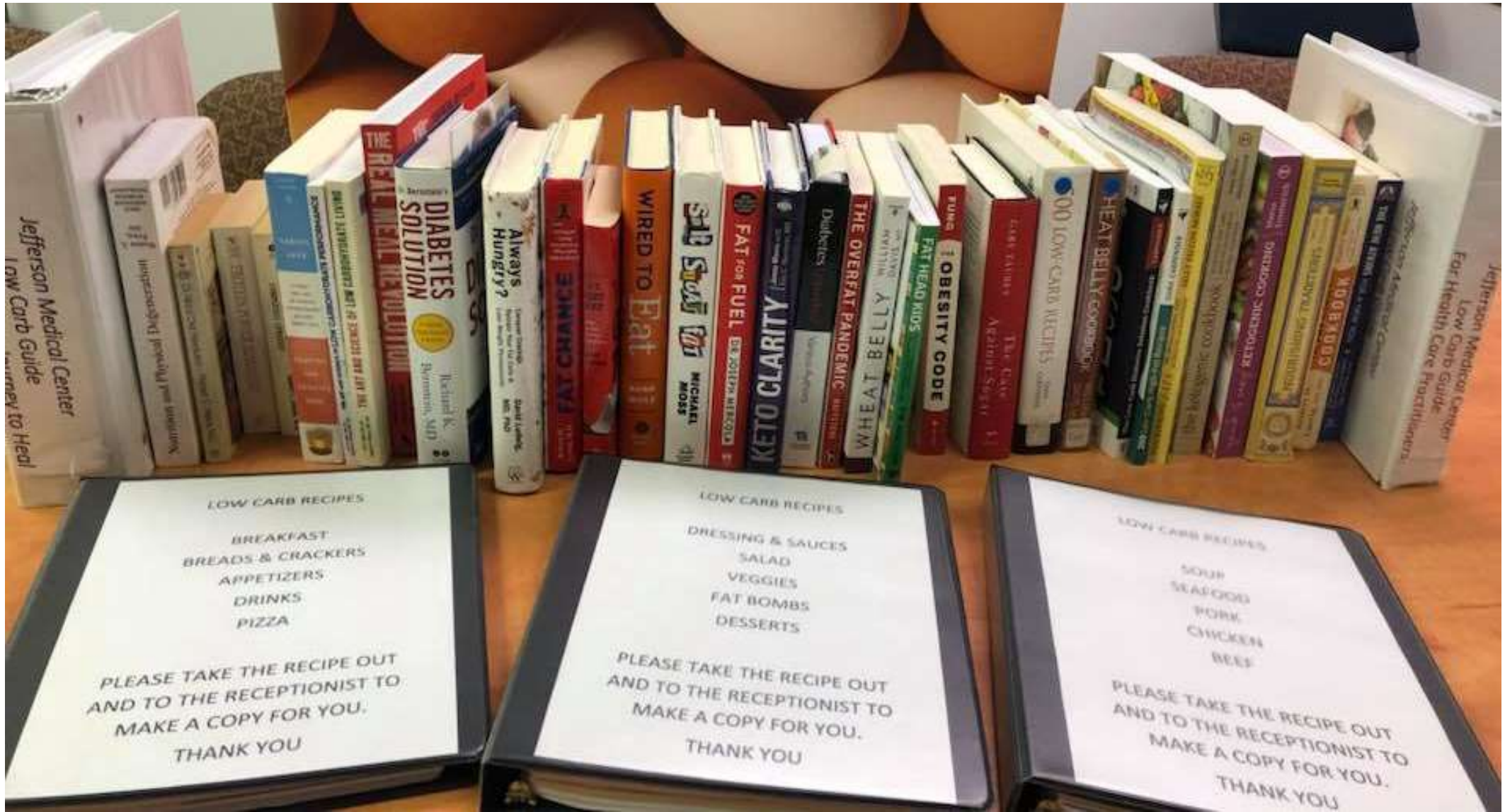




**WVU Center For  
Metabolic Health  
Celebrate Eggs!  
Back on the menu  
40 pounds and joint  
pain gone**



# Books for the Low Carb Group Visit





# Medical Residents- Maddie H Low Carb Lunch and Learn



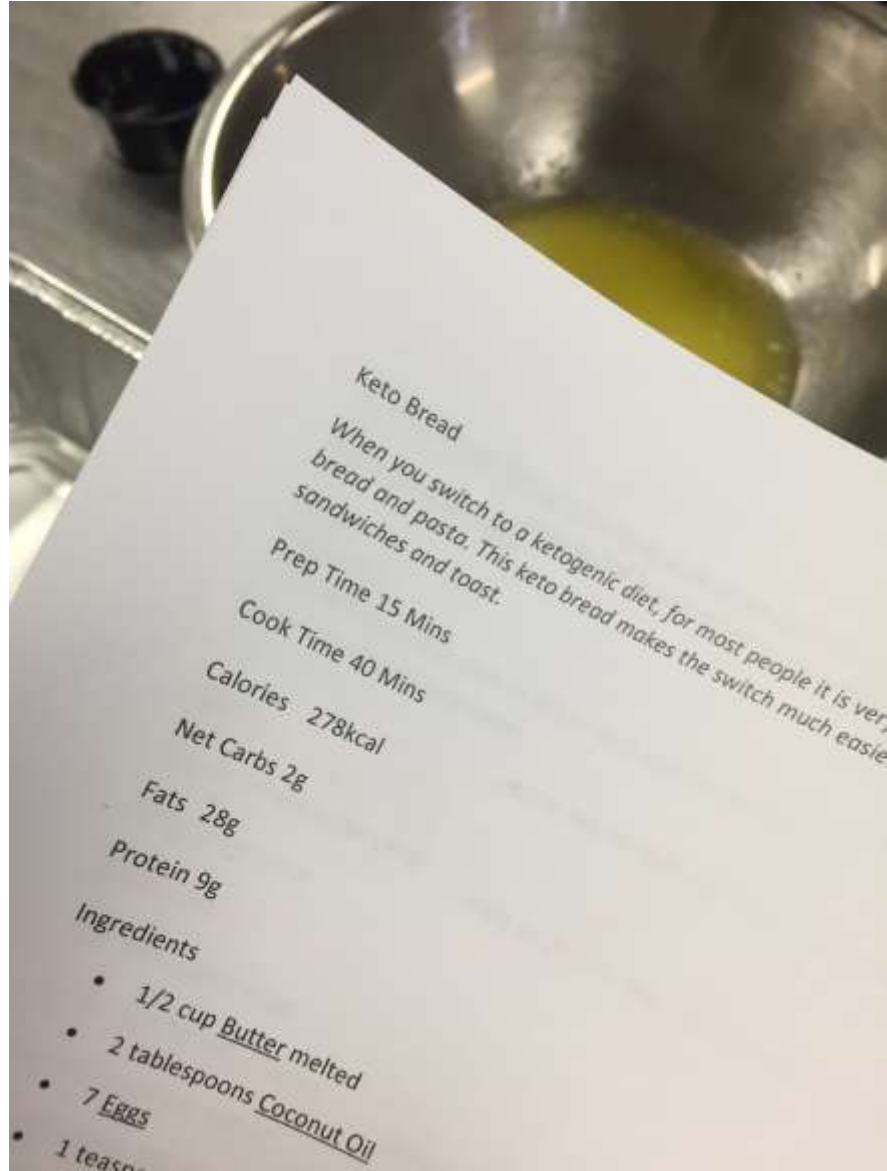
# The Med Students WVU MedCHEFS- 4<sup>th</sup> Year

## The Textbook- Fat Chance Dr. Robert Lustig





# Making Keto Bread







Let's Get Cooking with the...

**MedCHEFS**

**3rd Saturday of the Month @ 10am**

**Next Session: February 17, 2018**

**MENU: Chicken 3 Meals—3 Ways**

**In the JCCM Food Pantry**

238 W Washington St, Charles Town, WV 25414

- Learn healthy cooking techniques
- Taste testing of the foods prepared
- Prize drawing and giveaways for all

***For JCCM clients:***

- Get recipe ideas for the foods you get from the pantry
  - Get a meal & bag of ingredients
- Counts as 1 opportunity for your food pantry requirement

**Program is FREE and  
Open to the Public**

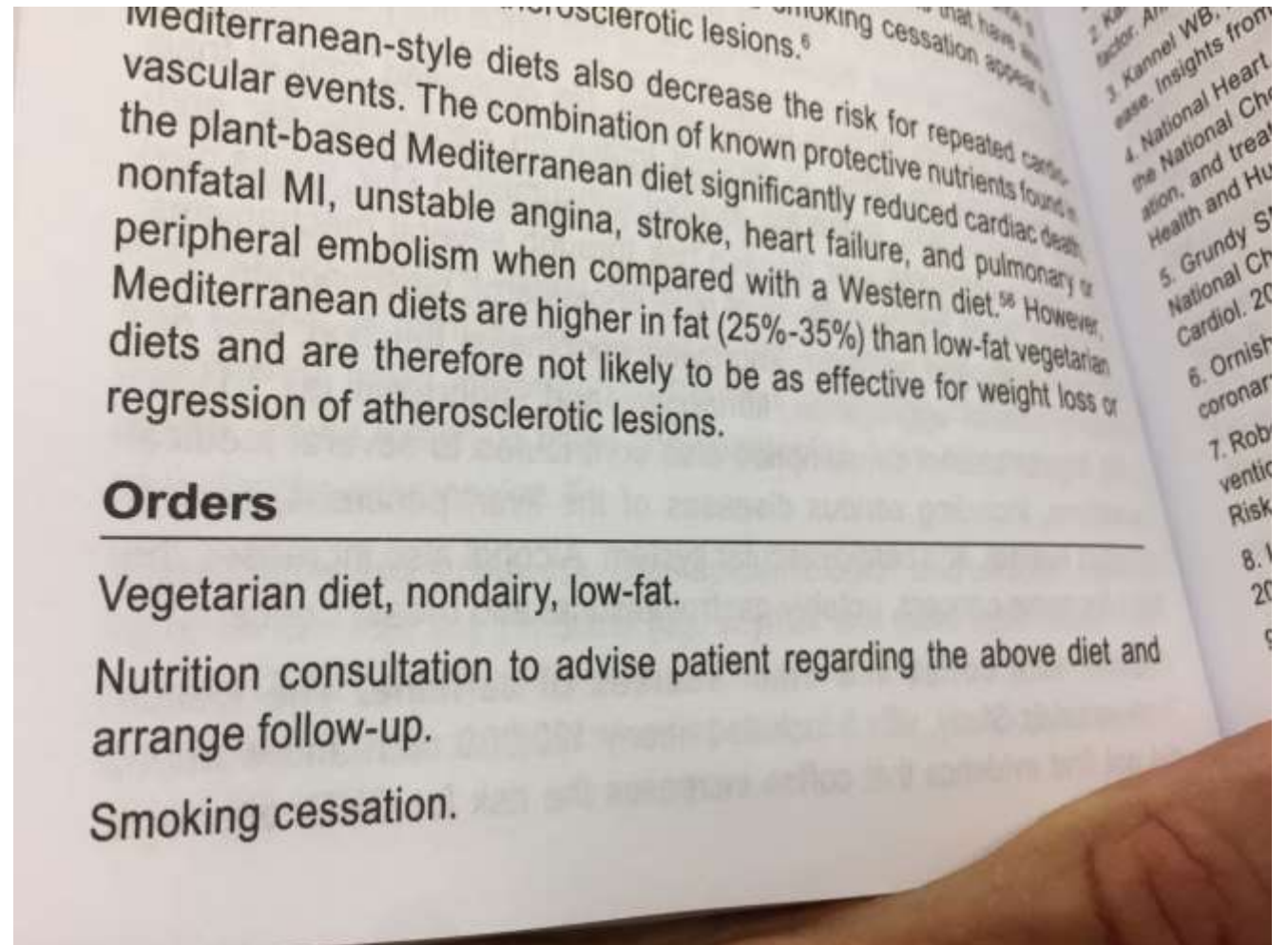
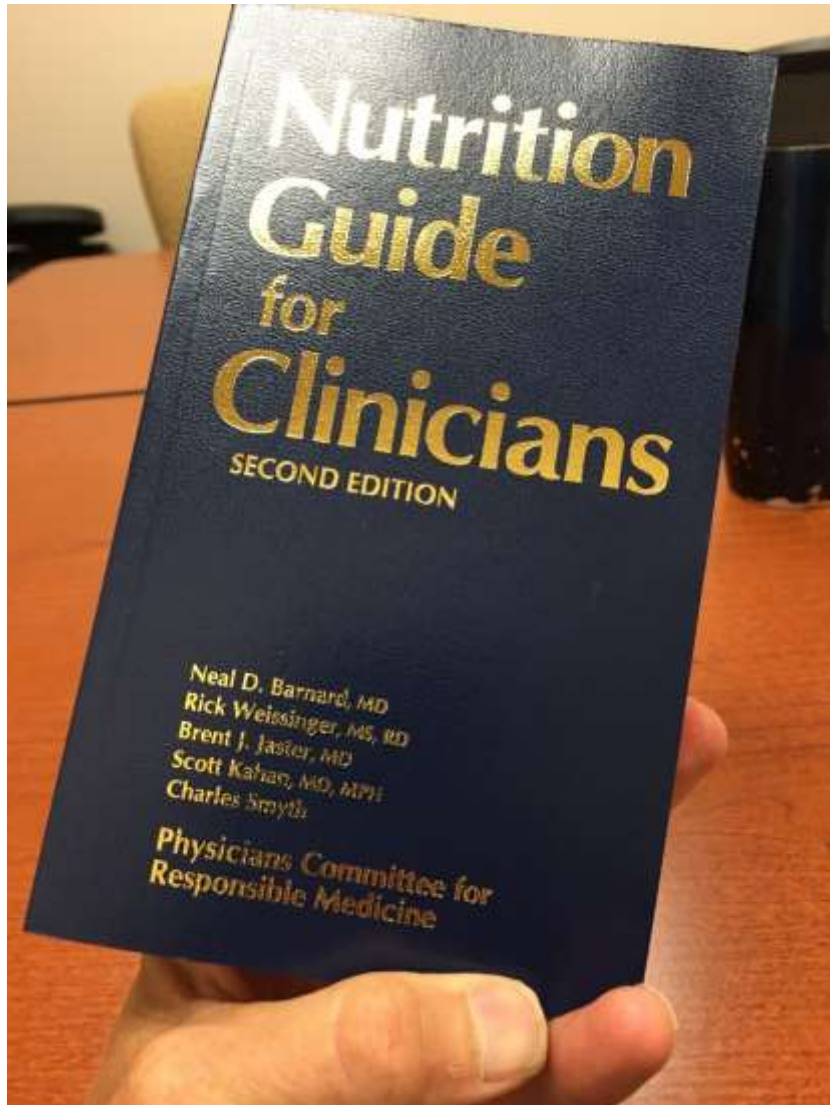
**WVU Medicine**

CENTER FOR DIABETES AND  
METABOLIC HEALTH

Operated by University HealthCare Physicians, Inc.



This is what is being distributed “Free... \$80 Value”  
to Medical Students in the USA by PCRMM



Diet for Cardiovascular Disease



# Imagine a Color You've Never Seen Before





# My *Healing* Community- Change Starts Local

- Emphasizes the **social context** as key component and carried out in public domain
- Community healing is a **process**, not an event. It is multi-faceted and multi-layered with no set time limitations. Healing proceeds at pace determined by the participants and cannot be rushed



Heal Event Shepherdstown April 2017

# WV Low Carb Revolution Community Meeting



Education  
Healthy Food  
Joy  
Stories  
Support  
Fun



# Michelle D 110 Pounds Another Champion Supporting Others







Lance and Michelle  
Heal Together DM in  
Remission  
over 170 pounds 12 months  
Starting Local Support Group

# The Food Insecure- WV Freshealthy Bucks Double SNAP at Farmers Markets







# CHEF TRT

WITH PRIMAL KITCHEN

- Small Retail as agent for community health
- [www.tworiverstreads.com](http://www.tworiverstreads.com)





# Youth Running and Health

[www.FreedomsRun.org](http://www.FreedomsRun.org)

Raising \$ for Community Health





# Community on a Global Scale Breckenridge CO 2017



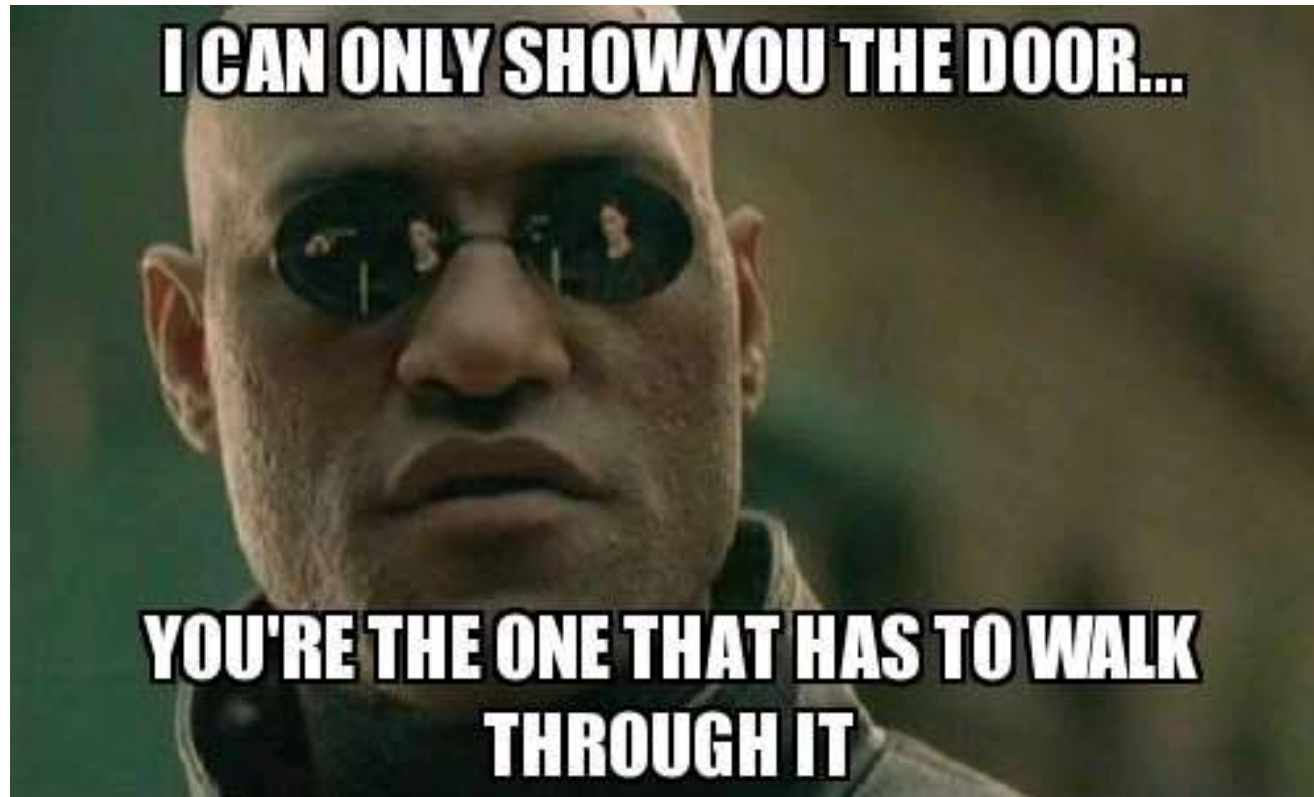


**C'EST LA REVOLUTION !..**  
**QUE FAIT LE "SUAVITOS"**  
**DANS L'ALIMENTATION**

"SUAVITOS" NE SAU-CONVENIR AUCUNEMENT L'ESTRILE  
EN CE QU'IL DANS TOUTES LES SORTES RAISONNABLES D'ALIMENTATION



*"You take the **blue pill**, the story ends. You wake up in your bed and believe whatever you want to believe. You take the **red pill**, you stay in wonderland, and I show you how deep the rabbit hole goes."* —Morpheus to Neo



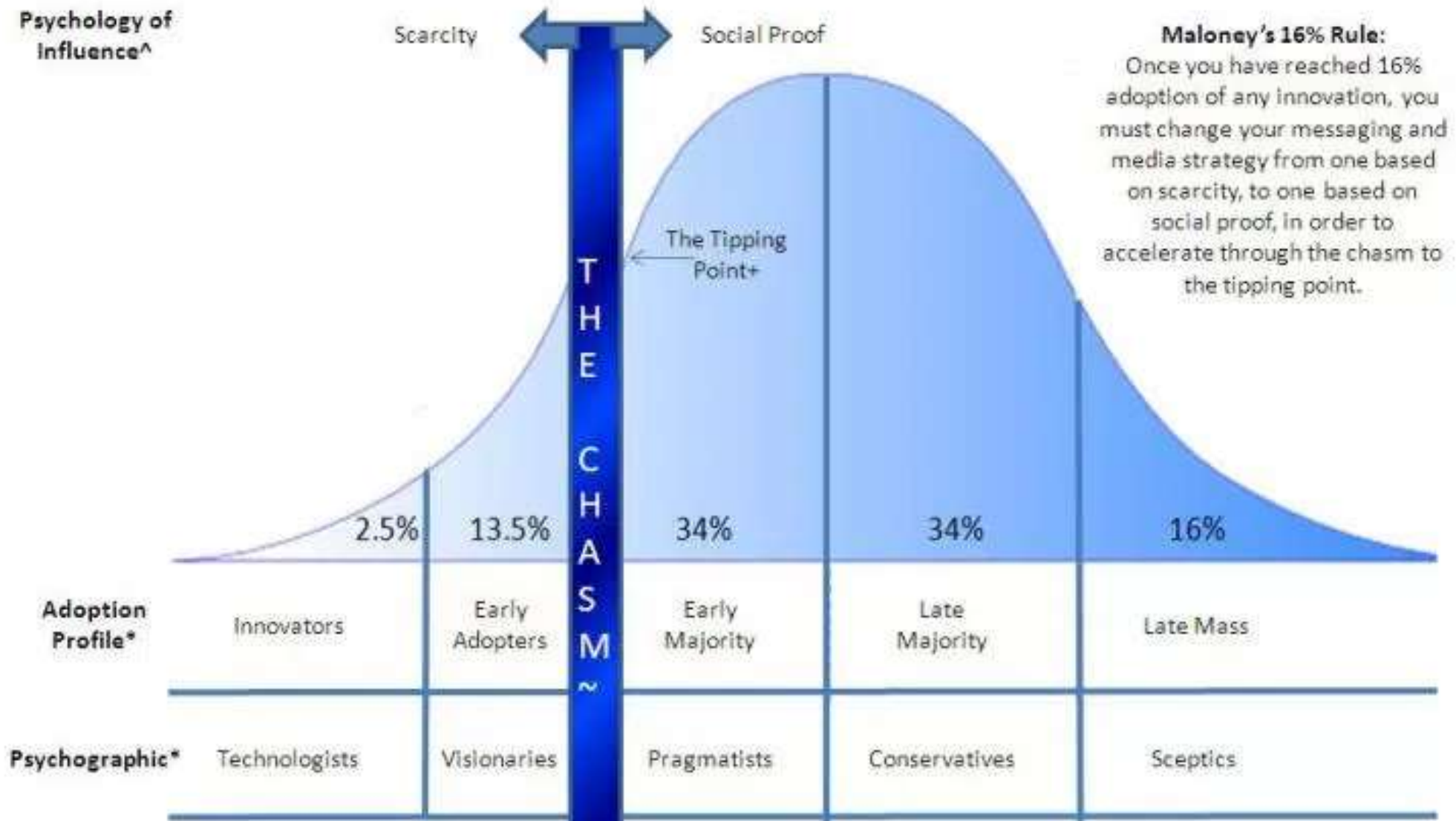
# Minimally Disruptive Medicine – health care that fits

**The burden of illness** (the pathophysiological and psychosocial impact of disease on the sufferer) has its counterpart in the **burden of treatment** (the workload delegated to the patient by health professionals, which may include self care and self-monitoring, managing therapeutic regimens, organizing doctors' visits, tests, and insurance).





# This is Our Opportunity to Change the World



# Dr. Tim Noakes-Acquitted in Trial in South Africa for telling a mom its ok for a baby to have fat



Comrades 2013 on Low Carb Diet  
Durban to Pietermaritzburg South Africa- 90k



# CrossFit Health Meeting Washington DC



<http://www.nutrition-coalition.org/>

*The Nutrition Coalition is a nonprofit advocacy organization working to strengthen national nutrition policy so that it is founded upon a comprehensive body of conclusive science, and where that science is absent, to encourage additional research.*





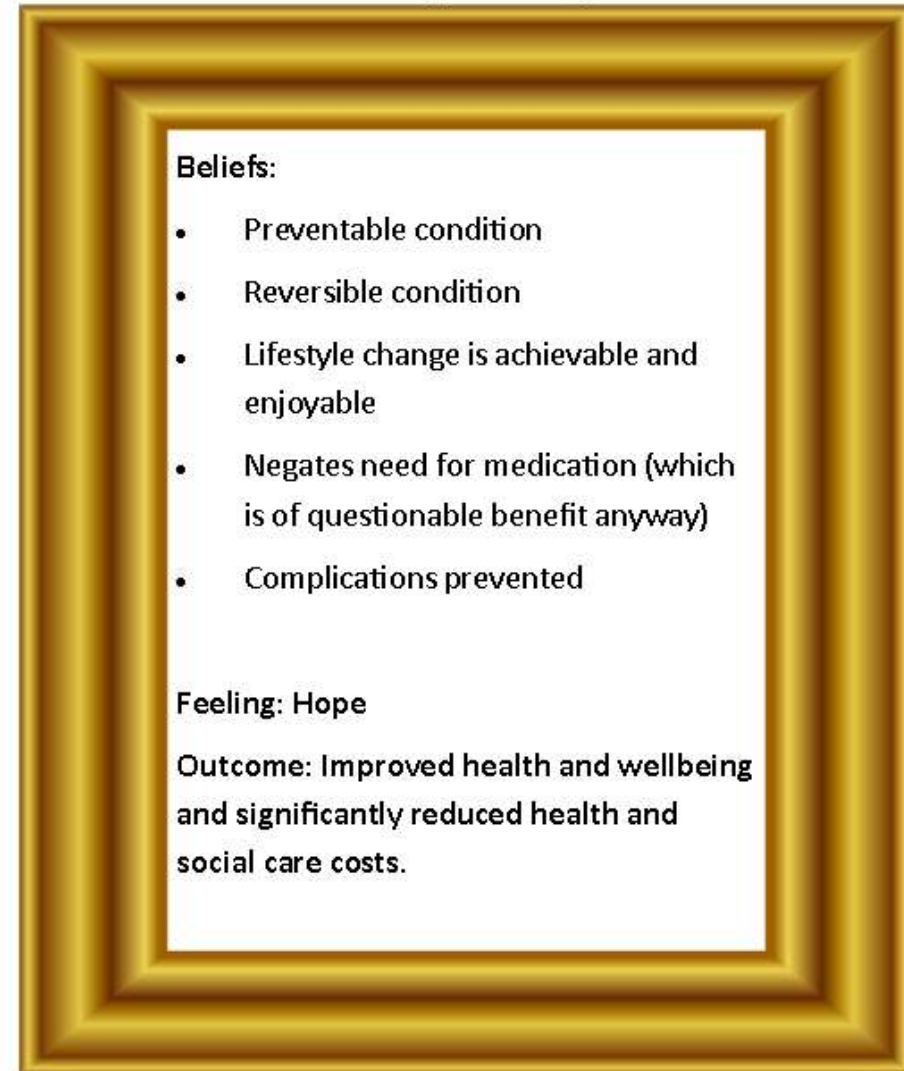
# THE FRAMING OF TYPE 2 DIABETES: Beliefs & Outcomes

*Previous*

*Vs*

*Emerging*

Thanks  
Dr.Campbell  
Murdoch





What if We Applied the Same Thinking to Polio as We Do To Diabetes and Just Built More Iron Lungs





# Summary Slide



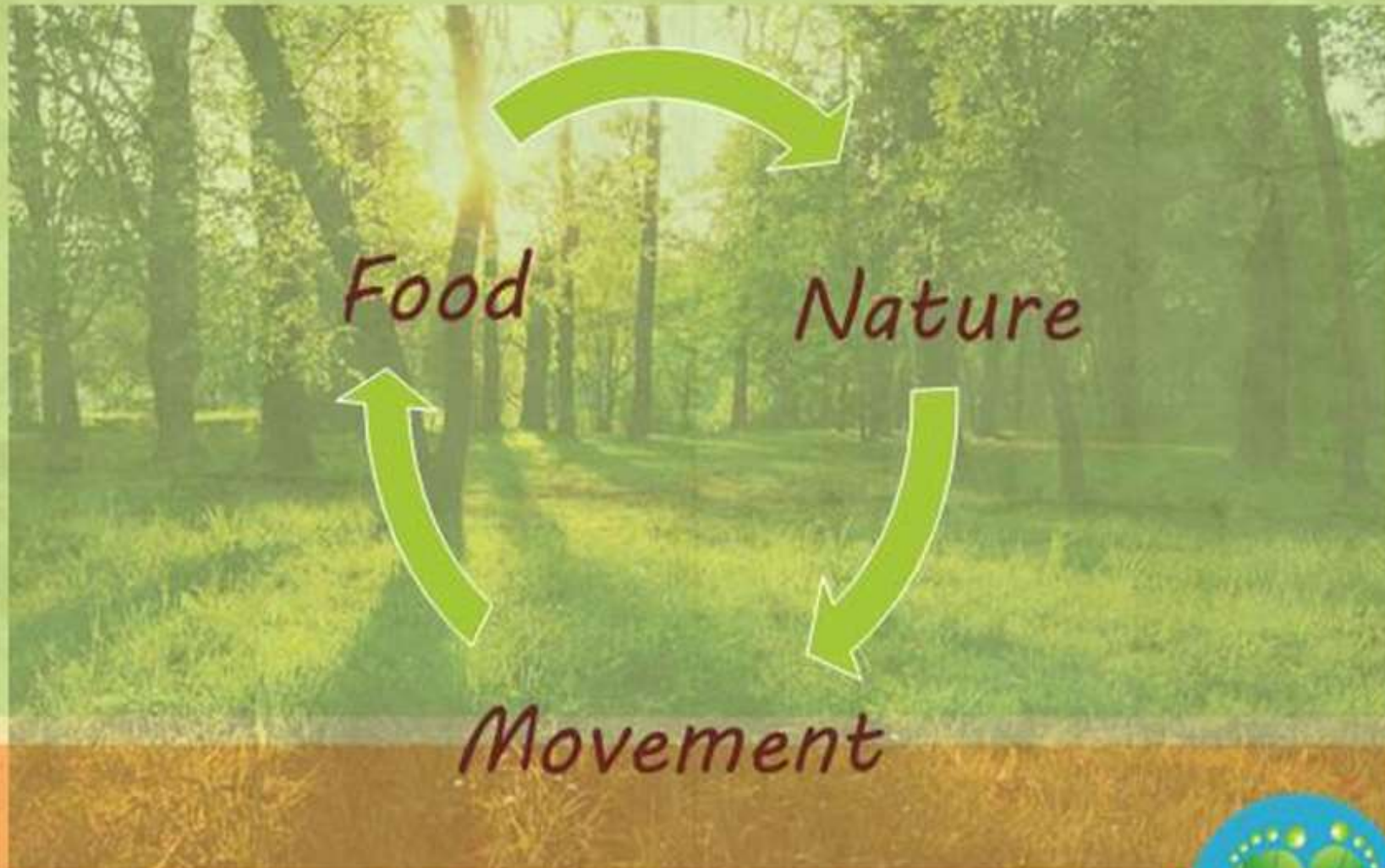
# Learning the Art of Cooking Daughter Lily with Grandma Age 88





Feeling Healthy is Like.....





NaturePrescriptions.org





# NaturePrescriptions.org



Take advantage of all that nature has to offer to improve your health.

- Eat Whole Foods

- Visit Local Farmers Markets for fresh fruits and veggies.

- Eat healthy fats and proteins (nuts, eggs, fish, quality meats)

- Avoid processed foods and sugar.

- Get Moving

- Full body movement not only strengthens you but decreases anxiety and stress, and improve memory and learning...and you live longer

- A minimum of 30 minutes of exercise 5 times/week is best. Start slowly and build.

- Go Outside

- Visit your local parks.
- Take a walk outside and relax among the sites and sounds of nature.

- Nature can help lift your mood and reduce stress.

- Take children outside to play and play yourself.



Visit our site for more info on healthy living and local trails

What foods and activities bring me joy?    How can I eat healthier and move & play outside more?

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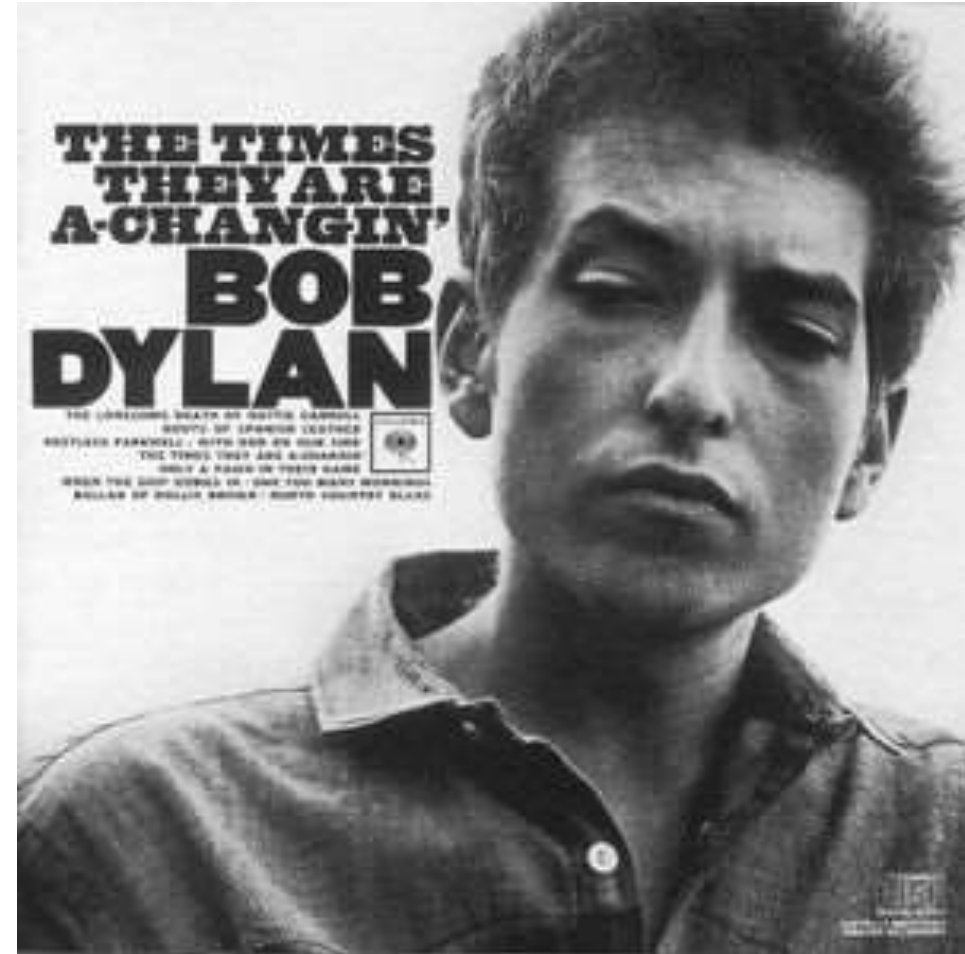
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Come writers and critics  
Who prophesize with your pen.....

For the loser now  
Will be later to win  
For the times they are a-changin'.





I Imagine a world where we all get along



barefoot run  
in Central Park

Thank You All For Coming and For All You  
Do to Make This a Healthier Place For the  
Next Generation

[AFRUNDOC@GMAIL.COM](mailto:AFRUNDOC@GMAIL.COM)  
[WWW.DRMARKSDESK.COM](http://WWW.DRMARKSDESK.COM)

Resources Dropbox  
<https://tinyurl.com/DrMarkLowCarb>