Health at Every Size

Scott Hagan, MD

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No Financial Conflicts of Interest

The views expressed are mine alone and do not represent the views of the U.S. Department of Veterans Affairs of the United States Government.

Intellectual conflicts of interest

HAES-friendly but not exclusive

PCP

Weight-centric

U.S. Preventive Services TASK FORCE

Behavioral Weight Loss Interventions to Reduce Morbidity and Mortality

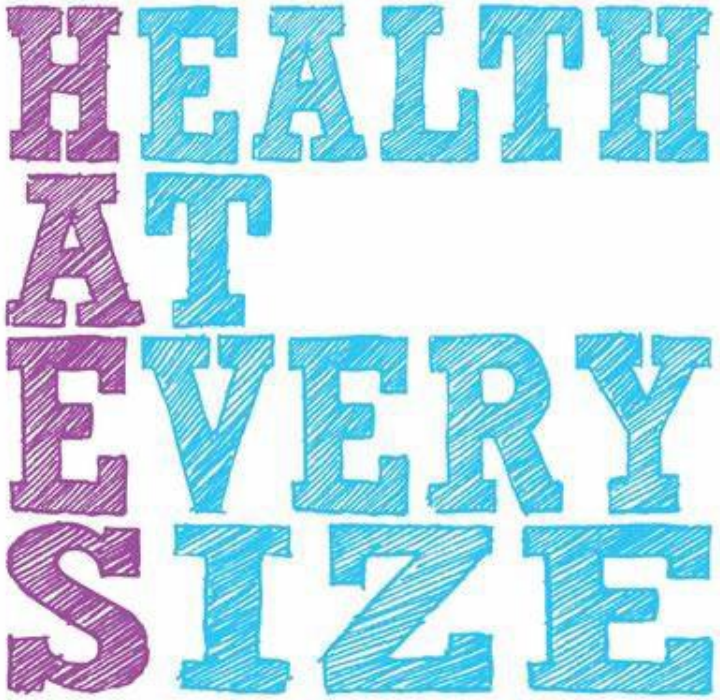
Risk Factors	Normal BMI (18.5-25)	Overweight BMI (25-30)	Obesity BMI (>30)
None	Individualize	Individualize	Refer
HTN or HLD	Individualize	Refer	Refer
Hyperglycemia	Refer	Refer	Refer

Refer >50% of adult population

Curry et al *JAMA* 2018

Weight-neutral/inclusive

Weight Inclusivity
Intuitive Eating
Enjoyable Activity

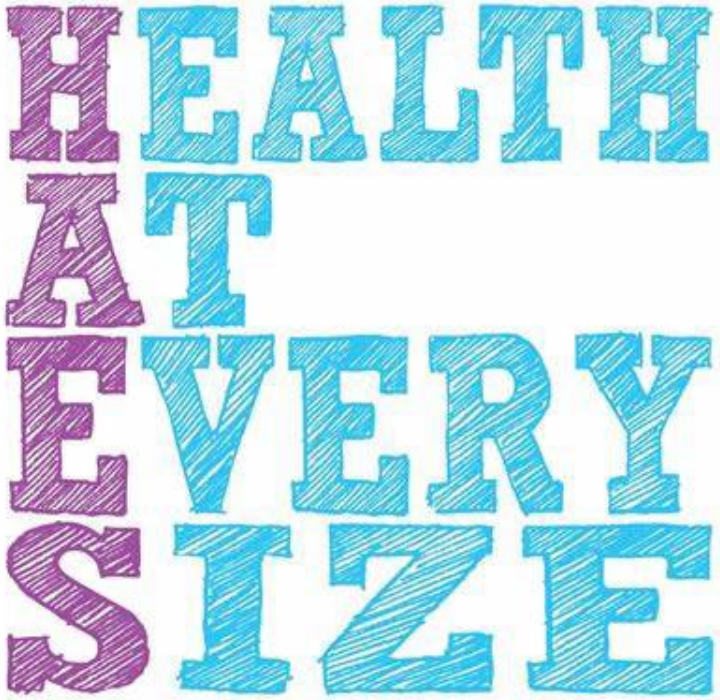


ASDAH

Weight-neutral/inclusive

Weight Inclusivity
Intuitive Eating
Enjoyable Activity

Trauma-informed care



ASDAH

BMI Category	% U.S. Adults	
Overweight (BMI 25-29.9)	30	
Class I Obesity (BMI 30-34.9)	33	42
Class II Obesity (35-39.9)		
Class III Obesity (BMI > 40)	9	

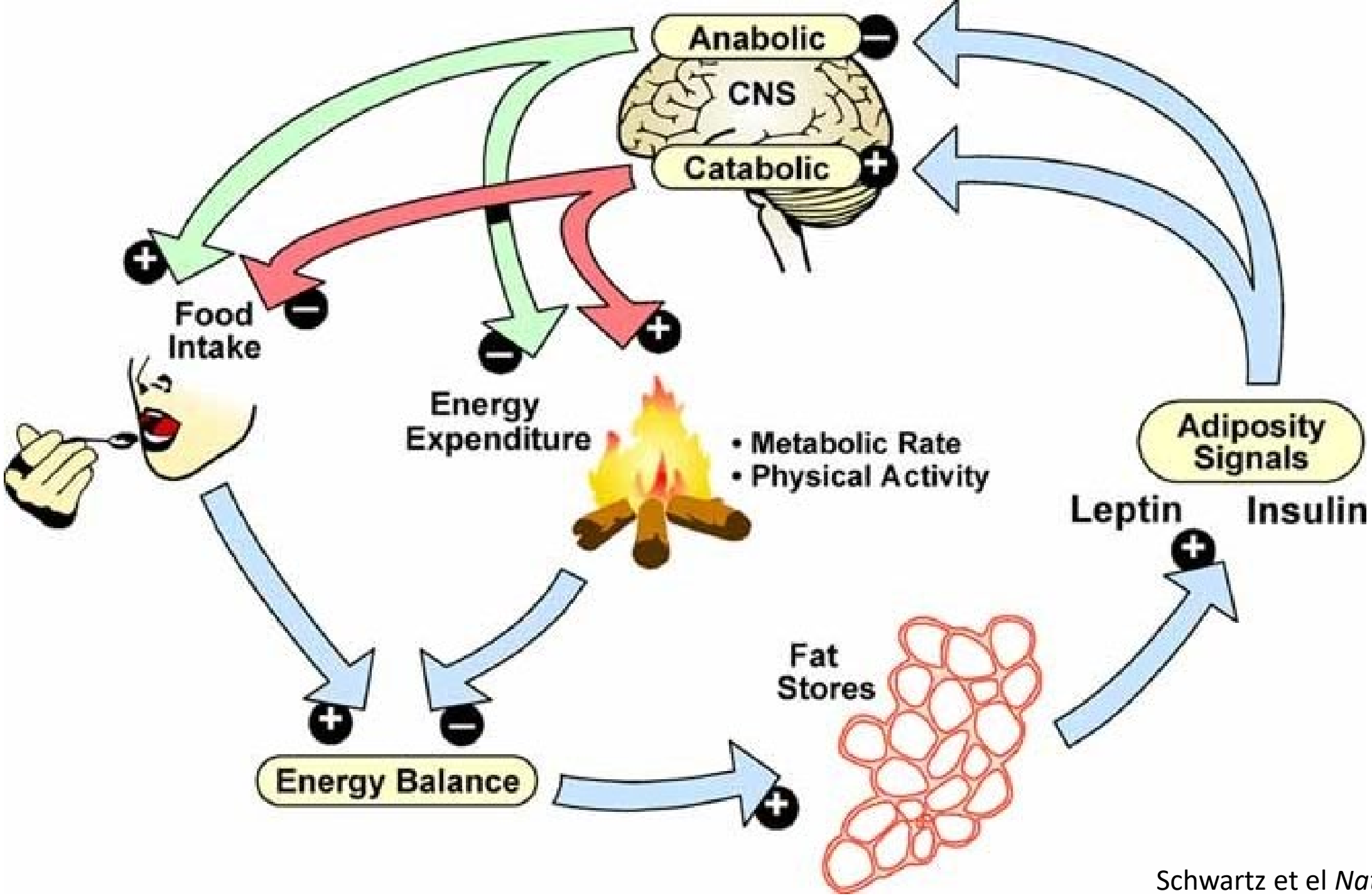
72% BMI 25+

Fryar et al *NCHS* 2020

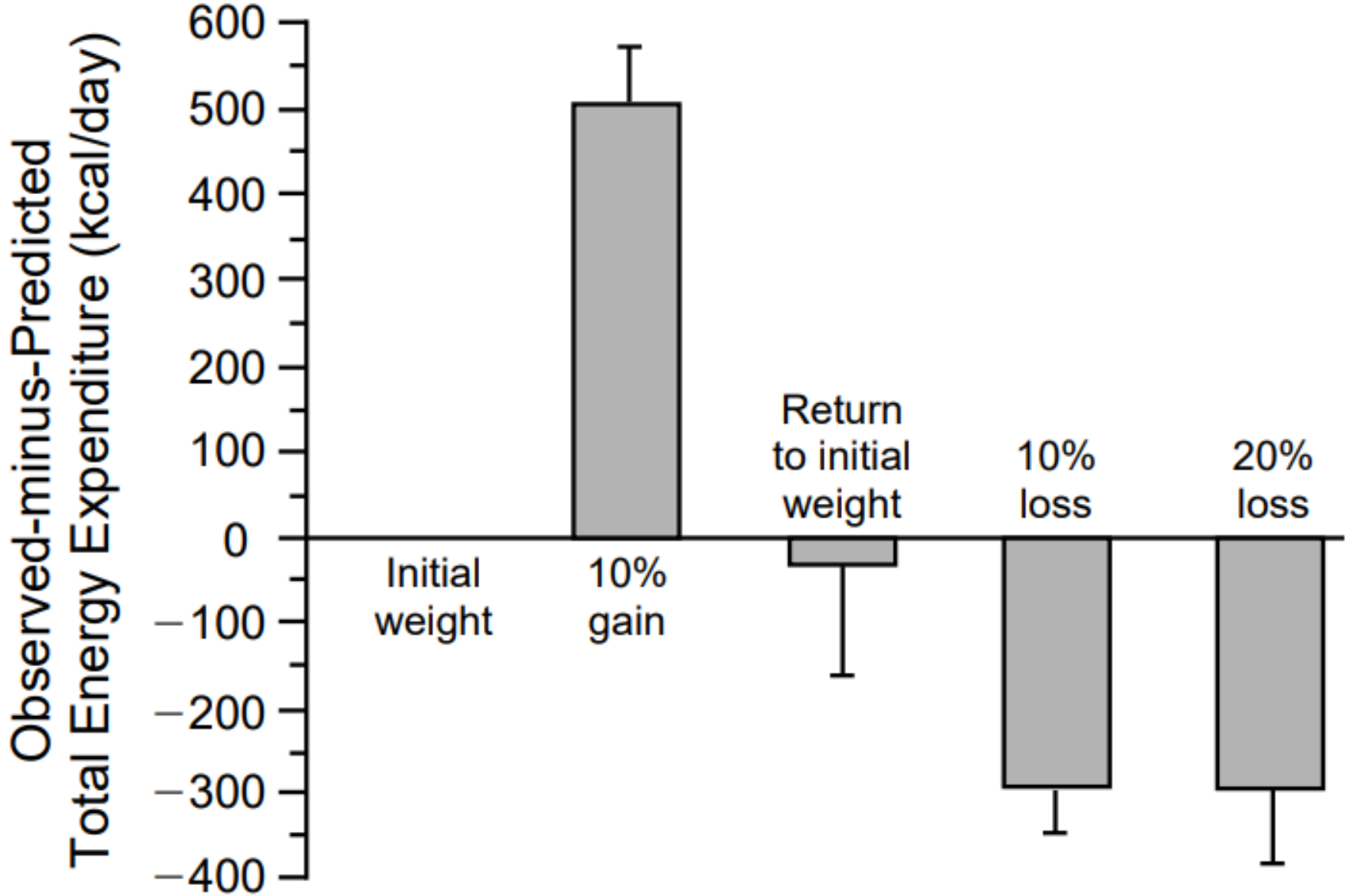
“I am trying to lose weight”

	Men (% Yes)	Women (% Yes)
1950s	7	14
1980s	25	40
1990s	29	44
2000s	34	48
Late 2000s	40	57

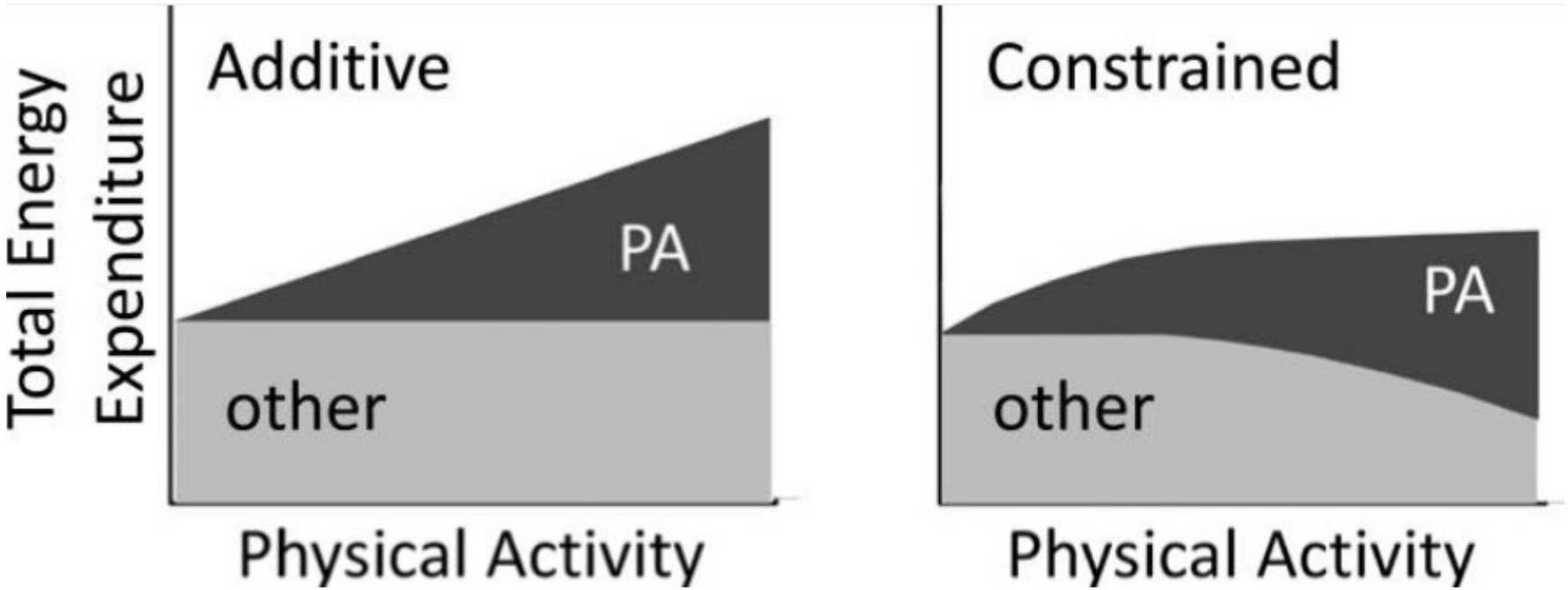
Montani et al *Obes Rev* 2015



Schwartz et el *Nature* 2000

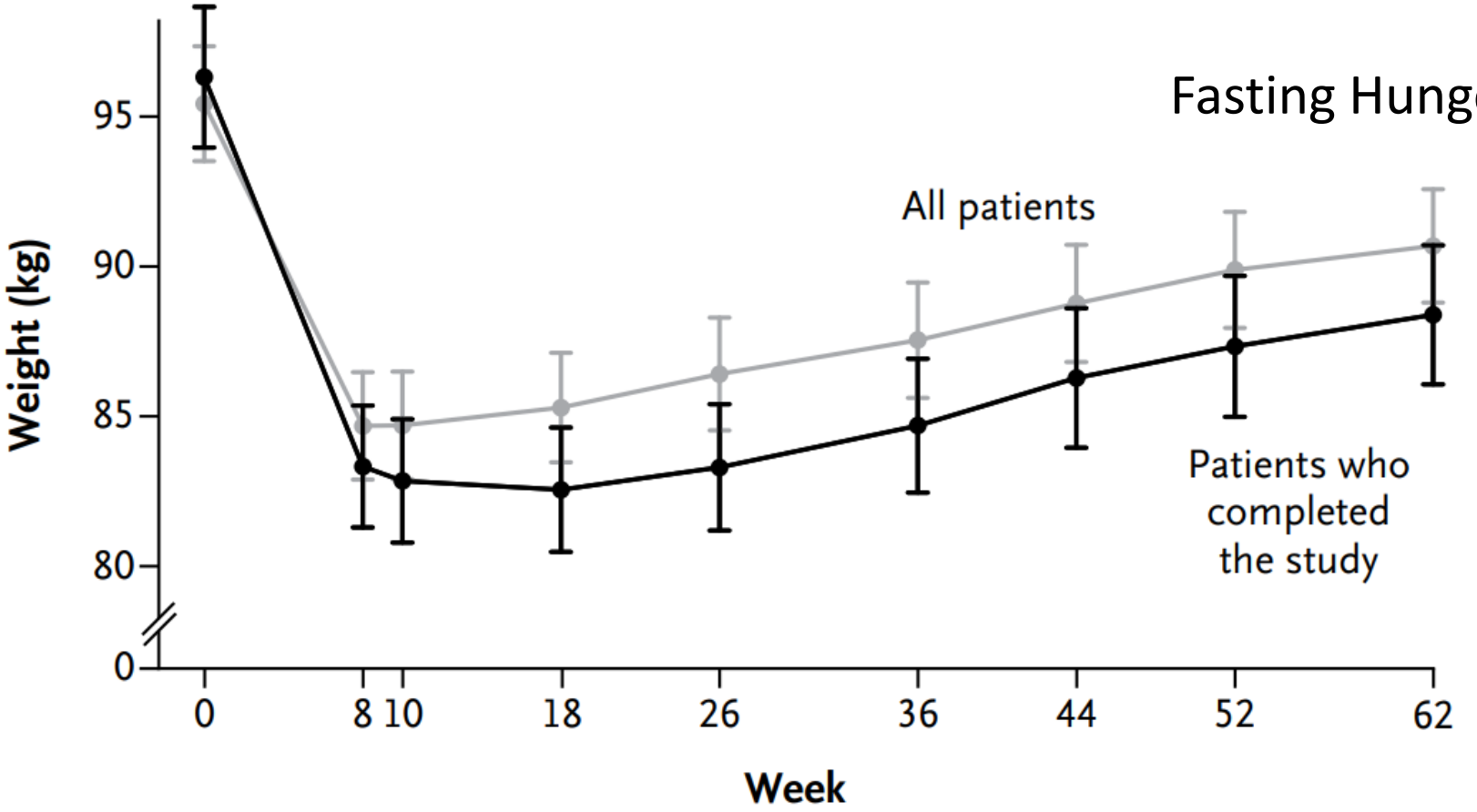


Leibel et al. *NEJM* 1995



Pontzer *Curr Biol* 2017

Fasting Hunger ↑ 28%



Hormone	Action	10-week Δ	62-week Δ
Leptin	Satiety	↓ 68%	↓ 32%
Amylin	Satiety	↓ 44%	↓ 40%
Ghrelin	Hunger	↑ 57%	↑ 8%

Sumithran *NEJM* 2011

Weight Loss Diets Fail

Diet	6-month weight Δ	12-month weight Δ
Low Fat	- 4 kg	- 3 kg
Low Carb	- 5 kg	- 3 kg
Moderate Macros	- 3 kg	- 2 kg
Dietary Advice	0 kg	+ 2 kg

Ge et al *BMJ* 2020

Diets (and exercise) fail because of:

- Hunger signaling
- Metabolic Adaptation
- Energy constraint
- NOT: laziness, lack of concern for health, etc.

Weight-centric

U.S. Preventive Services TASK FORCE

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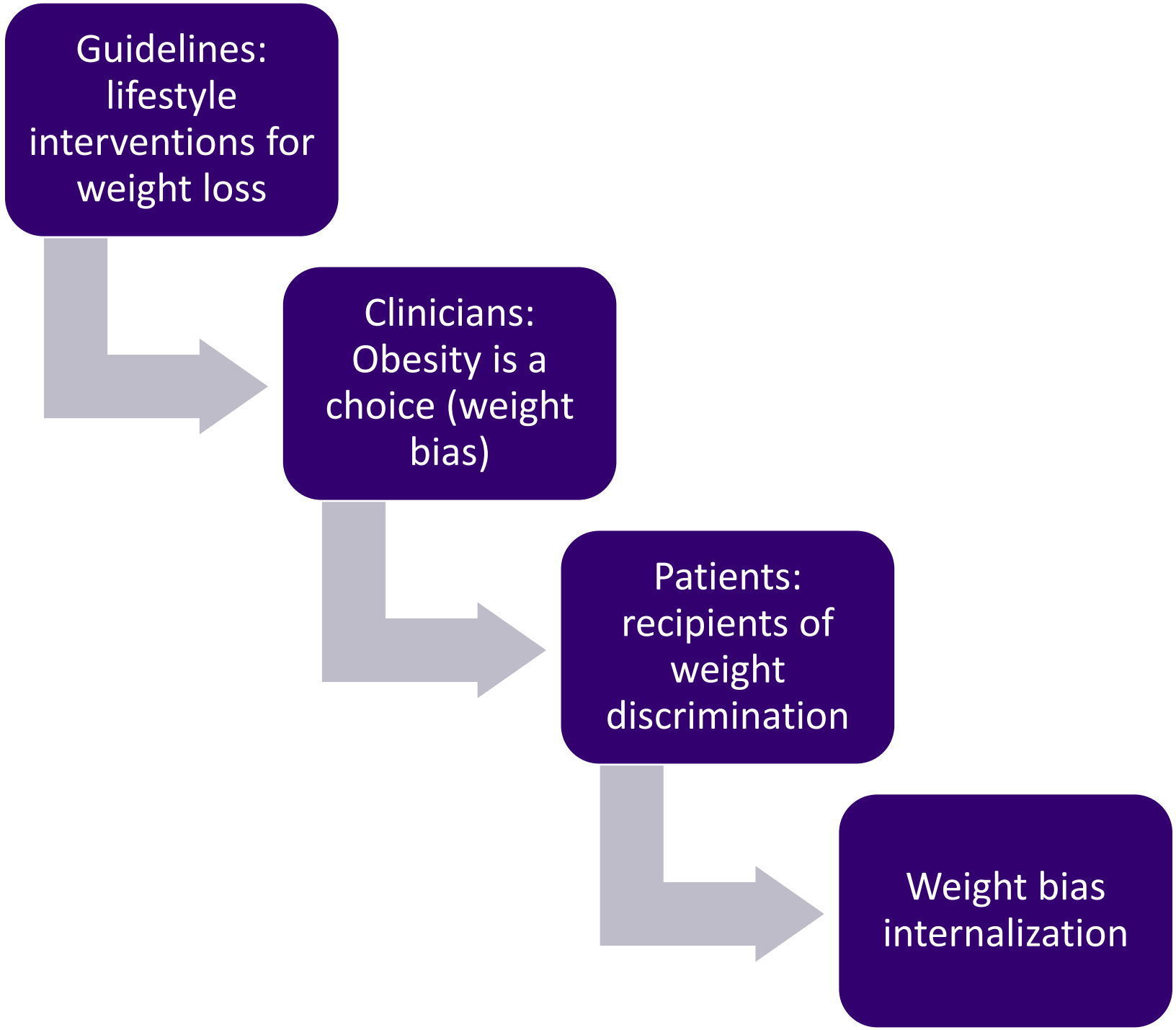
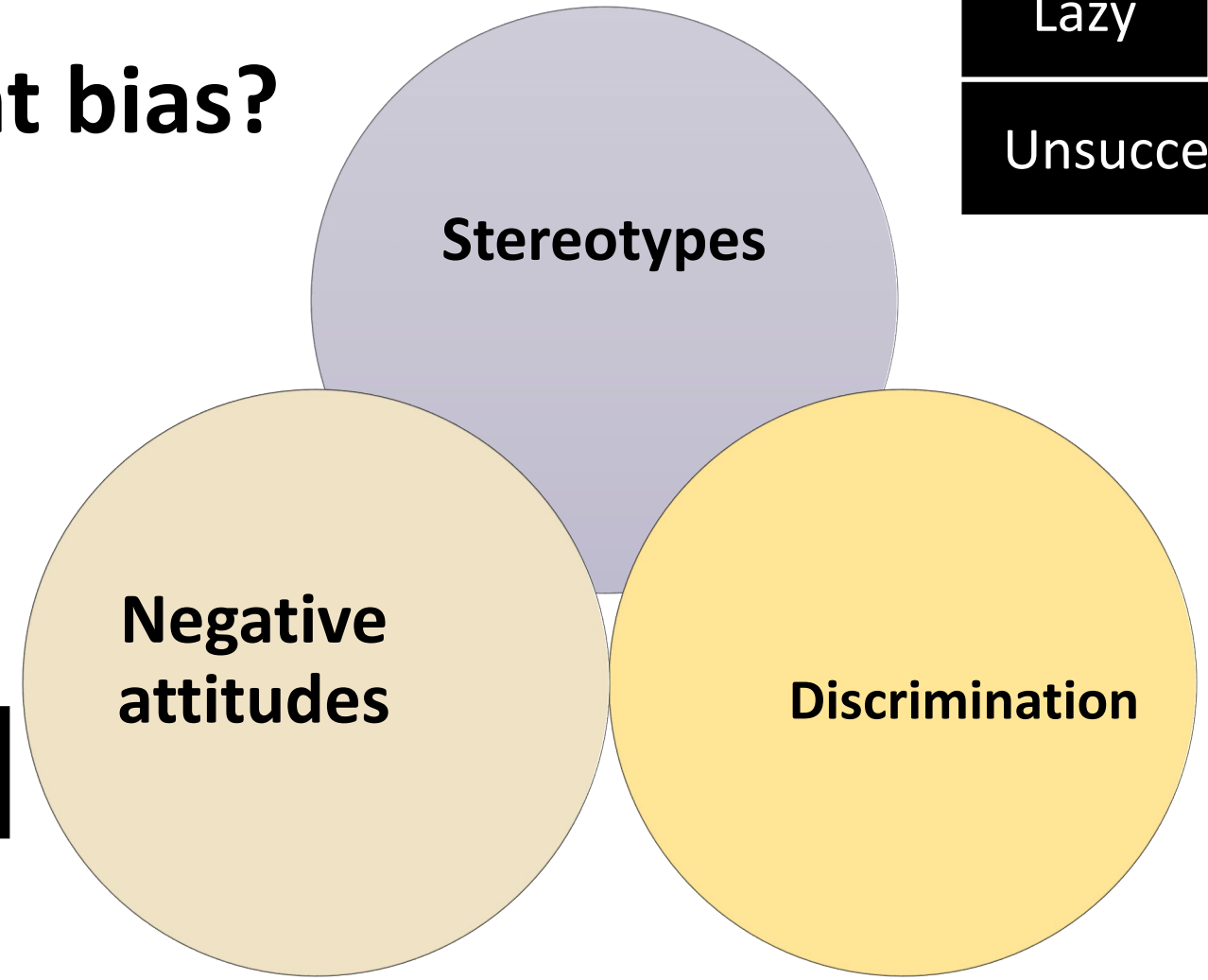
Refer >50% of adult population

Curry et al *JAMA* 2018


Guidelines: lifestyle interventions for weight loss
Clinicians: Obesity is a choice (weight bias)
Patients: recipients of weight discrimination
Weight bias internalization

What is weight bias?



Lazy

Not smart

Unsuccessful

Undisciplined

Don’t befriend

Don’t sit next to

Unfair/unequal treatment

Courtesy of Dr. Ginger Evans

“Have you ever experienced weight discrimination from…”

Source of Stigma	Ever Experienced (%)	More than once (%)
Family members	72	62
Doctors	69	52
Friends	60	42
Nurses	46	34
Nutritionists	37	26
Mental Health Professionals	21	13

Puhl and Brownell *Obesity* 2006

Statement	Disagree	Agree
Most obese patients could reach a normal weight (for height) if they were motivated to do so.	34%	41%
Obesity is due to a lack of willpower.	42%	33%

Foster et al *Obesity Research* 2003

MD Weight (BMI)	Implicit Weight Bias Effect Size	Explicit Weight Bias Effect Size
Normal	Large	Large
Overweight	Large	Large
Obesity	Medium	Medium

Project Implicit®

Sabin et al *PLoS One* 2012

Emotional Rapport Building

- Empathy
- Concern
- Reassurance
- Partnership

Rate of Emotional Rapport Building		
Normal BMI	Overweight	Obesity
1.00	0.65*	0.69**

*p 0.01
** p < 0.01

"I can see how frustrated you are by your slow progress. Anyone would be." [empathy]

Gudzune et al *Obesity* 2013

- **>50% with obesity have high WBIS score**

Modified Weight Bias Internalization Scale (WBIS)
Because of my weight, I feel that I am just as competent as anyone.
I hate myself for my weight.
My weight is a major way that I judge my value as a person.

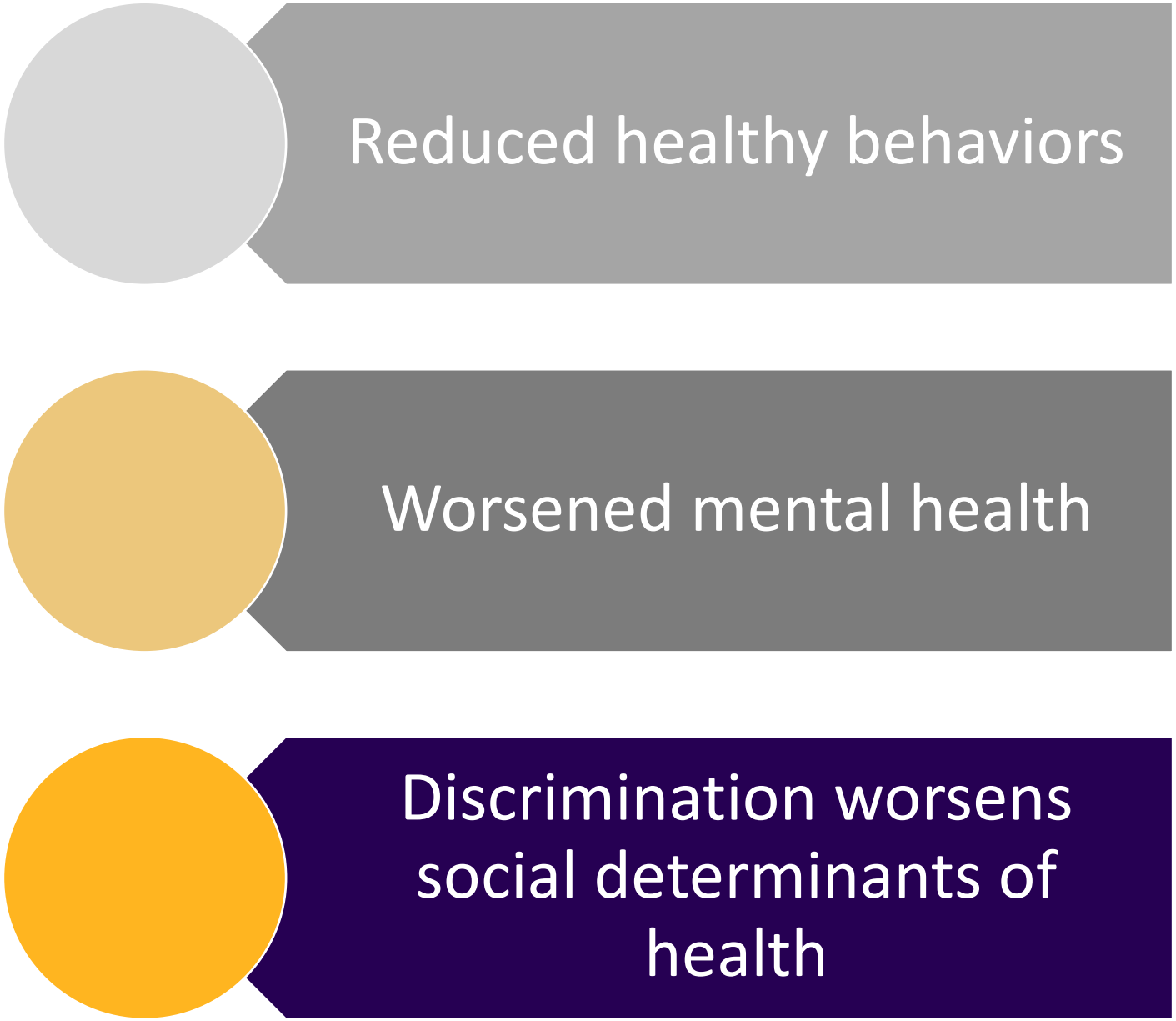
Puhl et al. *Obesity* 2018

Hatzenbeuhler et al *Obesity* 2009

Durso et al *In J Eat Disord* 2012

Vartanian et al *Obesity* 2010

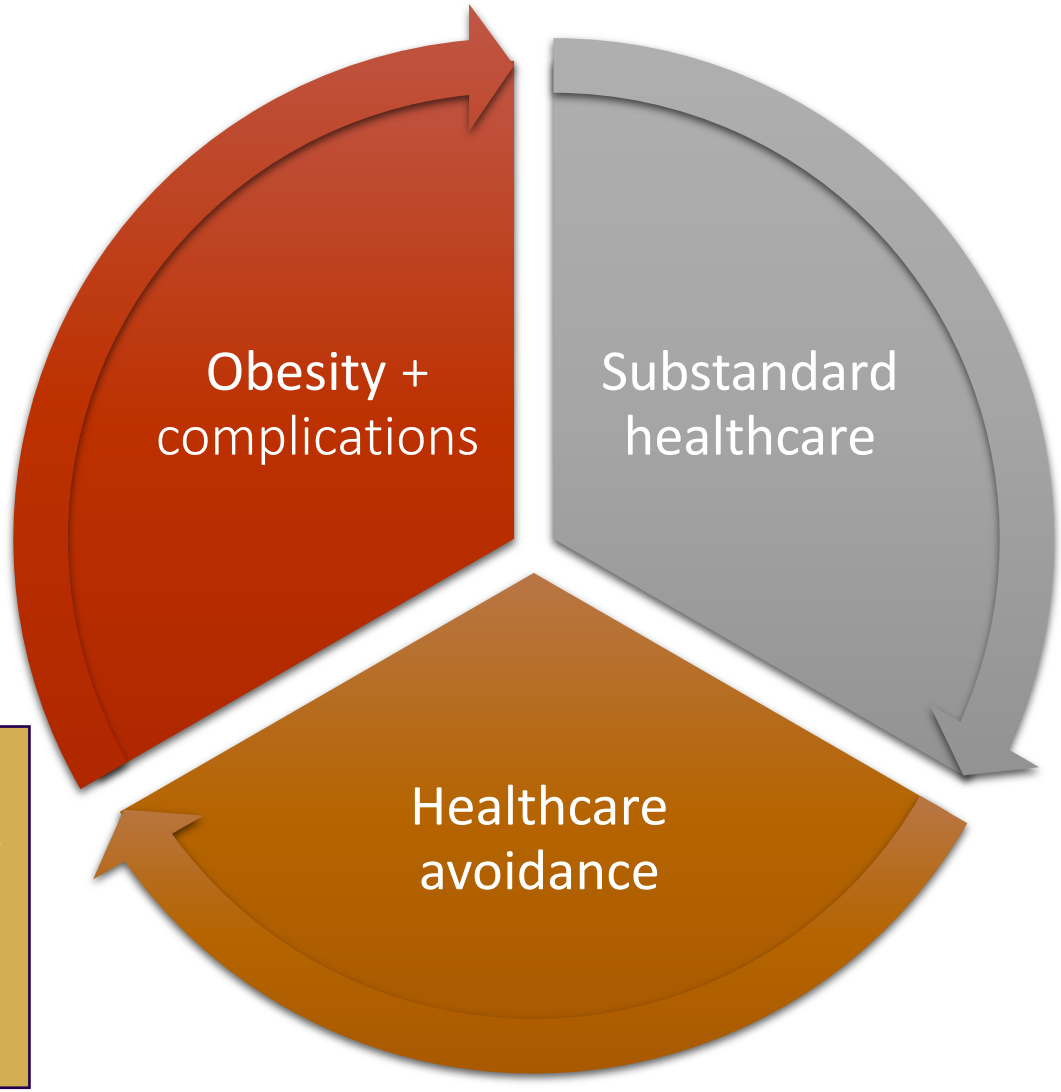
How does weight bias affect **health**?



Am J Public Health. 2010;100:1019–1028
Puhl, Heuer. Obesity (2009) 17, 941–964
Puh. APA 2020

Courtesy of Dr. Ginger Evans

How does weight bias affect **healthcare**?



Providers
- Shorter visits
- Less health counseling
- Misperceive patient motivation
- Less screening

Patients perceive:
- everything blamed on obesity
- disrespectful treatment
- unsolicited advice to lose wt
- equipment that doesn't fit

Courtesy of Dr. Ginger Evans

Puhl, Heuer. Obesity (2009) 17, 941–964.

Trauma-Informed Care

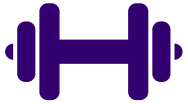
Avoid Re-traumatization

Pivoting from weight

“Your body may like the weight you are at.”

“I think you can be healthy without losing weight.”

“I think we can focus on other ways to improve your health.”



Avoid “fat”, “overweight” (prefer BMI, higher weight)

Weight-Neutral Treatment Strategies

How would you approach this condition in a patient without obesity?

General Principles

BALANCED DIET

CONSISTENT SLEEP

ADDRESS MENTAL HEALTH

ADDRESS SUBSTANCE USE

ENJOYABLE ACTIVITY PROGRAM

Cardiorespiratory Fitness & Mortality

Aerobics | Strength | Mobility

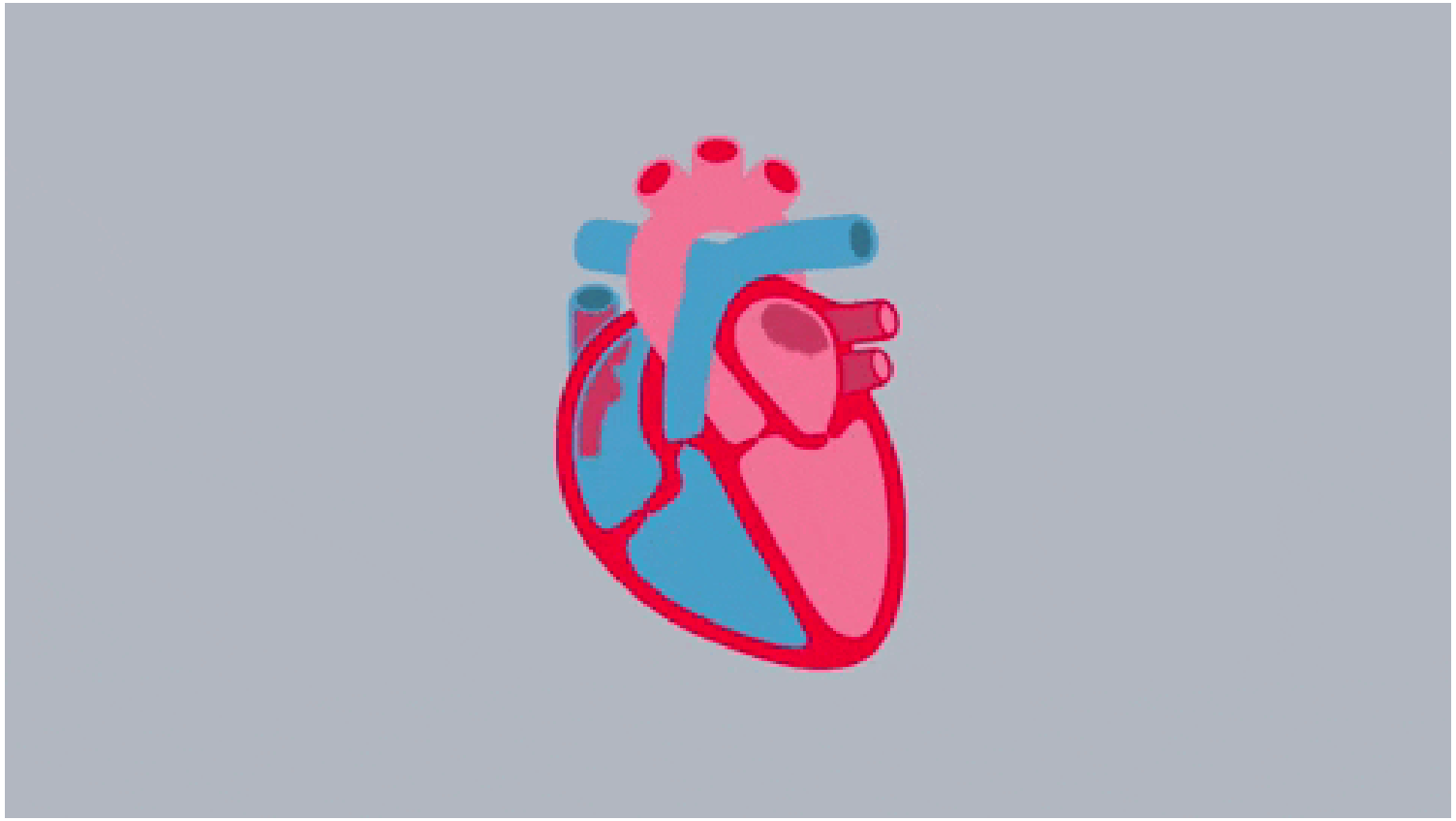
Physical Activity Guidelines for Americans
2nd edition

Fitness Associated with Lower BMI Mortality Risk

	Mortality Risk	
BMI	Low Fitness (HR)	Not Low Fitness (HR)
18.5-24.9	2.2	1.0 (ref)
25-29.9	2.5	1.1
30+	3.1	1.1

Wei et al *JAMA* 1999

Hypertension



On average the systolic blood pressure lowering effect of weight loss diets on adults with hypertension at 12 months is:

- (a) 2 mm Hg
- (b) 4 mm Hg
- (b) 6 mm Hg
- (c) 10 mm Hg
- (d) 15 mm Hg

On average the systolic blood pressure lowering effect of weight loss diets on adults with hypertension at 12 months is:

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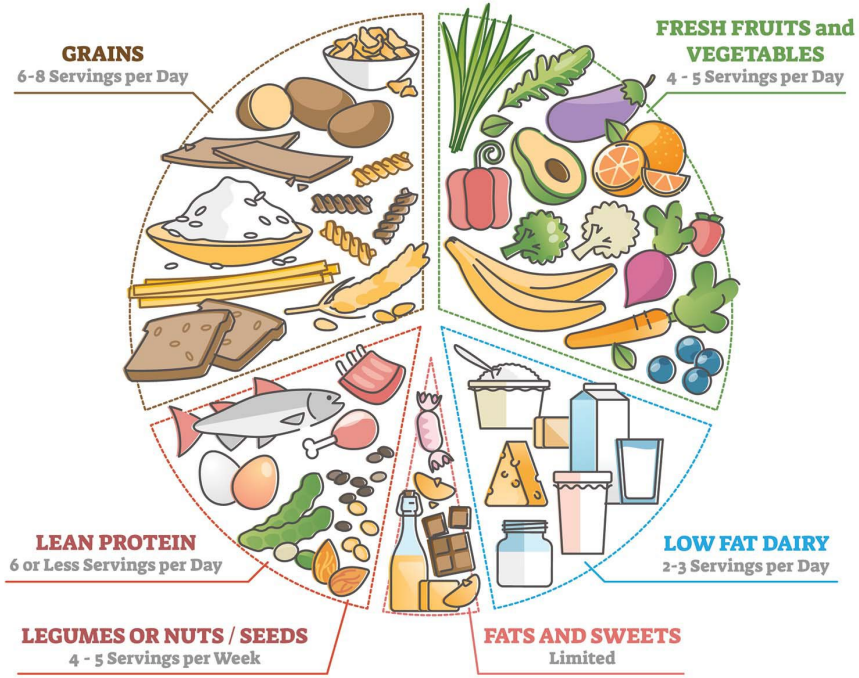
- **(b) 4 mm Hg**
- (b) 6 mm Hg
- (c) 10 mm Hg
- (d) 15 mm Hg

Outcomes			Effect estimate (95% CI)	No of Participants (studies)	Certainty of the evidence (GRADE)
Changes in systolic blood pressure [mm Hg] from baseline to end of study	**MD** **−4.49** (−7.20 to −1.78)	731 (3 studies)	⊕⊕⊖⊖ **low**[a,d]	-	
Changes in diastolic blood pressure [mm Hg] from baseline to end of study	**MD** **−3.19** (−4.83 to −1.54)	731 (3 studies)	⊕⊕⊖⊖ **low**[a,d]	-	
Changes in body weight [kg] from baseline to end of study	**MD** **−3.98** (−4.79 to −3.17)	880 (5 studies)	⊕⊕⊕⊖ **moderate**[a]	-	

Semlitsch et al Cochrane 2021

The DASH Diet

DIETARY APPROACHES TO STOP HYPERTENSION



Weight-Neutral Diet	SBP* Reduction	SBP* Reduction if HTN
DASH	3	7
DASH + low fat	6	11
DASH + low sodium	7	12

DASH, Appel et al *NEJM* 1997

DASH-Sodium, Sacks et al *NEJM* 2001

Get out your prescription pad…

Medication	# Trials	# Patients	Average SBP Reduction*
ACE	36	1898	13
Beta Blockers	18	908	15
Calcium Channel Blockers	34	3727	15
Thiazides	18	1657	15

Wu et al *AJH* 2005

Hyperlipidemia

The average LDL lowering effect of weight loss diets in patients with HLD is:

- (a) 2%
- (b) 5%
- (c) 10%
- (d) 20%
- (e) 30%

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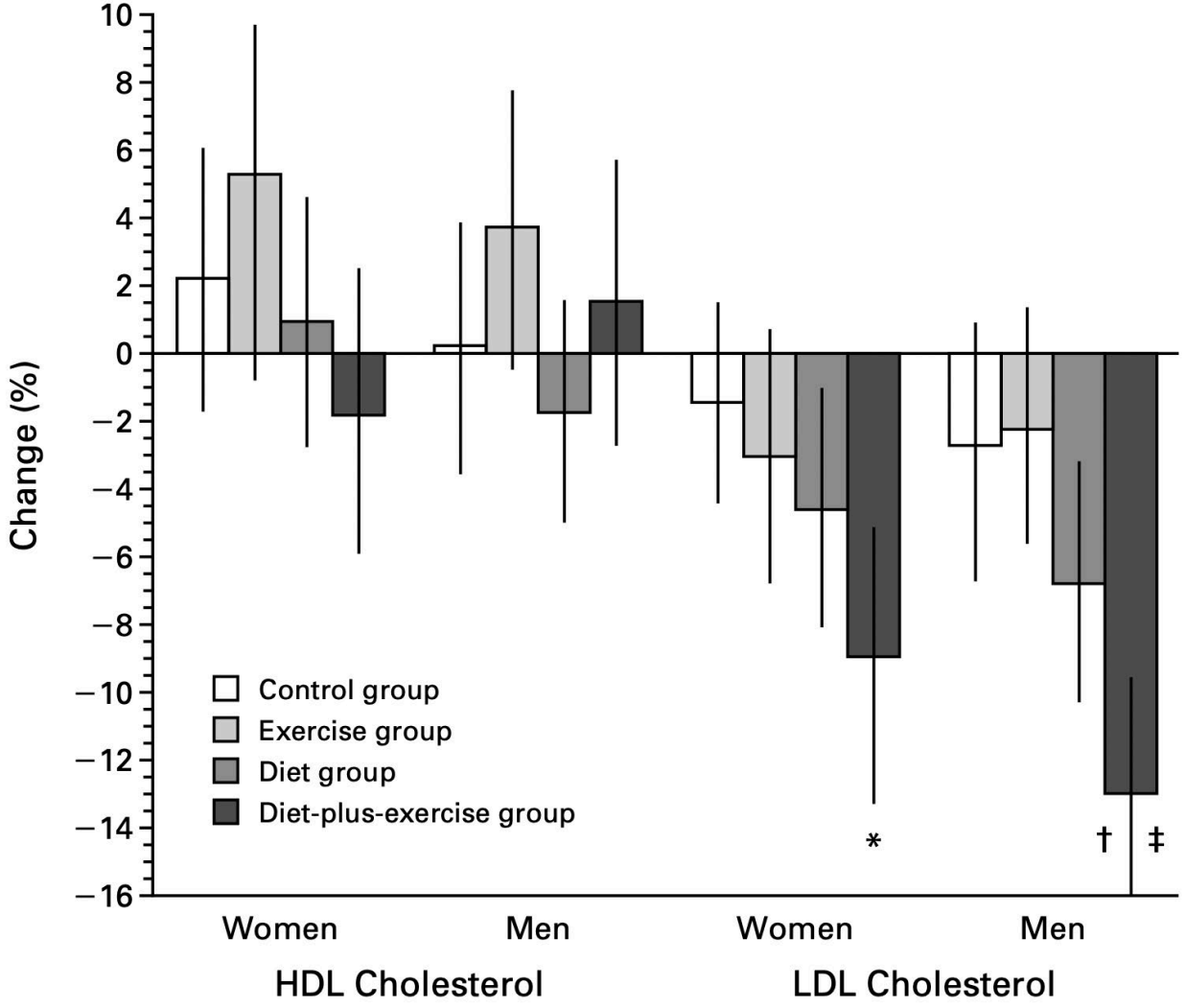
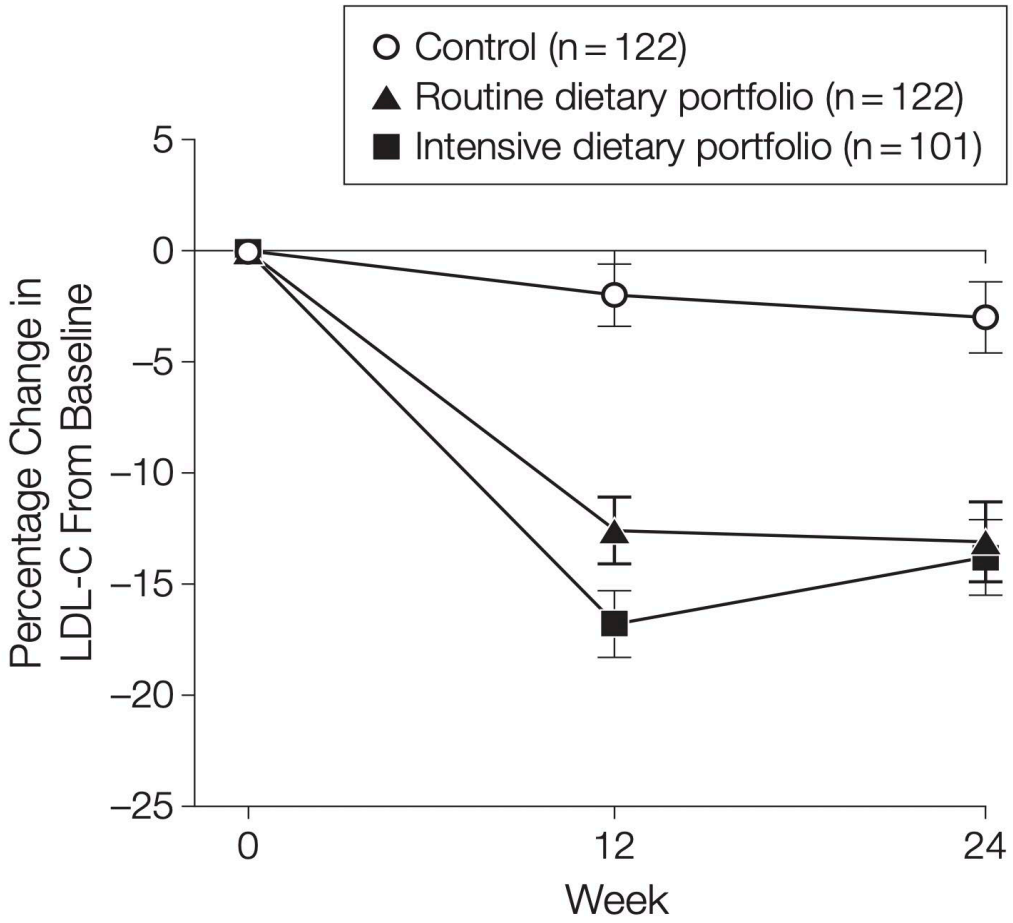
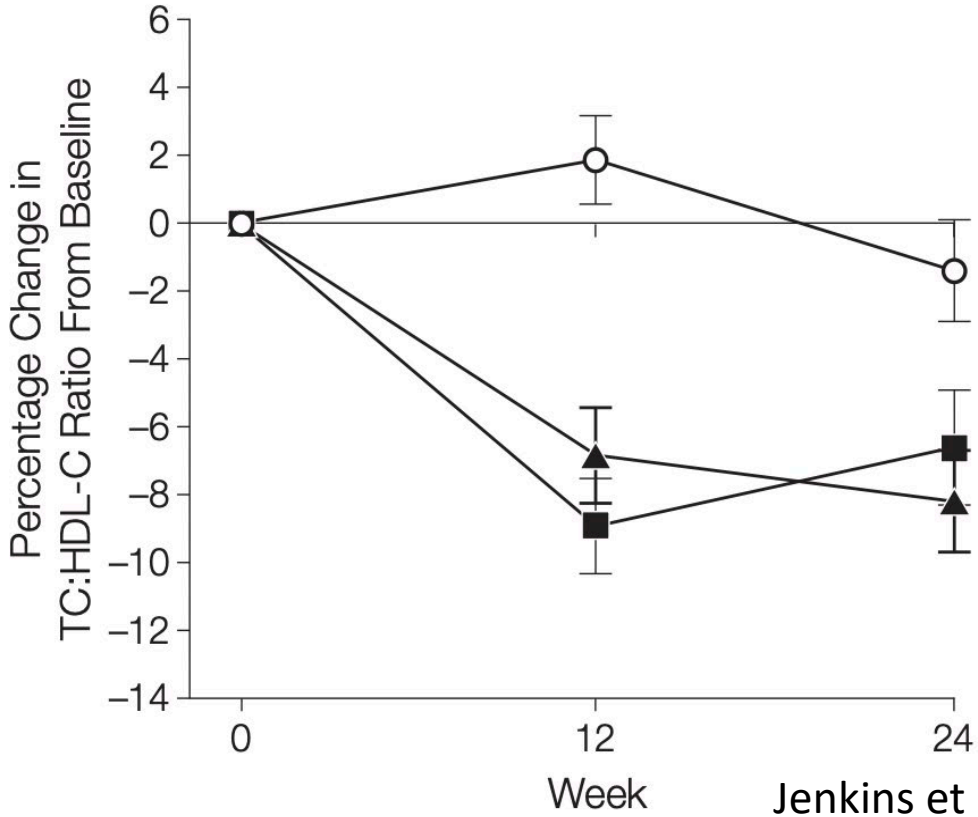


Stefanick et al NEJM 1998

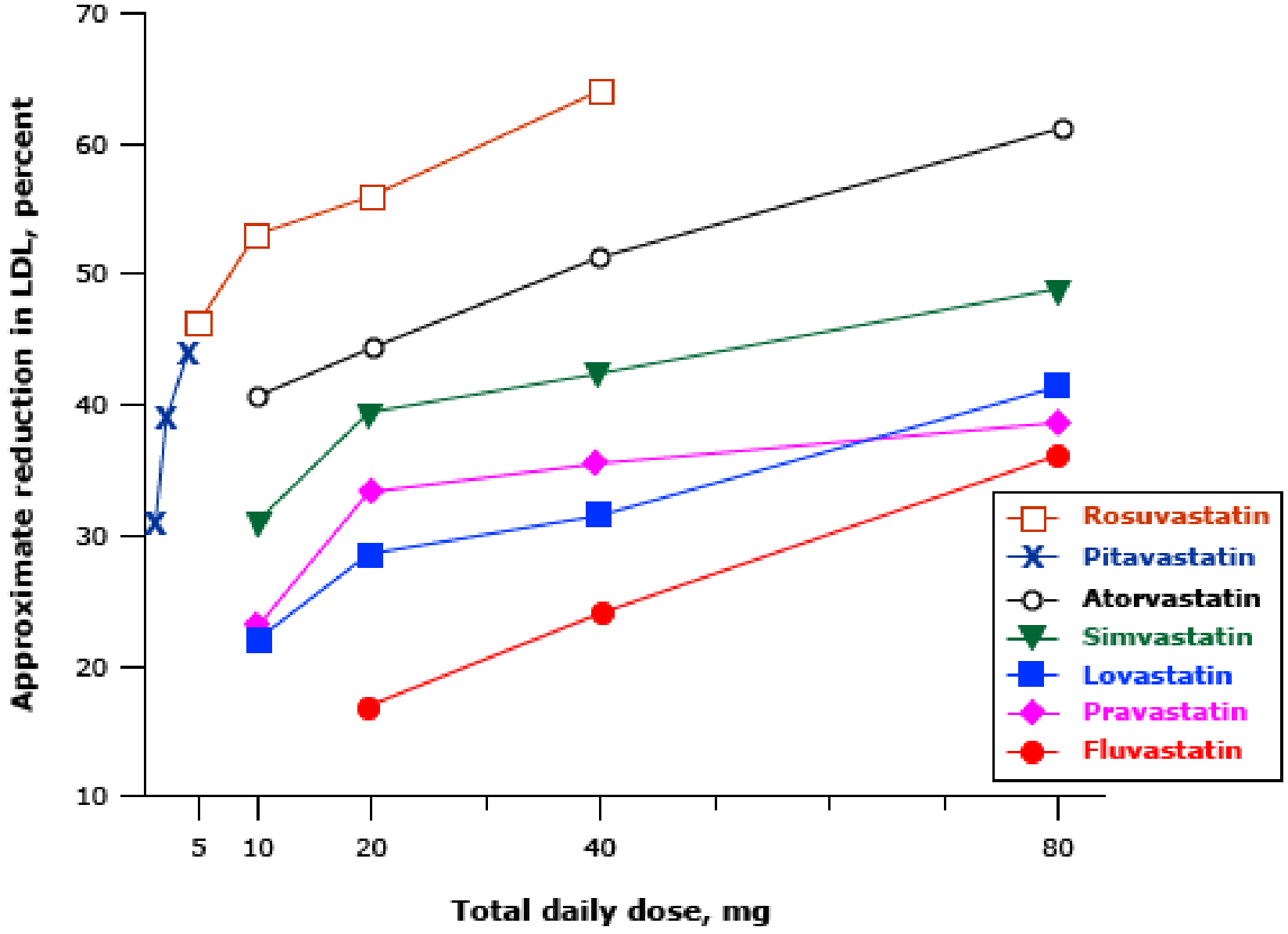
LDL-C



TC: HDL-C ratio



Jenkins et al *JAMA* 2011



UpToDate 2022

Diabetes / Pre-Diabetes

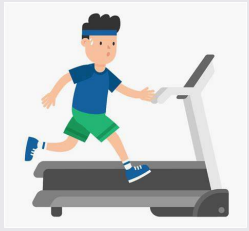
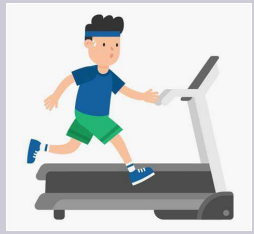
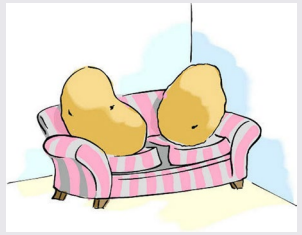
DA Qing IGT and Diabetes Study

	& Exercise
6-year BMI change	-1.6
6-year diabetes incidence	46%

Table 1—*Activities required for one unit of exercise*

Intensity	Time (min)	Exercise
Mild	30	Slow walking, traveling by bus, shopping, housecleaning
Moderate	20	Faster walking or walking down stairs, cycling, doing heavy laundry, ballroom dancing (slow)
Strenuous	10	Slow running, climbing stairs, disco dancing for the elderly, playing volleyball or table tennis
Very strenuous	5	Jumping rope, Playing basketball, swimming

Pan et al *Diabetes Care* 1997

Intervention	A1c Reduction @ 6 m
	0.3
	0.4
	0.9
	0.1 increase

D.A.R.E.®

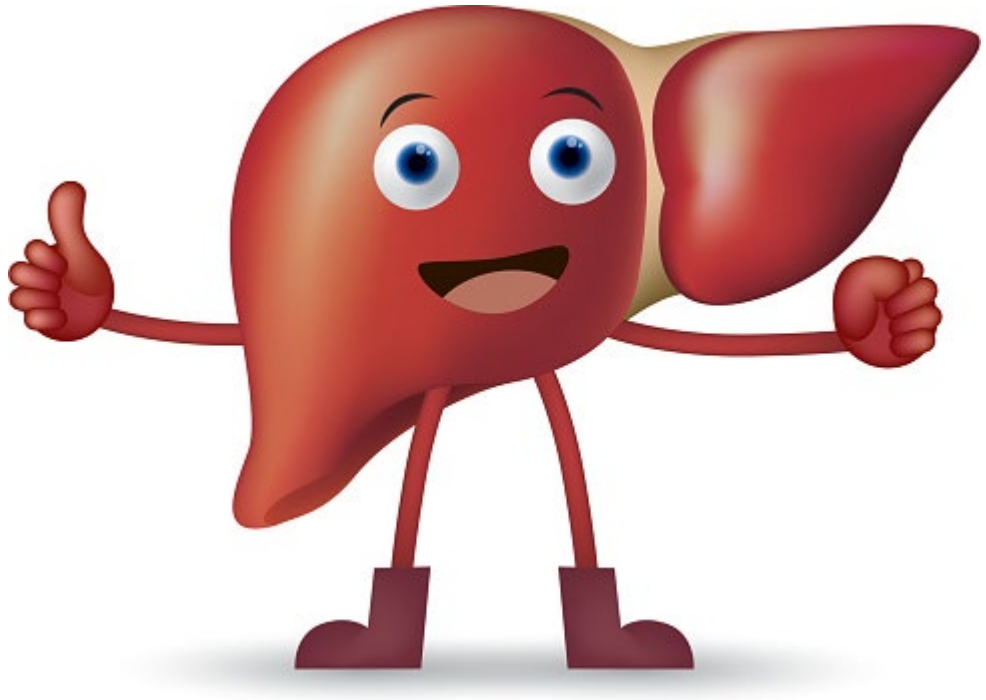
Sigal et al *Ann Intern Med* 2017

10 min post-meal walks help BG

	Post-meal walks	30 min walk	p-value
All-meal iAUC	453	508	0.031
Dinner iAUC	424	537	0.001

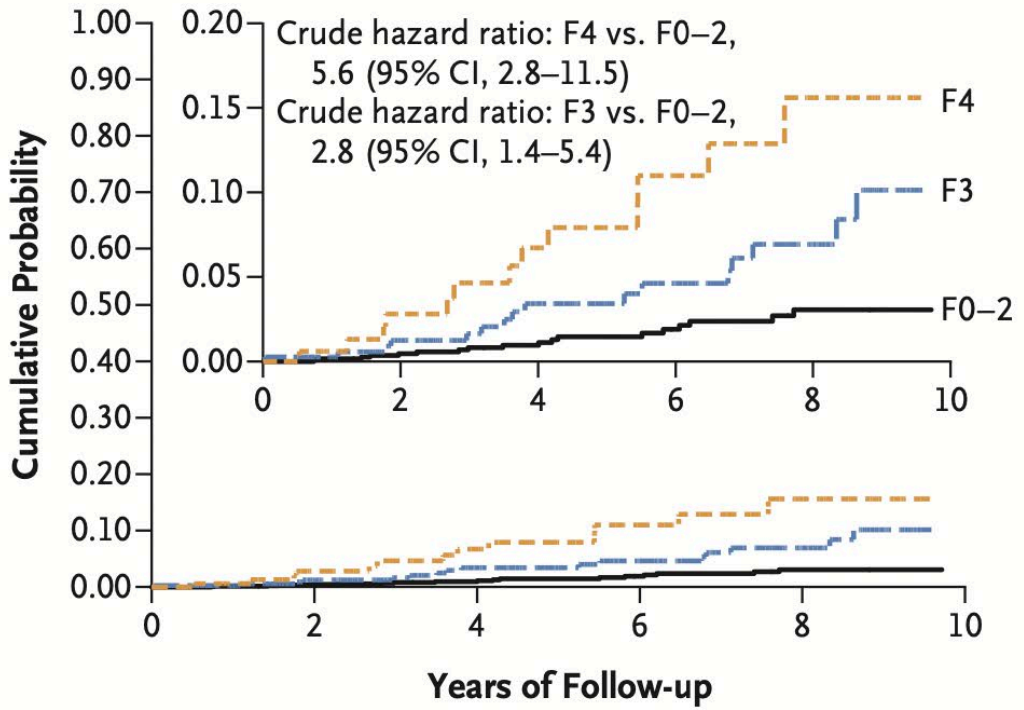
Reynolds *Diabetologia* 2016

MASLD



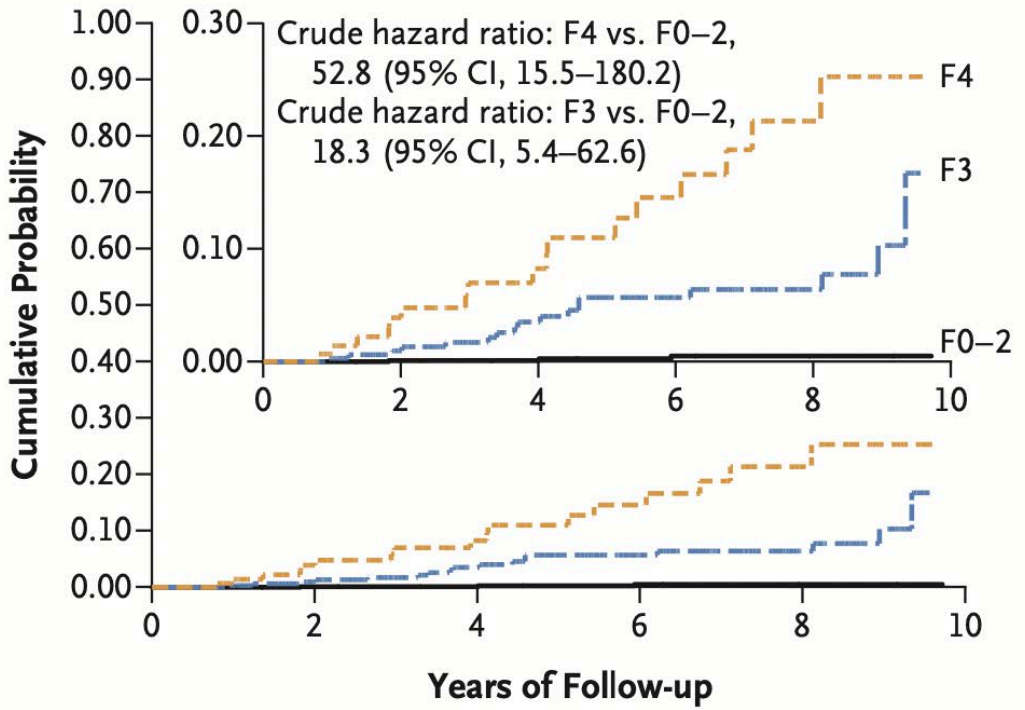
Liver Risks of F0-2 MASLD Are Low

A **Death from Any Cause**



No. at Risk						
F4	167	125	85	51	26	0
F3	369	282	195	142	81	0
F0–2	1237	943	614	422	233	0
No. of Events						
F4	4	4	3	2	0	0
F3	4	5	2	3	2	0
F0–2	5	4	5	4	0	0

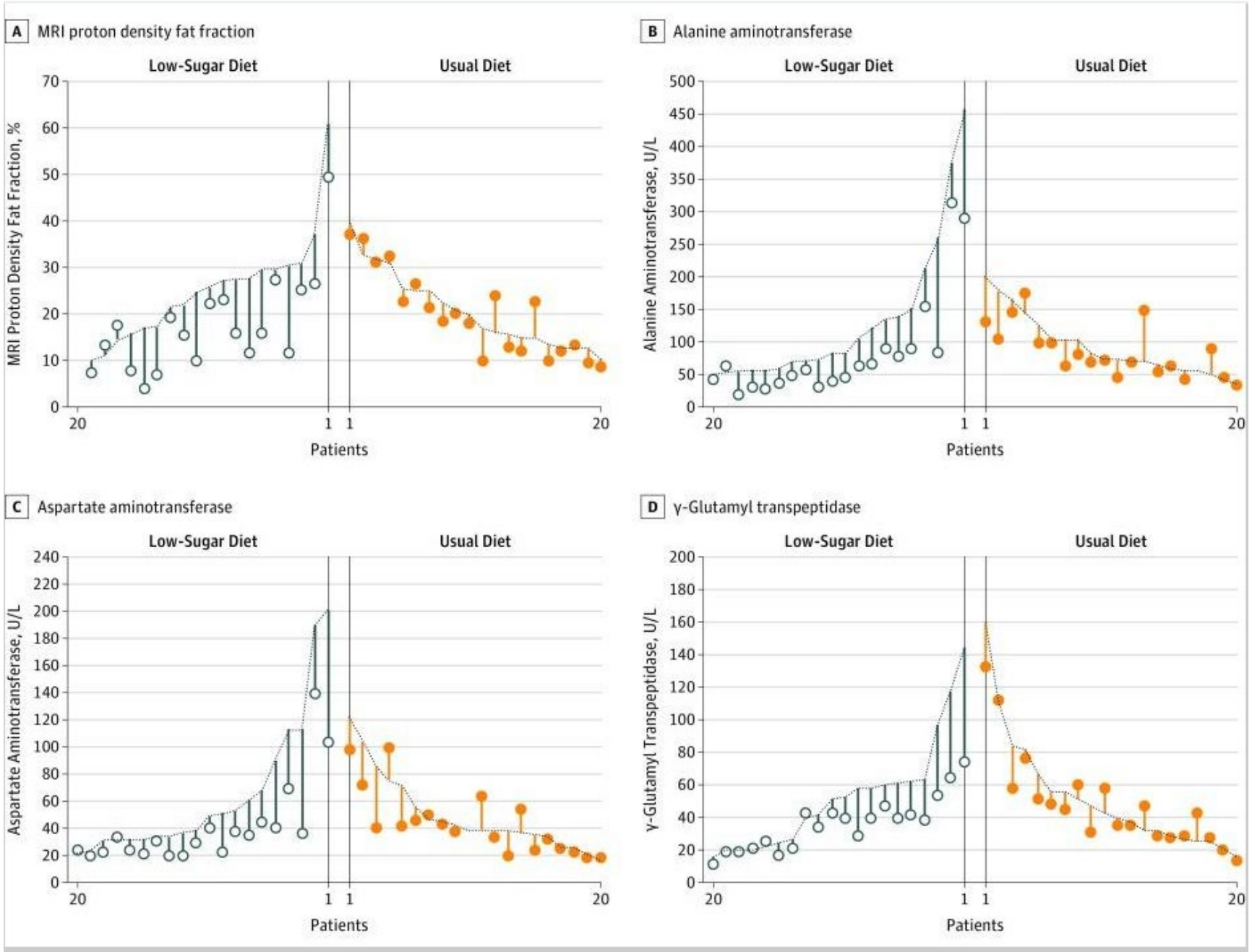
B **Hepatic Decompensation Events**



No. at Risk						
F4	153	110	71	42	20	0
F3	362	279	192	135	75	0
F0–2	1230	955	613	421	236	0
No. of Events						
F4	5	4	4	3	1	0
F3	3	6	4	1	3	0
F0–2	1	0	2	0	0	0

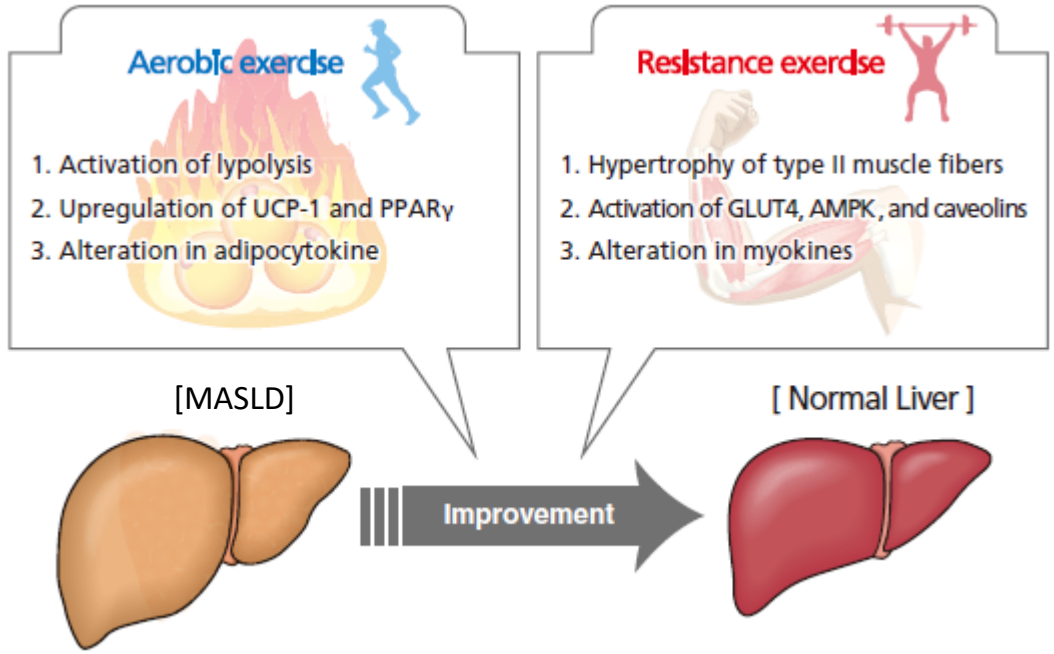
Sanyal et al NEJM 2021

Less Added Sugar, Less Liver Fat



Schwimmer et al JAMA 2019

Aerobic and Resistance Exercise Both Help



	Aerobic Exercise	Resistance Exercise
△ALT	-10	-5.3
△ intrahepatic lipid %	-2.65%	-12%

Hashida et al J Hepatol 2007

Key Points

Body weight is regulated

Weight bias is harmful

Trauma-informed care

“How would you approach this in a patient without obesity?”