

“Eat Your Medicine”

David Kerr MD

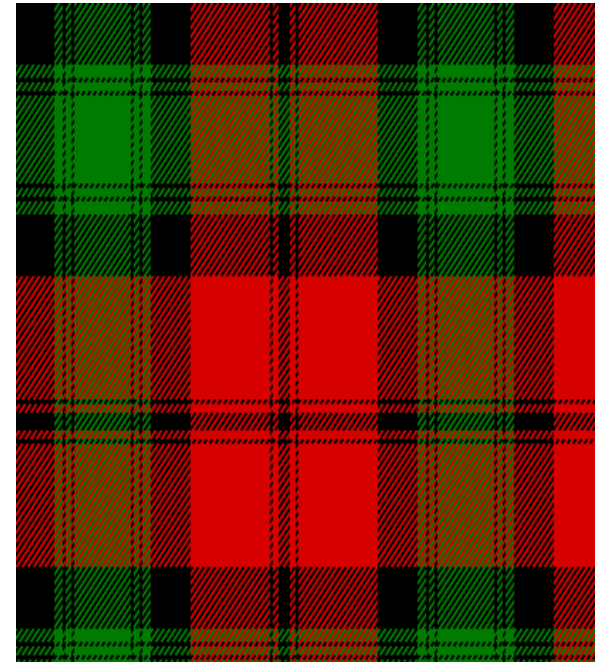
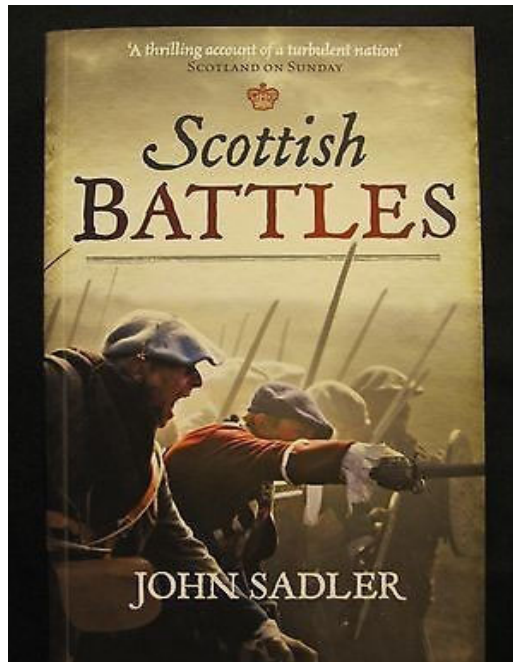




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Scotsman in the Golden State





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75 Years
SANSUM DIABETES
RESEARCH INSTITUTE
1944 - 2019

Dr. William Sansum. First U.S. physician to manufacture and administer insulin

Historical/ongoing strengths

Diabetes and pregnancy

Artificial pancreas

New areas of interest

Social determinants of health

Digital diabetes health

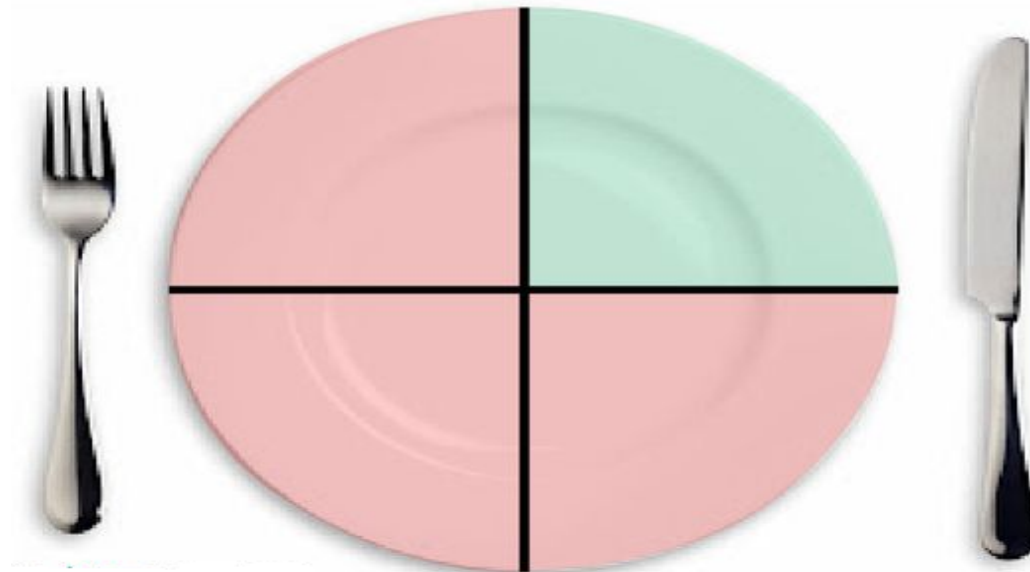


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**“One quarter of what you eat
keeps you alive.
The other three-quarters
keeps your doctor alive.”**

-Ancient Egyptian Proverb





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“How many of us appreciate the joys of a simple tortilla?”

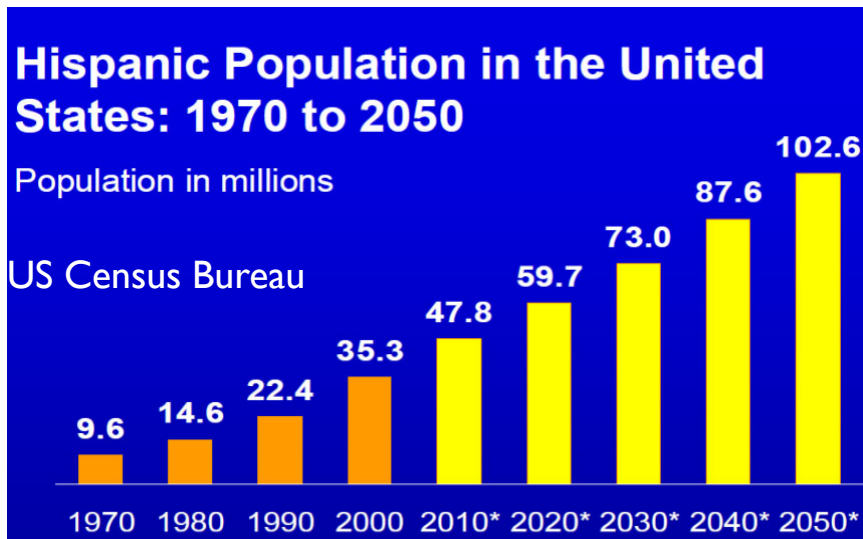
Jonathan Franklin, *438 Days: An Extraordinary True Story of Survival at Sea*



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Tortilla Consumption



- Global tortilla market USD 48.5 billion by 2023
- North America USD 22.45 billion in 2017 based on growth of Hispanic population
- Gaining popularity in non-Hispanic population
- Gluten-free tortilla is the fastest growing segment

Tortilla Market Research Report- Forecast till 2023, Jan 2018

Census

Projections



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Tortillas as a Preventative Medicine





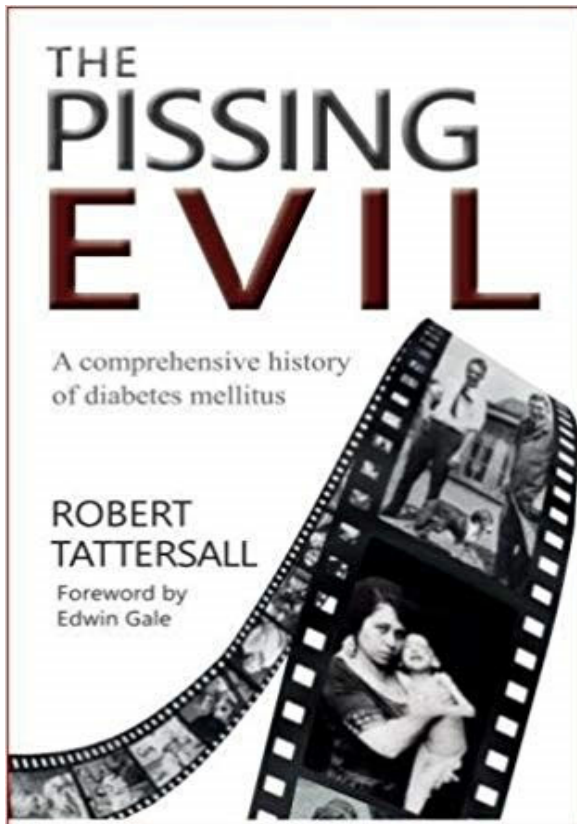
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Watercolour by A.J.E.Terzi, 1925.

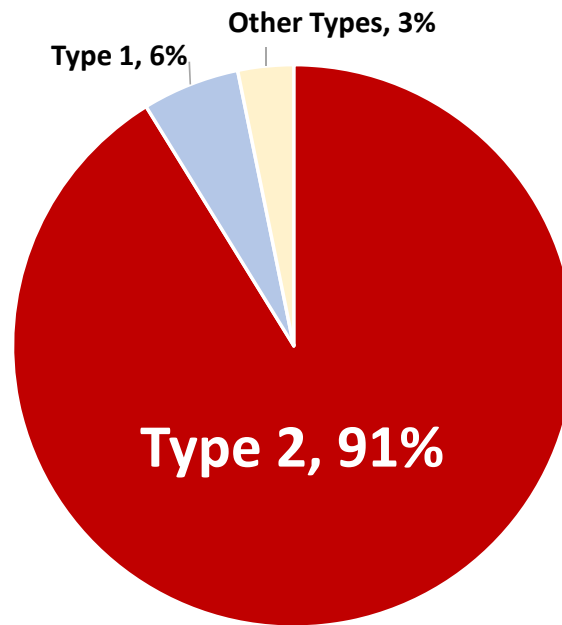
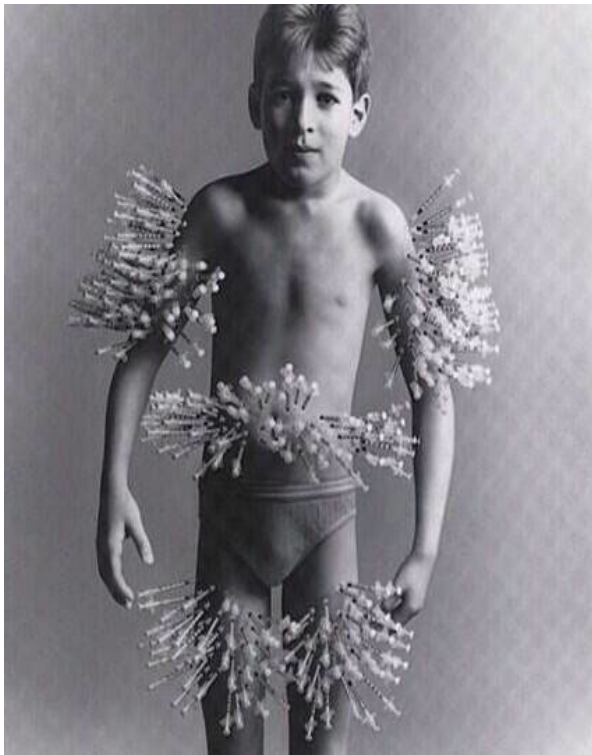


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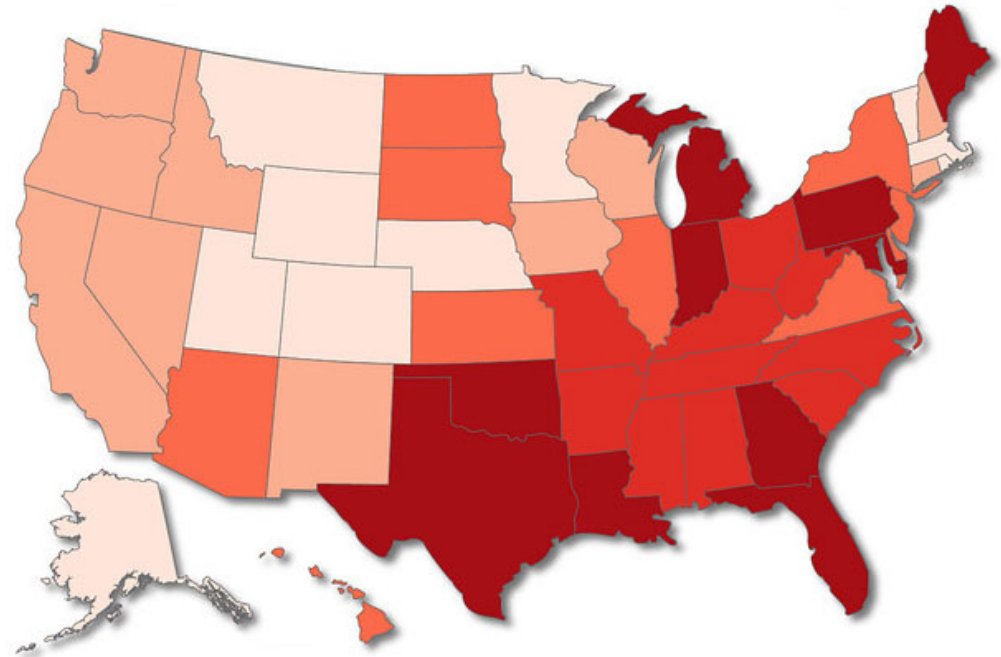
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Who gets diabetes?

Prevalence: 9.4% of Americans
Seniors: 1 in 4 aged > 65 years
New Cases: 1.5 million/year
Prediabetes: 84 million

7.4% Whites
12.1% Latinx
12.7% African-Americans
15.1% Native Americans





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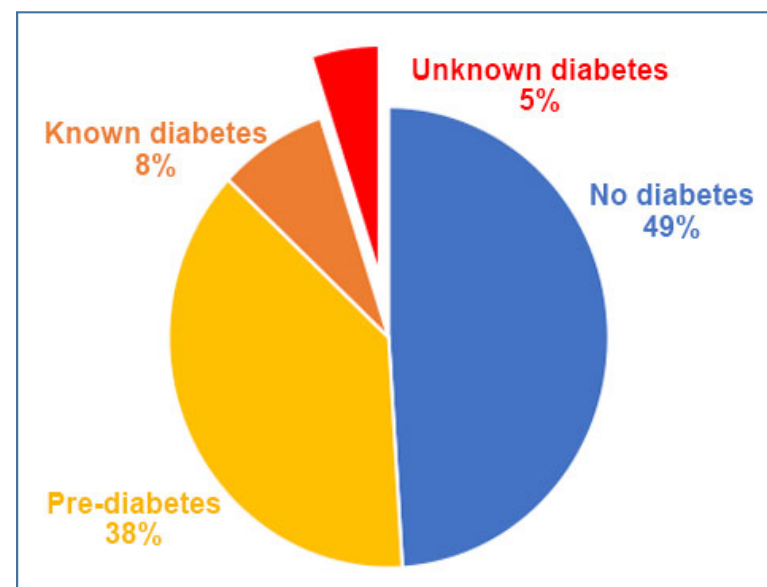


Diabetes is Expensive

Diabetes creates 'hidden tax' for US residents

Dall TM, et al. *Diabetes Care*. 2019;doi:10.2337/dc18-1226.

- Diabetes cost U.S. \$404 billion in 2017
- Annual cost per person for diagnosed diabetes >\$10,000
- Annual costs of \$4,250 and \$500 for undiagnosed diabetes and prediabetes
- Hidden 'tax' of \$1,240 per person (medical costs and reduce productivity)

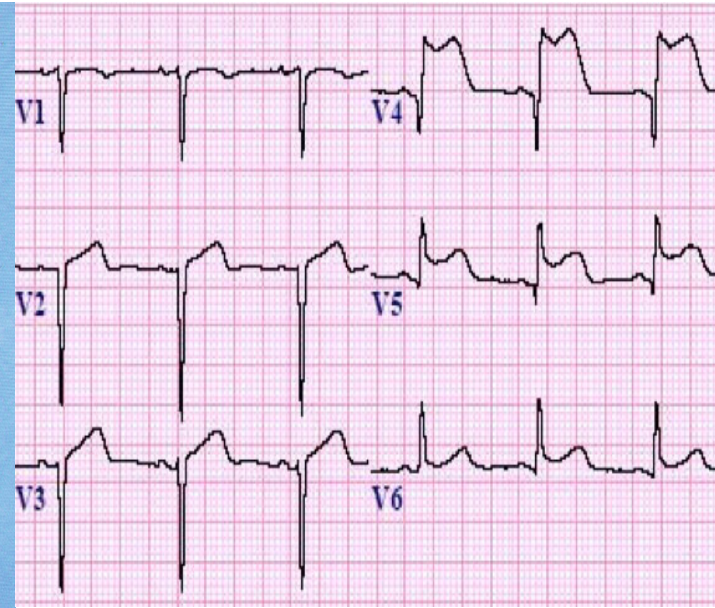




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What is diabetes?





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Why do people develop diabetes and the associated complications?

“It is much more important to know what sort of patient has a disease than what sort of disease a patient has”

William Osler

“Medical care...accounts for only 10-20% of the modifiable contributors to health outcomes”



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5 Determinants of Human Health



Genetics

Biology

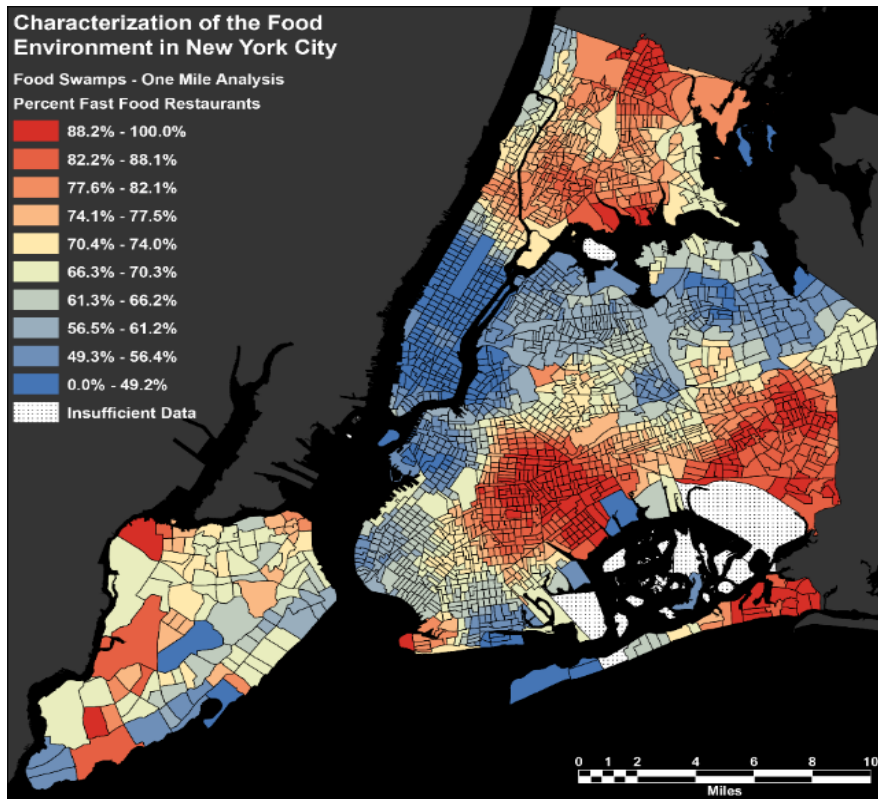
Behavior

Psychology

Society



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“prevalence of diabetes was higher in **fast food swamps**1.55 times higher adult T1D prevalence, 2.52 times higher adult T2D prevalence, and a 2.03 times higher pediatric T1D”

“food environment may be associated with T1D”



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Disparities and the Diabetes Epidemic



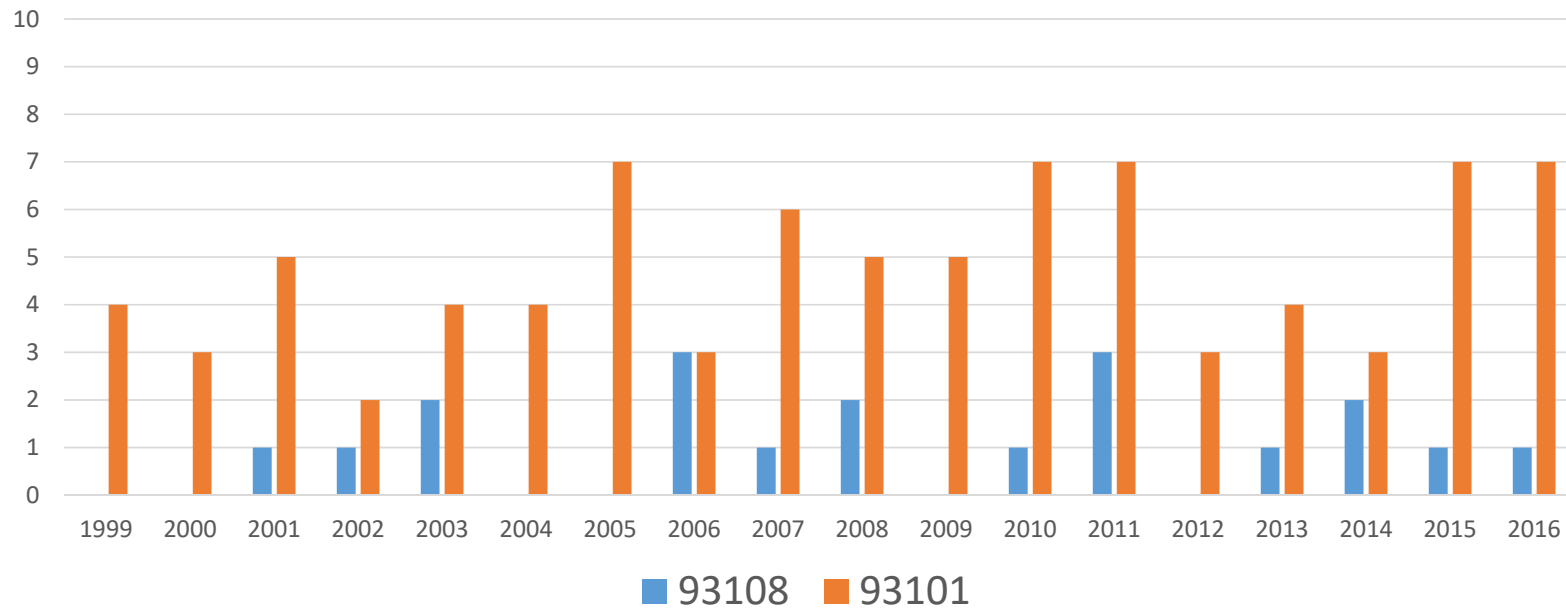


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Death by Zip Code, Santa Barbara

Diabetes as a Leading Cause of Death



<https://healthdata.gov/dataset/leading-causes-death-zip-code>



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HEALTH

How Diabetes Got To Be The No. 1 Killer In Mexico

April 5, 2017 - 4:23 PM ET

Walmart in Mexico

In 1991	n=1
In 2012	n=2000





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Reducing the unfair and excess burden of diabetes affecting Latino families in the USA



MIL  FAMILIAS

 LATINO DIABETES



A DIGITAL DIABETES FUTURE



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Especialistas





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1000 local Latino families provide annual data on 5 Determinants of Health



Data used to develop novel interventions to reduce diabetes burden

Genetics



Biology



Psychology



Behavior



Environment



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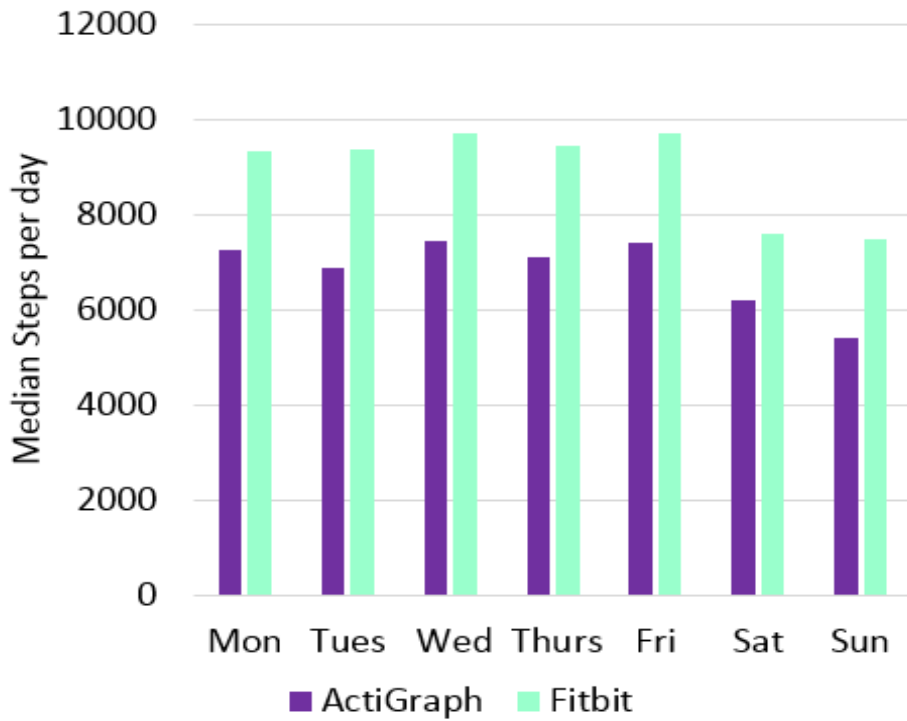


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Median Steps - ActiGraph vs Fitbit







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Create measurable and equitable health-economic benefits by making healthy food prescriptions a central strategy for preventing and managing chronic, non-communicable diseases.





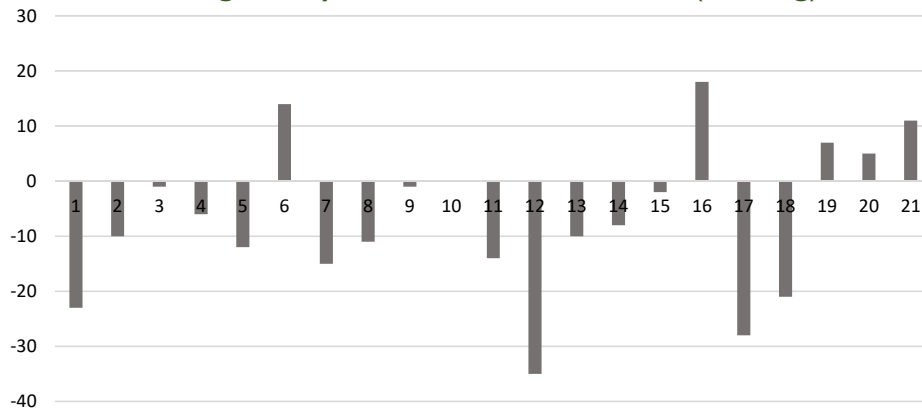
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Doctors prescribing organic vegetables improves health



Change in Systolic Blood Pressure (mmHg)



\$9.87 per week*
X
10 weeks of vegetable pick ups



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- Stimulate local economy including agriculture
- Less diabetes and lower costs by improving food security
- Environmental benefits
- Prevention of other conditions e.g. obesity
- Improved psychological well-being – less demand on mental health services
- **Agricultural Units of Care [AUC's]**





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True Knowledge is Power



The English Blog | BBC News - The papers: Radical cleric convicted and AstraZenec... | Anorak News | Tabloid Tropes: Th... | Daily Express (UK) Front Page for 11 July 2014 | Paperboy Online ...



Scoopnet | Anorak News | Tabloid Tropes: The Daily Express cured Diabetes in ... | Twitter | Newspaper Headlines for Friday, 25 April 2014 | Paperboy Online ...



The future of health begins with you



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LATINO DIABETES



Los Latinos tienen un riesgo mucho más alto de diabetes tipo 2 en comparación con la población no-Latino

Sep 12, 2018 | Factores de riesgo

Los Latinos son el grupo étnico minoritario más grande de los Estados Unidos. Tienen mayor riesgo...

[LEER MÁS](#)



Una cintura más grande aumenta su posibilidad de diabetes tipo 2 y prediabetes

Sep 4, 2018 | Dieta, Ejercicio, Factores de riesgo

Hay muchos factores que aumentan el riesgo de desarrollar diabetes tipo 2. Por ejemplo, un tamaño...

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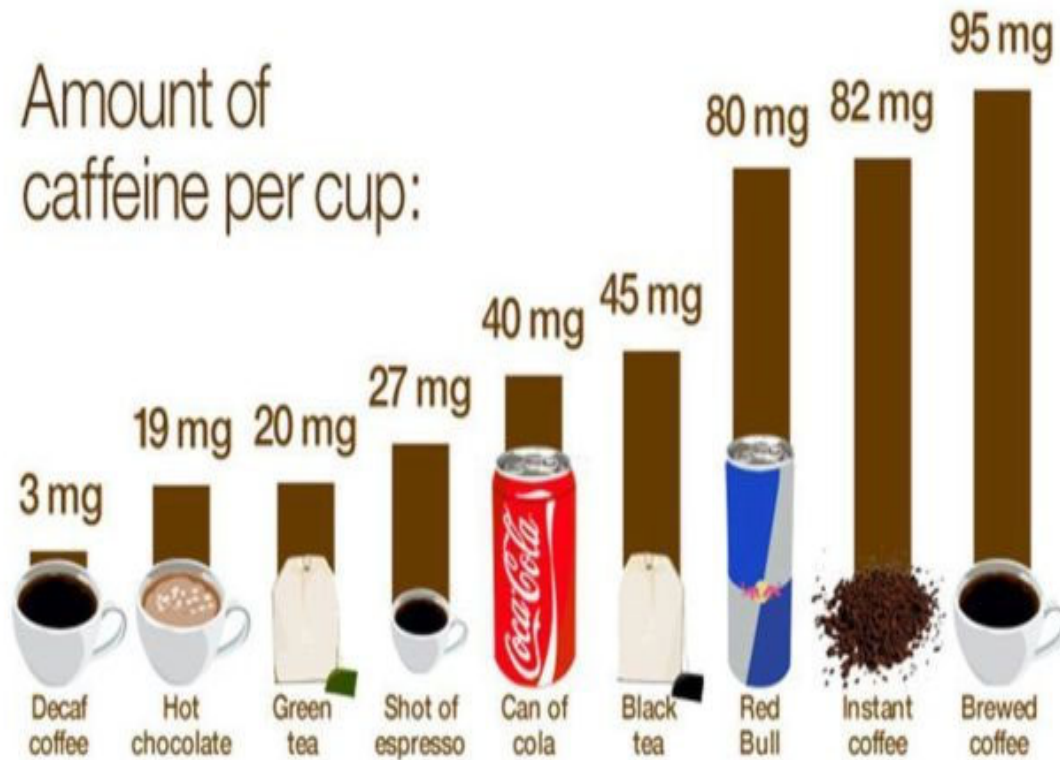




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Amount of caffeine per cup:



Randomized control trial investigating the influence of coffee on heart rate variability in patients with ST-segment elevation myocardial infarction

T. RICHARDSON¹, J. BAKER², P.W. THOMAS^{3,4}, C. MECKES², A. ROZKOVEC² and D. KERR^{1,4}

D. Kerr · J. Everett

Coffee, diabetes and insulin sensitivity

Physiological and Glycemic Responses Following Acute Ingestion of a Popular Functional Drink in Patients with Type 1 Diabetes

[Tolulope Olateju](#), MBBS, MRCP^{a,1}, [Joseph Begley](#), MBBCh, FRCPATH², [Daniel J. Green](#), MSc³, [David Kerr](#), MD, FRCP⁴



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The influence of liberal alcohol consumption on glucose metabolism in patients with type 1 diabetes: a pilot study ^{FREE}

D. Kerr, S. Penfold, S. Zouwail, P. Thomas, J. Begley

Influence of acute alcohol ingestion on the hormonal responses to modest hypoglycaemia in patients with Type 1 diabetes

D. Kerr, E. Cheyne, P. Thomas, R. Sherwin

Day After the Night Before

Influence of evening alcohol on risk of hypoglycemia in patients with type 1 diabetes

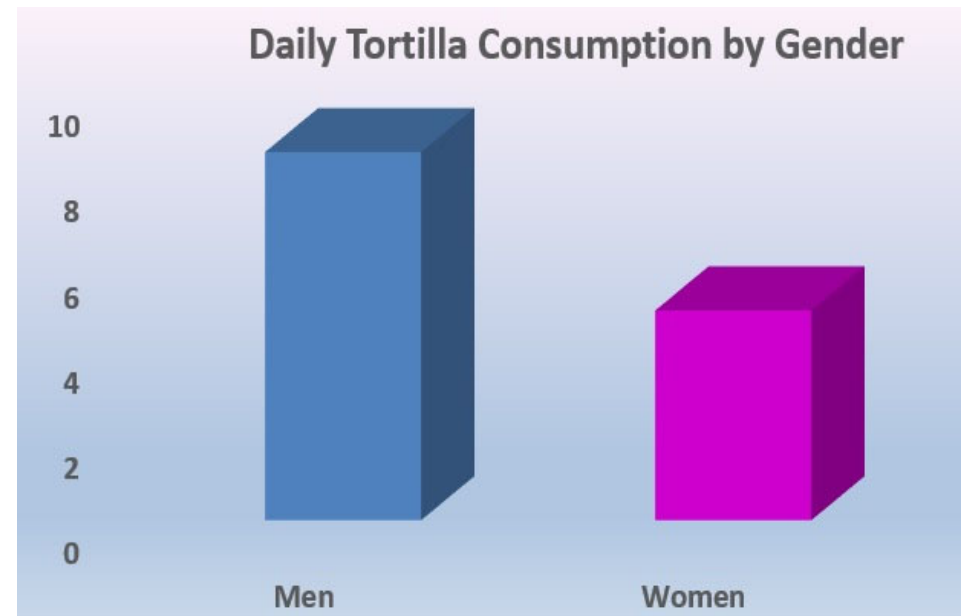
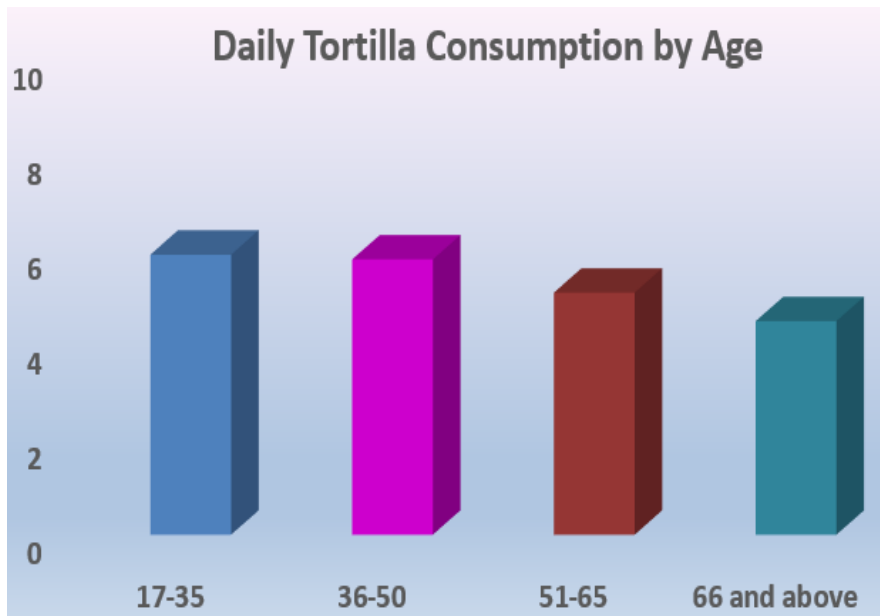
Tristan Richardson, BSC, MRCP1, Melanie Weiss, RGN1, Peter Thomas, PHD2 and David Kerr, MD,



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Why speaking to TIA makes sense?





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How the Tortilla Industry Association can help?

- Consumption of tortillas continues to rise
- Tortillas are a key ingredient of Latino cuisine
- Tortillas are used in place of utensils
- Tortillas are a vehicle to deliver other foods
- Differences between types of tortillas may have health benefits





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Real-time Continuous Glucose Monitoring



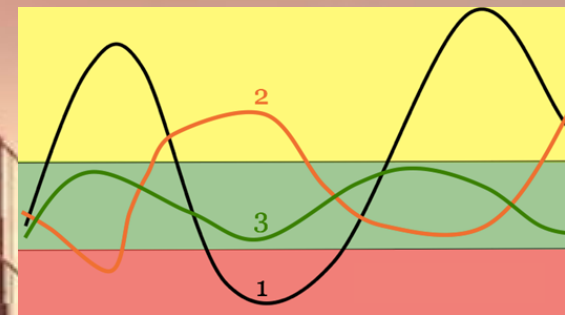


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How the Tortilla Industry Association can help?

- **With or at risk of diabetes**
- **Continuous glucose monitoring**
- **Compare types of tortillas**
- **Tortillas to support healthy produce**





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How the Tortilla Industry Association can help?

Tortilla

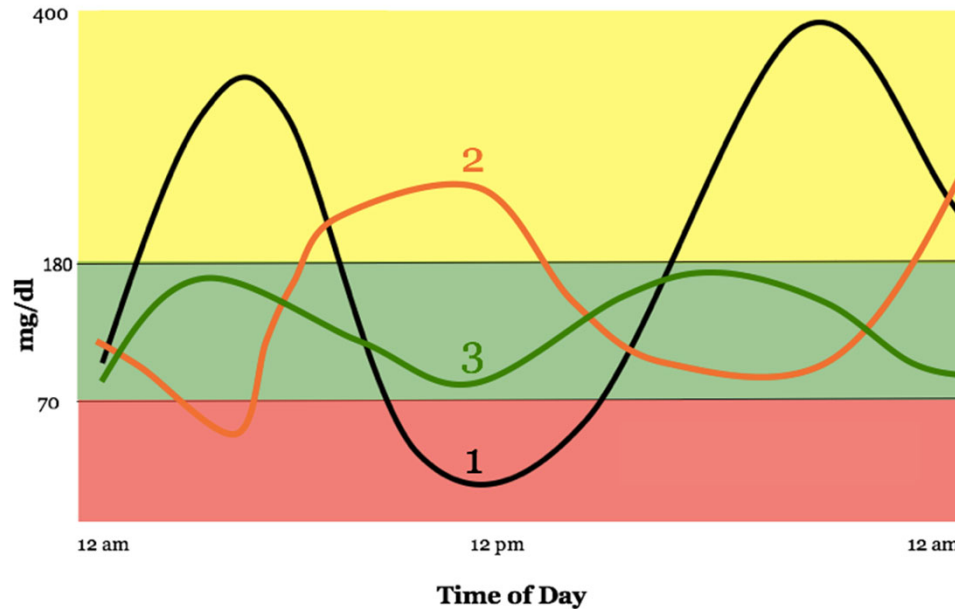
Serving size

Calories

Carbohydrates

Fat

Fiber

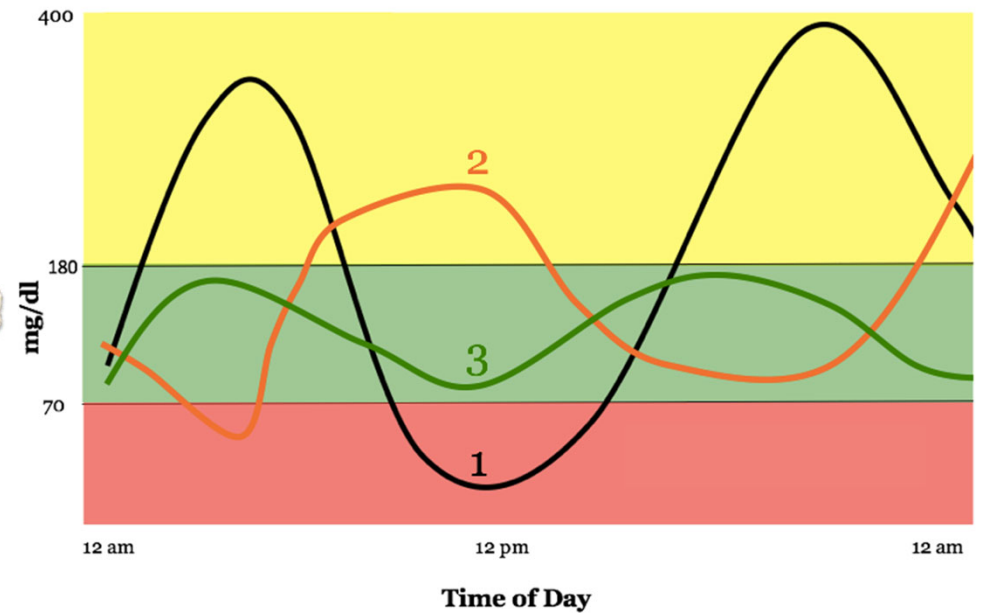




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How the Tortilla Industry Association can help?





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Pascal's Wager



	TORTILLAS YES	TORTILLAS NO
BELIEVER	ETERNAL HAPPINESS	NOTHING
NON BELIEVER	ETERNAL MISERY	NOTHING

Gracias
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