5 THINGS YOU CAN DO TO PREVENT DIABETES

Beverly Thomassian, RN, MPH, CDE, BC-ADM
Diabetes Nurse Specialist for a really long time.

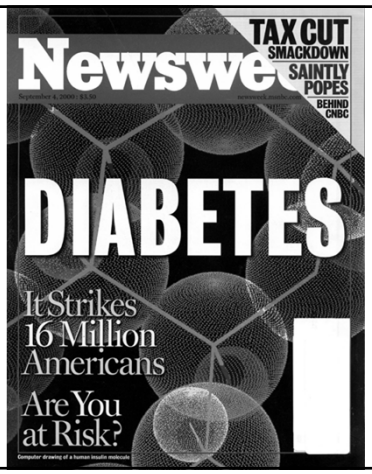
GOALS FOR TODAY

- Gain momentum toward better health
- Move toward the tomato
- Getting creative with activity
- Debunking diabetes myths
- Keeping it positive – Be your own best coach

CDC ANNOUNCES

1 in 3 Americans may have Diabetes by 2050

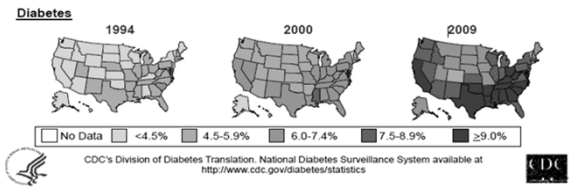
Boyle, Thompson, Barker, Williamson
2010, Oct 22:8(1)29
www.pophealthmetrics.com

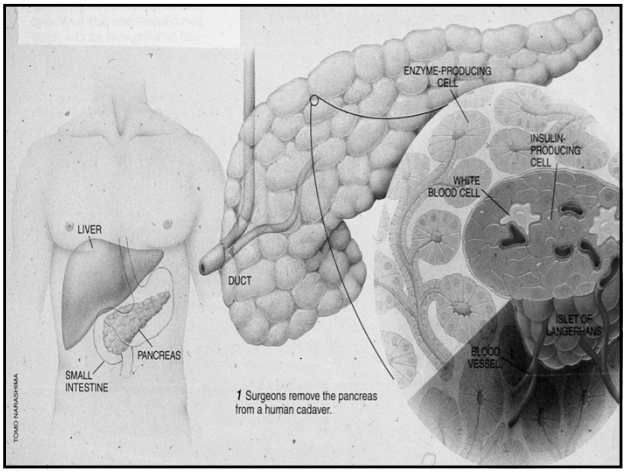


DIABETES IN AMERICA 2014

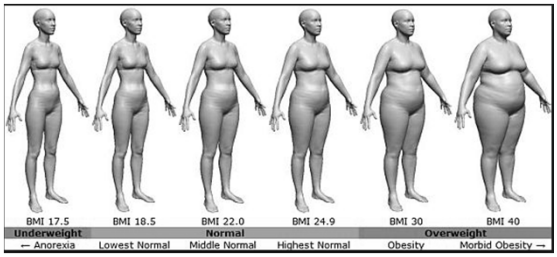
- 29 million 9.3%
- **79 million have pre diabetes**
- New cases increased **90%** in past 10 years.
  - 4.8 per 1,000 people during 1995-1997 to
  - 9.1 per 1,000 in 2005-2007 in 33 states.

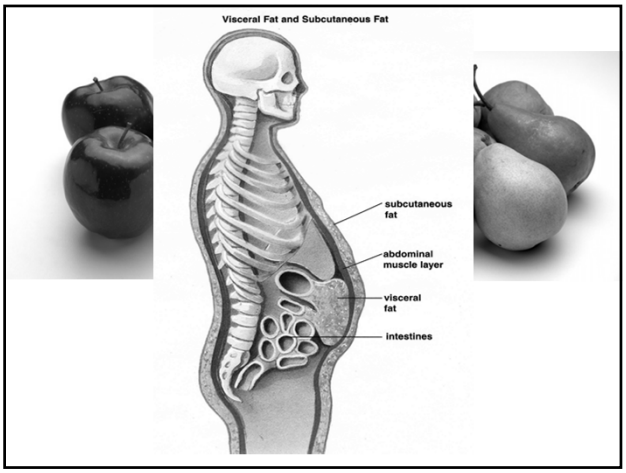
CDC 2011





BMI – VISUAL IMAGE





DIABETES 2 - WHO IS AT RISK?
(ADA CLINICAL PRACTICE GUIDELINES)

1. Testing should be considered in all adults who are overweight (BMI ≥ 25) and have additional **risk factors**:

   - First-degree relative w/ diabetes
   - Member of a high-risk ethnic population
   - Habitual physical inactivity
   - PreDiabetes
   - History of heart disease

DIABETES 2 - WHO IS AT RISK?

(ADA CLINICAL PRACTICE GUIDELINES)

Risk factors cont'd

- HTN - BP > 140/90
- HDL < 35 or triglycerides > 250
- baby >9 lb or history of Gestational Diabetes Mellitus (GDM
- Polycystic ovary syndrome (PCOS)
- Other conditions assoc w/ insulin resistance:
  - Severe obesity, acanthosis nigricans (AN)

SIGNS OF DIABETES

- Polyuria
- Polydipsia
- Polyphasia
- Weight loss
- Fatigue
- Skin and other infections
- Blurry vision

- Glycosuria, H_2O losses
- Dehydration
- Fuel Depletion
- Loss of body tissue, H_2O
- Poor energy utilization
- Hyperglycemia increases incidence of infection
- Osmotic changes

PREVENTING DIABETES

CAN TYPE 2 BE PREVENTED IN OLDER ADULTS?

- Physical activity (30 mins a day)
- Dietary score (higher fiber intake, low saturated fat and *trans*-fat, lower mean glycemic index)
- Not Smoking
- Alcohol use (up to 2 drinks a day);
- BMI <25 and waist circumference

Overall, 9 of 10 new cases of diabetes attributable to these 5 lifestyle factors.

89% risk reduction when all at goal.

35% rel risk reduction for each additional

Dariush Mozaffarian, MD,
Arch Intern Med. 2009;169(8):798-807.

FINANCIAL ADVISOR

- Mid 30s, friendly, he smiles to greet you and you notice his gums are inflamed. You'd guess a BMI of 26 or so, with most of the extra weight in the waist area.
- If you could give him some health related suggestions, what would they be?

CAN WE STOP PRE DIABETES FROM PROGRESSING?

3, 234 people w/ Pre-Diabetes randomized:

- Placebo
- Diet/Exercise or
- Metformin

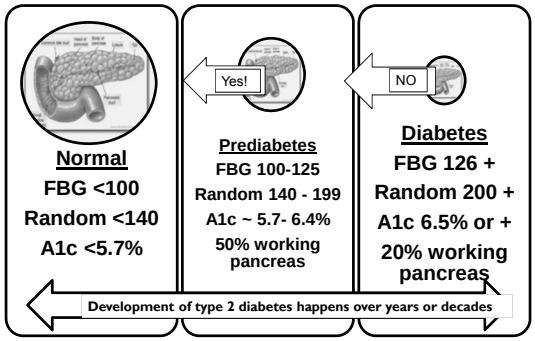
over a three year period

Diabetes Prevention Program (DPP) 2(

DIABETES PREVENTION PROGRAM

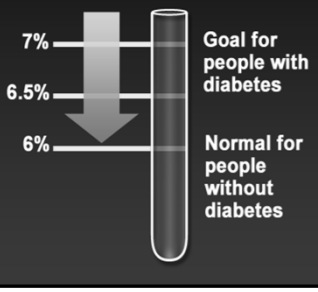
- Standard Group - 29% developed DM
- Lifestyle Results - 14% developed DM
  - 58% (71% for 60yrs +) Risk reduction
    - 30 mins daily activity
    - 5-7% of body wt loss
- Metformin 850 BID - 22% developed DM
  - 31% risk reduction (less effective with elderly and thinner pt's)

NATURAL HISTORY OF DIABETES



A1C Blood Test

This blood test checks the average blood glucose over the past 2 – 3 months



A1C AND ESTIMATED AVG GLUCOSE (EAG) 2008

A1c (%)	eAG
5	97
6	126
7	154
8	183
9	212
10	240
11	269
12	298

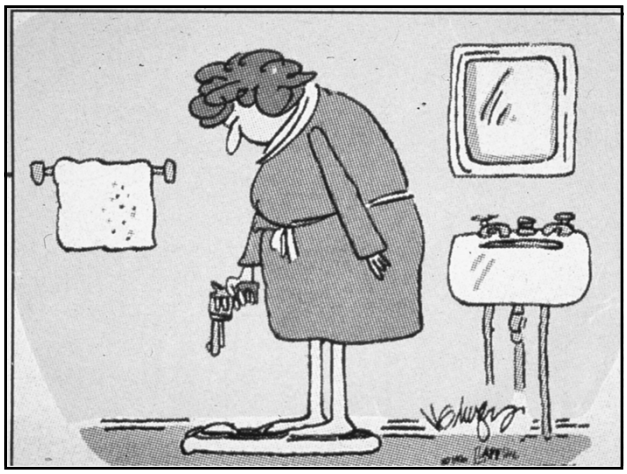
Order teaching tool kit free at diabetes.org

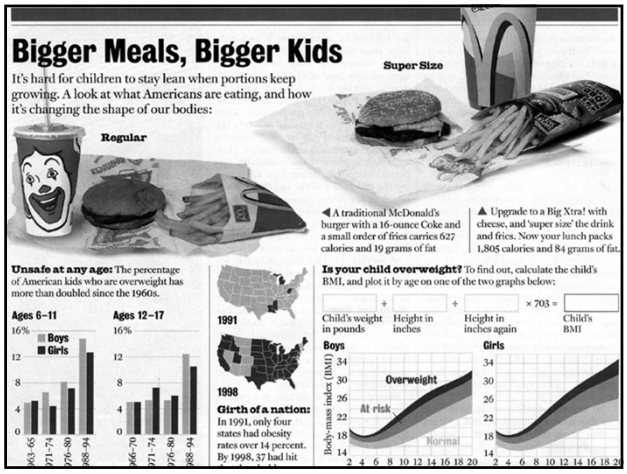
eAG = 28.7 x A1c-46.7 ~ 29 pts per 1%

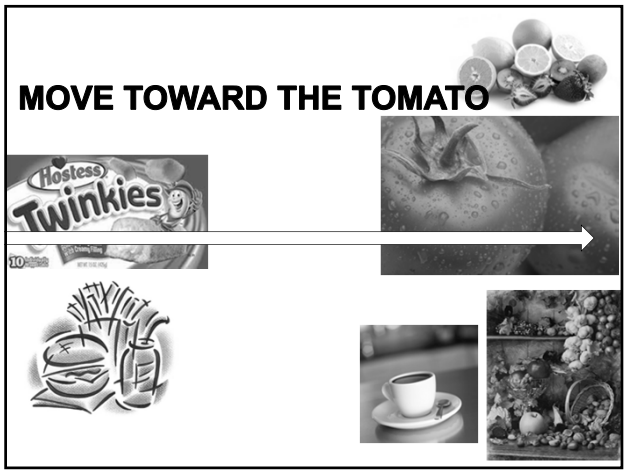
Translating the A1c Assay Into Estimated Average Glucose Values – ADAG Study
Diabetes Care: 31, #8, August 2008

DIABETES ABC'S

A 1c
B lood Pressure
C holesterol




Bigger Meals, Bigger Kids
It's hard for children to stay lean when portions keep growing. A look at what Americans are eating, and how it's changing the shape of our bodies:
Super Size
Regular
A traditional McDonald's burger with a 16-ounce Coke and a small order of fries carries 627 calories and 19 grams of fat
Upgrade to a Big Xtra! with cheese, and 'super size' the drink and fries. Now your lunch packs 1,805 calories and 84 grams of fat.
Unsafe at any age: The percentage of American kids who are overweight has more than doubled since the 1960s.
Ages 6–11
Ages 12–17
Boys
Girls
1991
1998
Girth of a nation: In 1991, only four states had obesity rates over 14 percent. By 1998, 37 had hit
Is your child overweight? To find out, calculate the child's BMI, and plot it by age on one of the two graphs below:
Child's weight in pounds
Height in inches
Height in inches again
Child's BMI
Boys
Girls
Overweight
At risk
Normal
Body-mass index (BMI)


MOVE TOWARD THE TOMATO
Hostess
Twinkies

MEDICAL NUTRITION THERAPY 2014 - ADA

- Focus on the Individual
- Maintain pleasure of eating
- Provide positive messages about food
- Limit food choices only when backed by science
- Provide practical tools
- Refer to a RD and Diabetes Education – Lowers A1c by 1-2%

MEDICAL NUTRITION THERAPY – ADA 2014 UPDATES

- No ideal percentage of calories from protein, carbohydrate and fat for people with diabetes.
- Macronutrient distribution should be based on an *individualized assessment* of eating patterns, preferences and metabolic goals.

LOSING 2-8KG EARLY IN DIAGNOSIS TYPE 2 HELPFUL

ADA 2014

- Weight Loss –
  - *The optimal macronutrient intake to lose weight not known*
  - *The literature does not support one particular nutrition therapy to reduce weight, but rather a spectrum of eating patterns that result in reduced energy intake.*
  - Wt loss goal ½ pound to 1 lb a week
    - Decrease intake 250-500 cals daily + exercise
- 2013 – Try and keep less than 2,300 mg a day
- Vitamin and mineral supplements not recommended - lack of evidence.
- Fiber 25 -38 gms a day

SUCCESSFUL WEIGHT LOSS STRATEGIES INCLUDE

- Weekly self-weighing
- Eat breakfast
- Reduce fast food intake.
- Decrease portion size
- Increase physical activity
- Use meal replacements
- Eat healthy foods

DIABETES PREVENTION PROGRAM FOCUS ON FAT = WT LOSS SUCCESS

To help you lose weight and improve your health, stay as close as possible to your fat and calorie goals.
Find your starting weight below. Your fat and calorie goals are in the same row. Circle your fat and calorie goals.

Weight (lb)	Fat Goal (grams)	Calorie Goal
120-174	33	1,200
175-219	42	1,500
220-249	50	1,800
>250	55	2,000

http://www.cdc.gov/diabetes/prevention/recognition/curriculum.htm

ADA RECOMMENDATION EAT LESS JUNK FOOD & SUGARY DRINKS –

- Less Processed Foods
- Less Sugary Beverages
  - increase visceral adiposity
  - With sugar or
  - High fructose corn syrup
- Soda Tax?
- Junk Food Tax?

USDA PLATE
WWW.MYPLATE.GOV

Balancing Calories

- Enjoy your food, but eat less.
- Avoid oversized portions.

Foods to Increase

- Make half your plate fruits and vegetables.
- Make at least half your grains whole grains.
- Switch to fat-free or low-fat (1%) milk.

Foods to Reduce

- Compare sodium in foods like soup, bread, and frozen meals — and choose the foods with lower numbers.
- Drink water instead of sugary drinks.

10 SUPERFOODS

- Beans
- Dark Green Leafy Vegs
- Citrus Fruit
- Sweet Potatoes
- Berries
- Tomatoes
- Fish High in Omega-3 Fatty Acids
- Whole Grains
- Nuts
- Fat-Free Milk and Yogurt

LABEL LESSONS

Nutrition Facts

Serving Size 1/2 cup (114 g)
Servings Per Container 4

Amount Per Serving	
Calories 90	Calories from Fat 30
	% Daily Value*
Total Fat 3g	5%
Saturated Fat 0g	0%
Cholesterol 0g	0%
Sodium 300mg	13%
Total Carbohydrate 13g	4%
Dietary Fiber 3g	12%
Sugars 3g	
Protein 3g	

Vitamin A	80%	**Vitamin C**	60%
Calcium	4%	**Iron**	4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2000	2500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate		300g	375g
Fiber		25g	30g

Calories per gram: Fat 9 Carbohydrates 4 Protein 4

CHOOSE HEALTHY CARBS

- Carbs have fiber, vitamins, minerals and phytonutrients
- 25 gms of fiber a day
- Power Carbs include:
  - Beans
  - Veggies
  - Fruits
  - Whole grain foods

HANDY MEAL PLAN

- Per Meal Serving
  - Each finger = 15 gms carb (can have 3-4 servings/meal)
  - Palm of hand = 3 oz's protein
  - Thumbnail = 1 tsp fat serving

GOAL IDEAS

- Eat less processed foods
- Eat 3 oz portions of lean meat / fish
- Eat foods that have less fat and salt
- Eat foods with more fiber

GET ACTIVE

CHOOSE A SMART GOAL

- Specific
- Measurable
- Attainable
- Realistic
- Timely

GOAL EXAMPLE –

- I will make 3 laps around my block on Monday, Wednesday and Friday for one month.

KEEPING IT POSITIVE – BE Y0UR OWN BEST COACH

- Brush and floss daily
- Get your flu shot
- Move, move, move
- Ask for help as needed

WHICH FAMOUS PERSON WITH TYPE 2 DIABETES?

"Too much of a good thing is wonderful?"

Mae West - lived into her 80's

THANK YOU