#### TOFI

Thin Outside Fat Inside

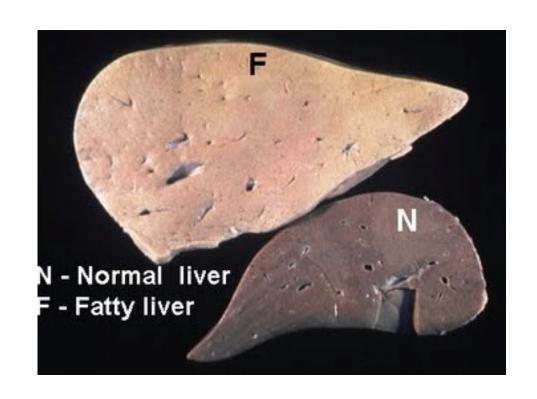
Normal weight - 4-5L of visceral fat

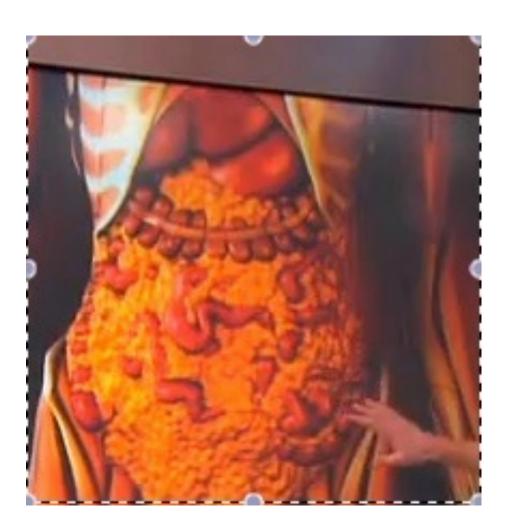
...translates into the difference of about 15 years of life.

Prof Robert Lustig



#### Who's Your Worst Enemy?





#### **Liver Fat**

We overload the liver mitochondria with all the CHO's we ask it to process, particularly fructose. Table sugar is 50% fructose.

#### **Visceral Fat**

Is very active and toxic. Among other things it secretes chemicals that increases inflammation throughout your body and it governs your metabolism by decreasing adiponectin (fat burning hormone), leading to MORE storage of visceral fat. Ultimately leading to heart disease, cancer, stroke, arthritis, type 2 diabetes. (Alzheimer's Dementia – type 3 diabetes) Dr Travis Stork M.D.

Visceral fat is the fulcrum on which your health teeters. Dr Robert H. Lustig, M.D.

#### Sugar, The Bitter Truth



Robert H. Lustig, MD.

Professor of Clinical Paediatrics

Hepatic fructose metabolism leads to all the manifestations of metabolic syndrome

- Hypertension
- De novo lipogenesis, dyslipidaemia & hepatic stenosis
- Inflammation
- Hepatic insulin resistance
- Obesity
- CNS leptin resistance which promotes continuous consumption

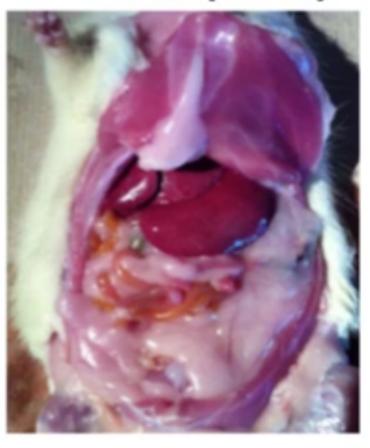
Fructose is a chronic hepatotoxin so there is no regulation. Alcohol is an acute hepatotoxin so it gets regulated

Sugar – glucose + fructose, is CHO & Fat together

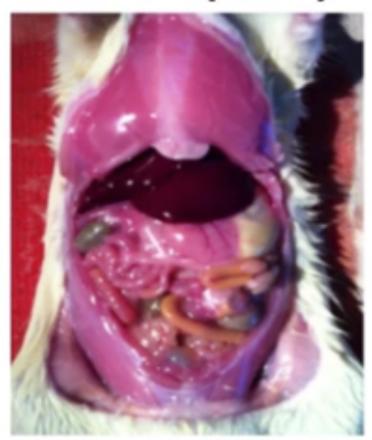
# ROBERTS, LOWERY WILSON ET AL (2016 JAP)

Fat loss was greatest in the keto group even though their calories were significantly greater in the keto then the standard chow. Suggesting a shift in metabolism

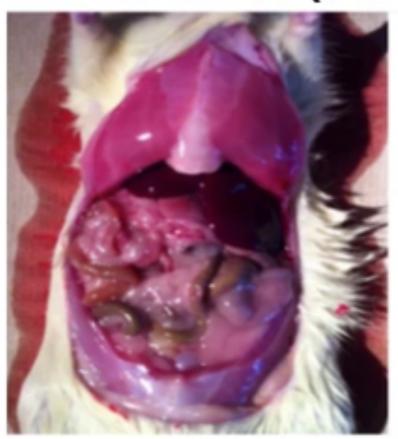
WD rat (SED)



KD rat (SED)



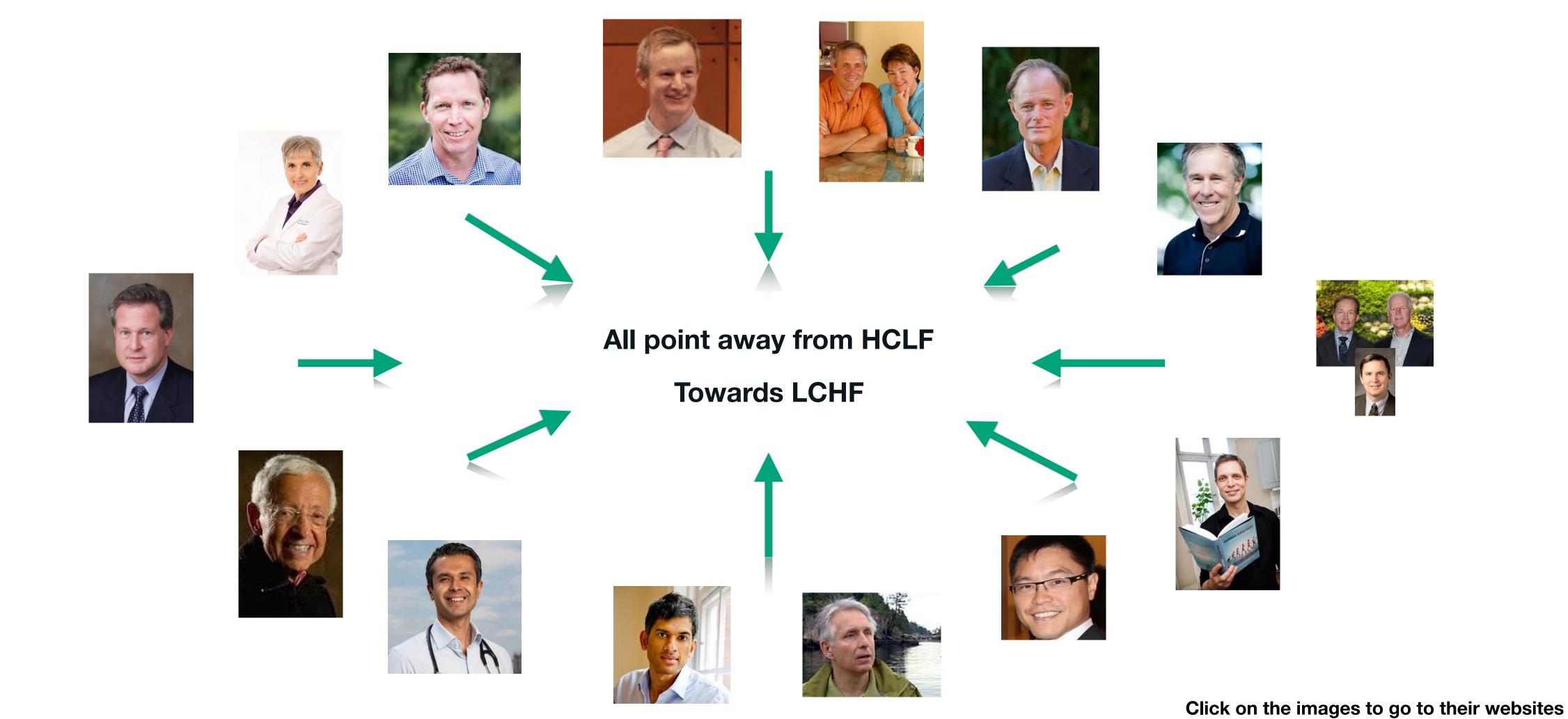
Std Chow rat (SED)



Western Diet vs Ketogenic Diet

Dr Jacob Wilson

## How Many Doctor's Will It Take?



# The Next Logical Step?



### Time To Adapt?



#### 200,000 years = 2m = 1000 pts

10,000 years = 10 cm = 50 pts

150 years = 3 mm = 1.5 pts (2)

50 years = 1 mm = 0.5 pts (1)

200,000 years = 24:00 hrs

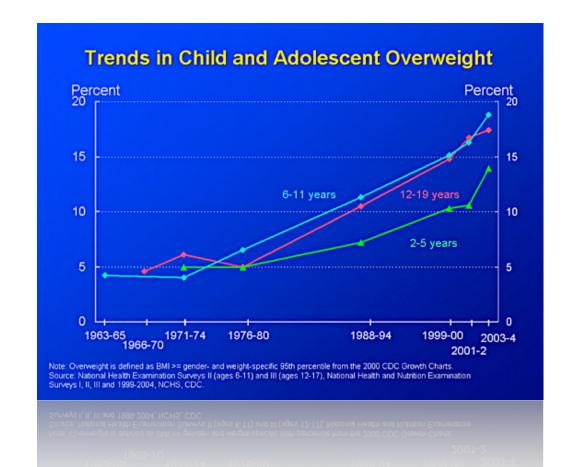
10,000 years = 01:12 hrs:mins

150 years = 00:01:05 mins:secs

50 years = 00:00:21 secs



<u> 20 years</u>



## Hunter Gatherer vs Agriculturalist

#### Paleopathologists can identify which culture, remains are from.

For 700,000 years we got 75% of calories from meat (meat, fat, nuts & berries)

Tall, strong, well formed bones, sound teeth



8-10,000 years ago we get 25% of calories from meat (predominantly grain based)

Skeletal signs of malnutrition, stunted growth and tooth decay