

Lifestyle Medicine for type 2 diabetes

Why and how?

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NUTRITION



EXERCISE



TOBACCO
& ALCOHOL



STRESS
MANAGEMENT



HEALTHY
RELATIONSHIPS



SLEEP

CONFLICTS TO DECLARE

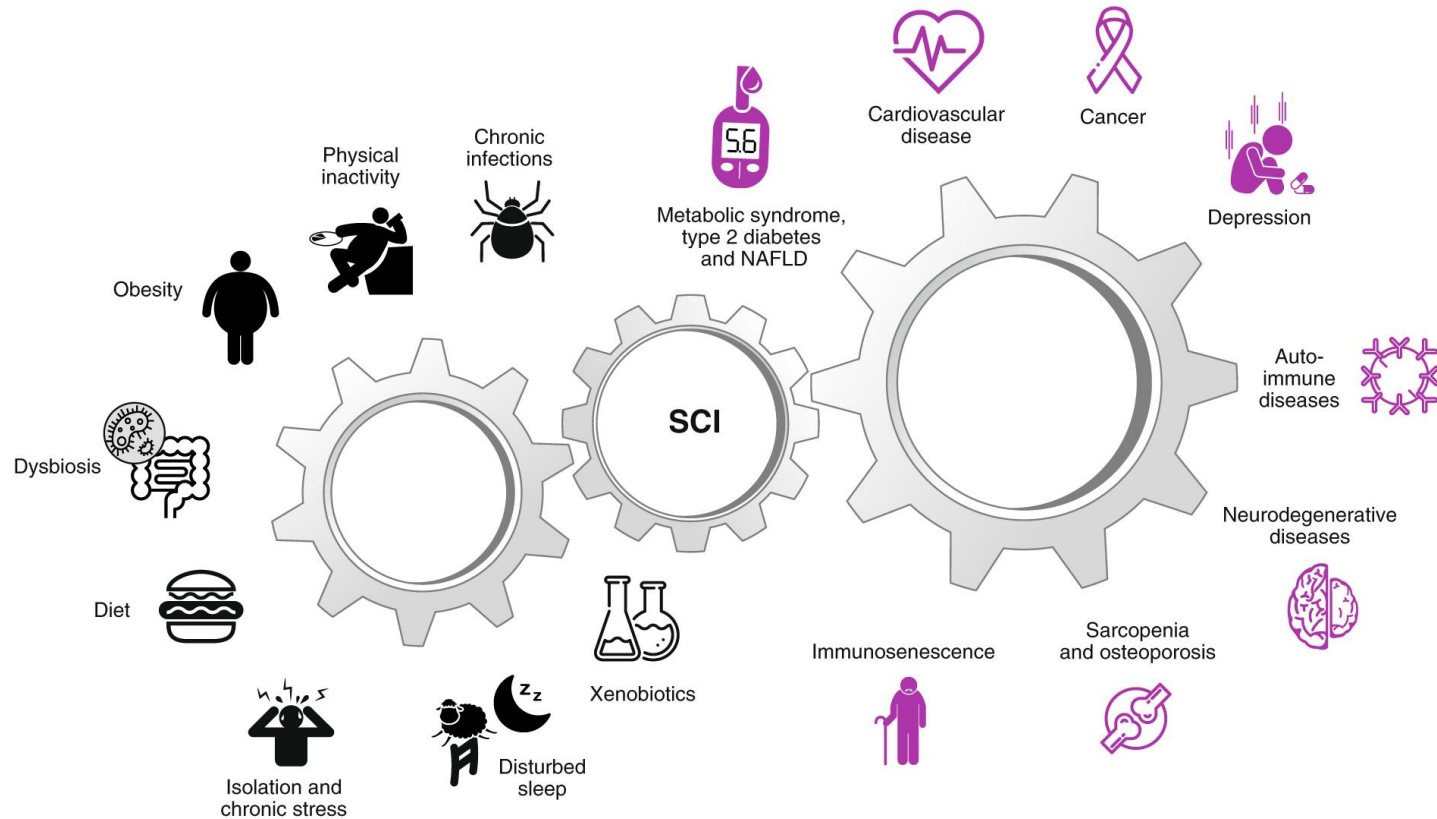


"What conflict of interest?!
I work here in my spare time."

ETIOLOGY OF TYPE 2 DIABETES



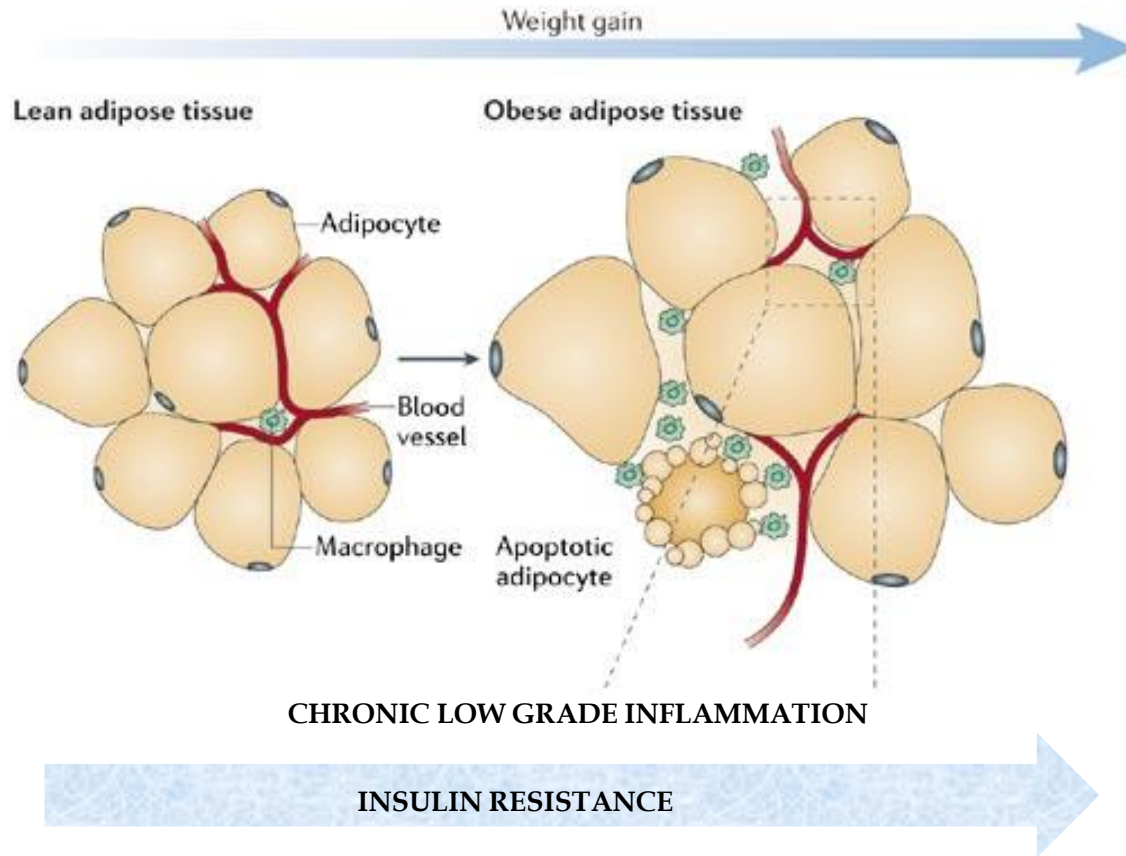
SYSTEMIC CHRONIC INFLAMMATION



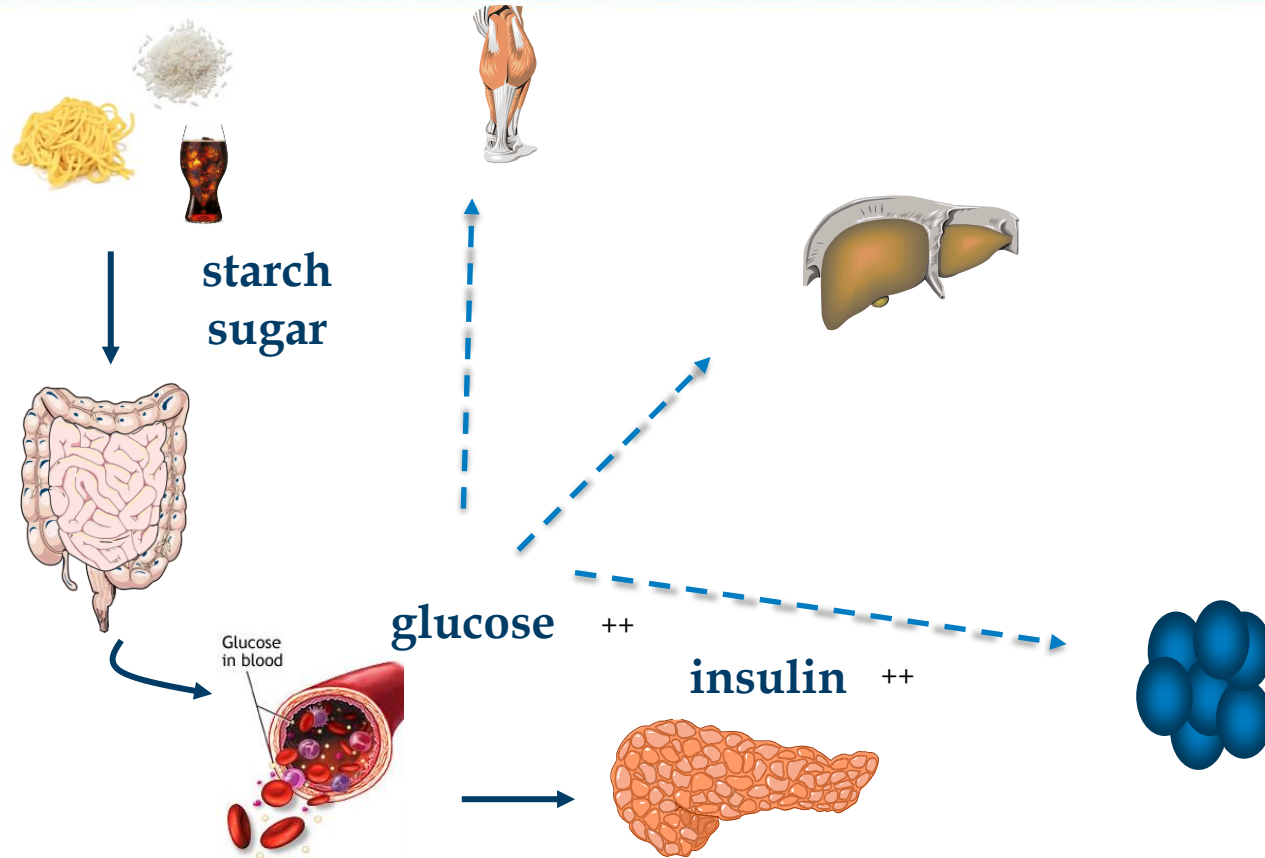
ENVIRONMENT/LIFESTYLE IS KEY

Pacific Islanders	Nauru (1952)	0
	Nauru (2002)	41
New Guineans	Rural	0
	Urban	37
Aboriginal Australians	Traditional	0
	Westernized	23

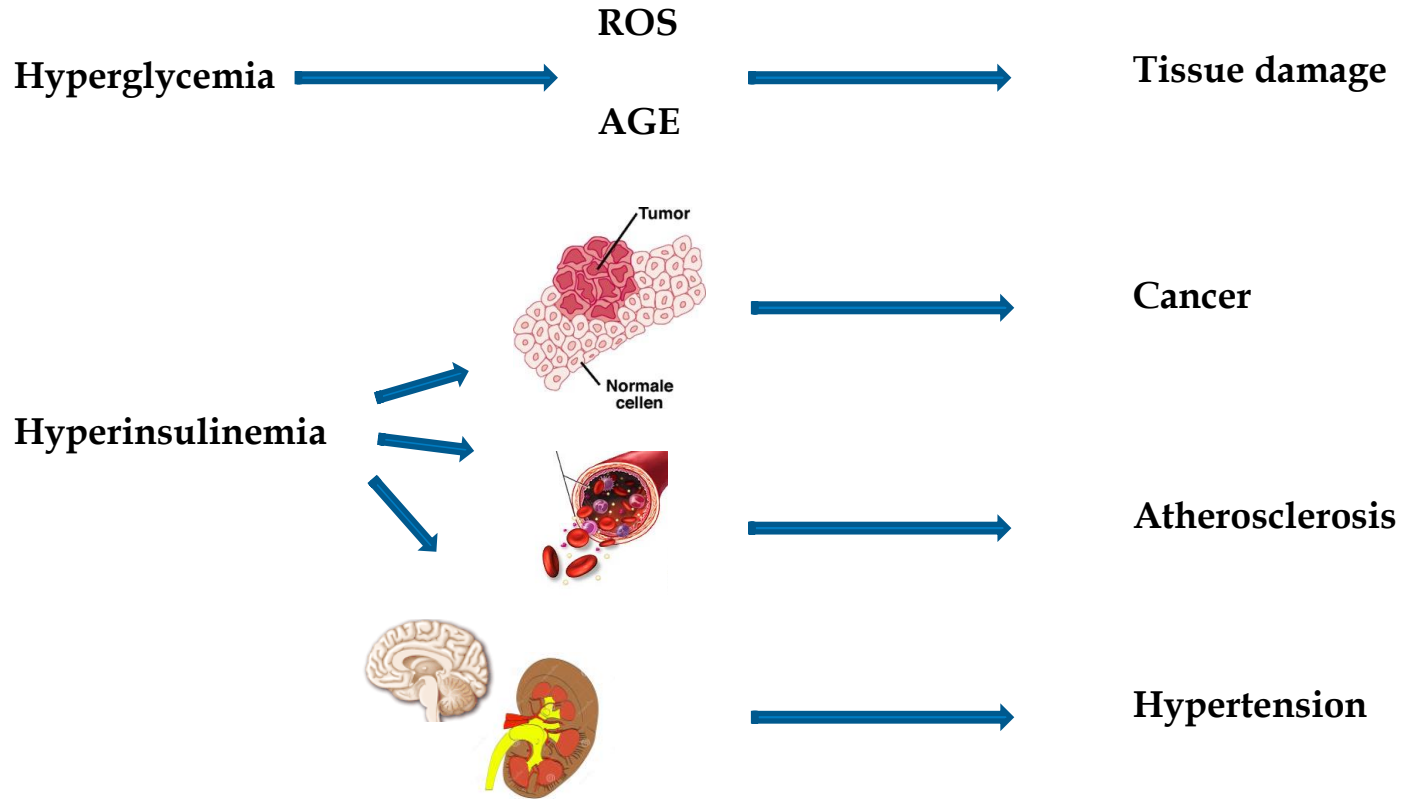
OBESEITY AND LOW GRADE INFLAMMATION



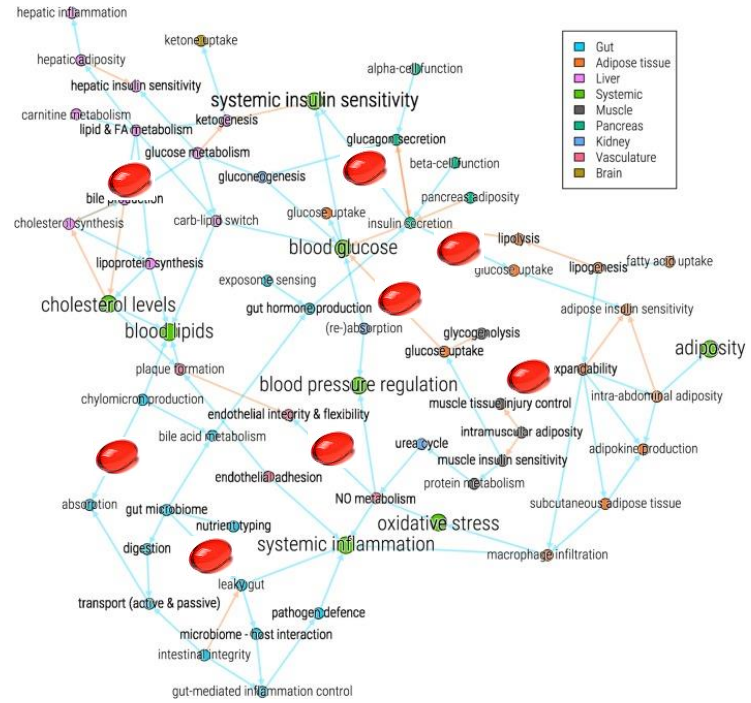
PATHOPHYSIOLOGY OF TYPE 2 DIABETES



PATHOPHYSIOLOGY OF TYPE 2 DIABETES



COMPLEX SYSTEMS DISEASE



Durability of a primary care-led weight-management intervention for remission of type 2 diabetes: 2-year results of the DiRECT open-label, cluster-randomised trial

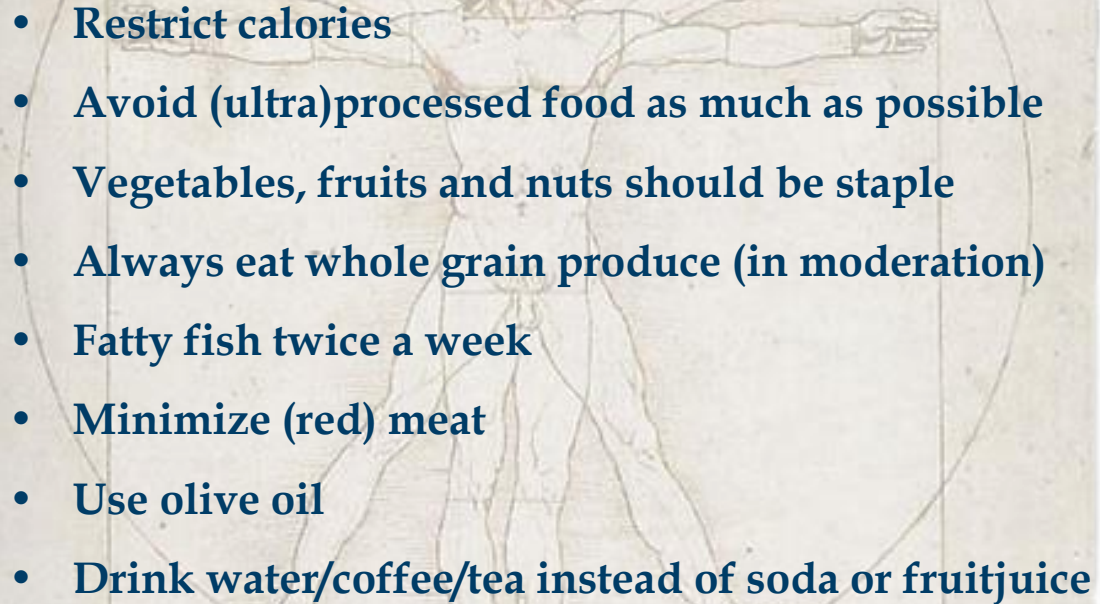
Michael E J Lean, Wilma S Leslie, Alison C Barnes, Naomi Brosnahan, George Thom, Louise McCombie, Carl Peters, Sviatlana Zhyzhneuskaya, Ahmad Al-Mrabeh, Kieren G Hollingsworth, Angela M Rodrigues, Lucia Rehackova, Ashley J Adamson, Falko F Sniehotka, John C Mathers, Hazel M Ross, Yvonne Mdlvenna, Paul Welsh, Sharon Kean, Ian Ford, Alex McConnachie, Claudia Martinez-Morales, Manuel Estey, Ben Teale**

Long-Term Effects of a Novel Continuous Remote Care Intervention Including Nutritional Ketosis for the Management of Type 2 Diabetes: A 2-Year Non-randomized Clinical Trial

Shaminie J. Athinarayanan¹, Rebecca N. Adams¹, Sarah J. Hallberg^{1,2}, Amy L. McKenzie¹, Nasir H. Bhanpuri¹, Wayne W. Campbell², Jeff S. Volek^{1,4}, Stephen D. Phinney¹ and James P. McCarter^{2}*

NUTRITION FOR DIABETES



- 
- **Restrict calories**
 - **Avoid (ultra)processed food as much as possible**
 - **Vegetables, fruits and nuts should be staple**
 - **Always eat whole grain produce (in moderation)**
 - **Fatty fish twice a week**
 - **Minimize (red) meat**
 - **Use olive oil**
 - **Drink water/coffee/tea instead of soda or fruitjuice**

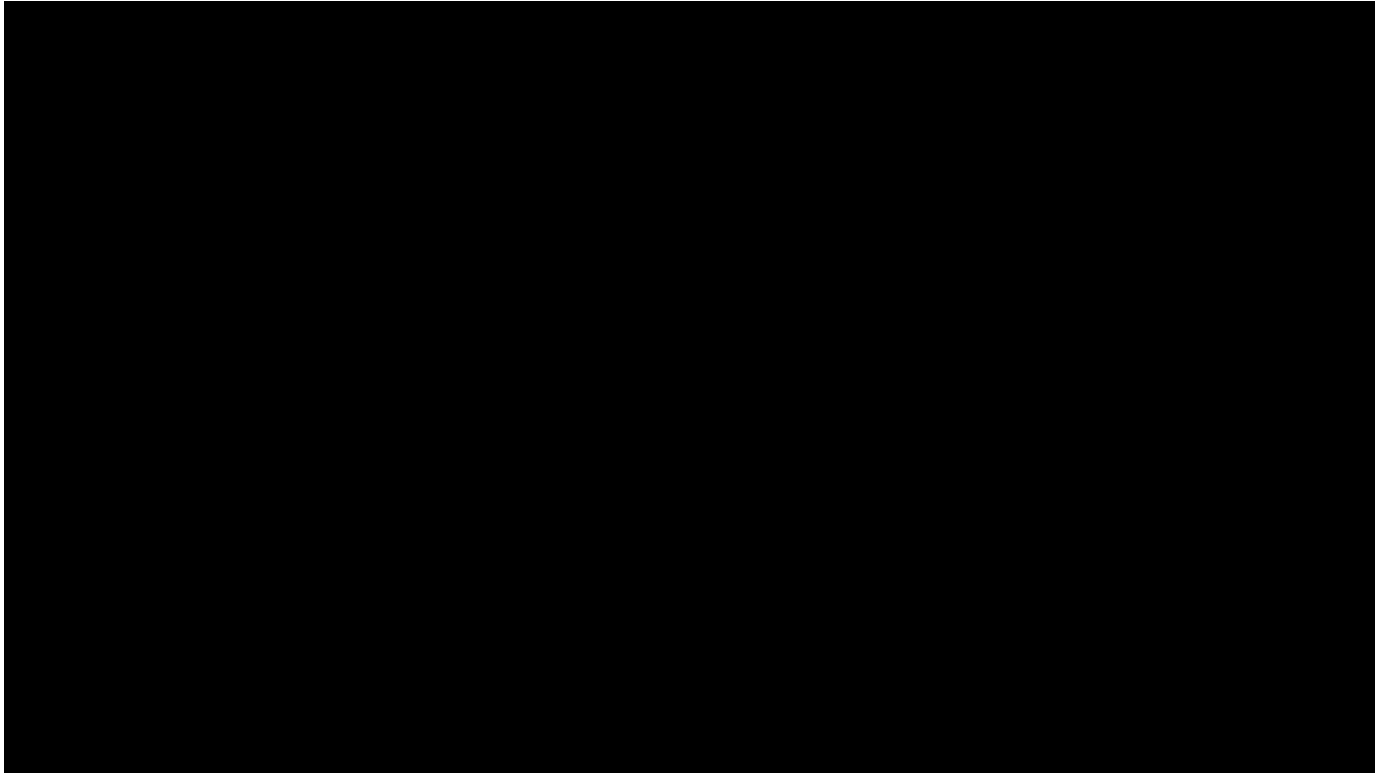
PHYSICAL ACTIVITY



- **Integrate physical activity in daily life**
- **Get up from behind your desk at least once an hour**
- **Take a walk for at least half an hour each day**
- **Build and maintain muscle mass**

OTHER RISK FACTORS





WIM & SAÏDA

2007



2016



HOLISTIC APPROACH

environment

biology

behavior

spirituality



PATIENT EMPOWERMENT



E-HEALTH





WHY DOCTORS?



Diagnose

Inform

Inspire

Check

- **Our way of life is critically involved in the pathogenesis of type 2 diabetes**
- **Type 2 diabetes is basically incurable without lifestyle adaptation**
- **“Lifestyle medicine” tackles the roots of the etiology**
- **Patient empowerment is key**
- **Modern doctors are advisors, no more no less**

WE NEED TO CHANGE OUR SOCIETY

