Practical Nutrition Counseling in Primary Care

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Disclosures

I have no conflicts of interest to disclose

Before we start – why this talk?

Objectives

1. Review basic epidemiology of obesity in the United States

2. Convey the value of nutrition counseling in primary care

3. Present an example of a practical model for nutrition counseling in primary care

4. Provide 3 examples of *specific* nutrition recommendations you can discuss with your own patients

OBESITY

US adults aged 20 and over:

- 31.1% overweight
- 42.5% obesity
- 9.0% severe obesity
- **Only 26.4% w/ BMI < 25.0**

Figure. Age-adjusted trends in overweight, obesity, and severe obesity among men and women aged 20–74: United States, 1960–1962 through 2017–2018

NOTES: Data are age adjusted by the direct method to U.S. Census 2000 estimates using age groups 20–39, 40–59, and 60–74. Overweight is body mass index (BMI) of 25.0–29.9 kg/m². Obesity is BMI at or above 30.0 kg/m². Severe obesity is BMI at or above 40.0 kg/m². Pregnant women are excluded from the analysis.
SOURCES: National Center for Health Statistics, National Health Examination Survey and National Health and Nutrition Examination Surveys.

Health in the United States

- According to the World Bank, the United States ranked 49th in life expectancy in 2022

- This is despite us spending more per-capita on healthcare than any other country

U.S. healthcare spending per capita is almost twice the average of other wealthy countries

Healthcare Costs per Capita ($)

Country	Cost
United States	$12,742
Switzerland	$9,044
Germany	$8,541
Netherlands	$7,277
Sweden	$7,009
Belgium	$6,994
France	$6,924
Average	$6,850
Canada	$6,845
Australia	$6,807
Ireland	$6,730
United Kingdom	$5,867
Japan	$5,424
Italy	$4,736

Source: Organisation for Economic Co-operation and Development

Notes: Data are for 2022. Average does not include the United States. The five countries with the largest economies and those with both an above median GDP and GDP per capita, relative to all OECD countries, were included. Chart uses purchasing power parities to convert data into U.S. dollars.

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A Risk factors and related deaths

Risk factors

Dietary risks
Tobacco use
High systolic blood pressure
High body mass index
High fasting plasma glucose
High total cholesterol
Impaired kidney function
Alcohol and drug use
Air pollution
Low physical activity
Occupational risks
Low bone mineral density
Residential radon and lead exposure
Unsafe sex
Child and maternal malnutrition
Sexual abuse and violence
Unsafe water, sanitation, and handwashing

x-axis: Deaths, No. (−50000, 0, 100000, 200000, 300000, 400000, 500000)

Legend:

Communicable, maternal, neonatal, and nutritional diseases
- HIV/AIDS and tuberculosis
- Diarrhea, lower respiratory tract, and other common infectious diseases
- Maternal disorders
- Neonatal disorders
- Nutritional deficiencies
- Other communicable maternal, neonatal, and nutritional diseases

Noncommunicable diseases
- Neoplasms
- Cardiovascular diseases
- Chronic respiratory diseases
- Cirrhosis and other chronic liver diseases
- Digestive diseases
- Neurological disorders
- Mental and substance use disorders
- Diabetes, urogenital, blood, and endocrine diseases
- Musculoskeletal disorders
- Other noncommunicable diseases

Injuries
- Transport injuries
- Unintentional injuries
- Self-harm and interpersonal violence
- Force of nature, conflict and terrorism, and executions and police violence

Are we doing enough?

- Health system in Colorado over 1 year:
  - 164,904 patients with a BMI > 25 (mean BMI in this population was 37)
  - Only 12% (20,383) had a visit where weight was addressed (defined as obesity, overweight, or weight being listed in the chief complaint or by use of ICD-10 code pertaining to overweight or obesity)

- Nationally among eligible individuals
  - < 5% are referred to diabetes prevention programs
  - < 4% are prescribed anti-obesity medications
  - < 1% undergo bariatric surgery

What are the challenges?

- Lack of confidence
- Lack of time
- Lack of resources
- Sense of futility: can I even make a difference?

Can we make a difference in primary care?

- Patients told by their doctors that they are overweight have nearly four times the odds of attempting weight loss and about twice the odds of succeeding

Physician weight loss advice and patient weight loss behavior change: a literature review and meta-analysis of survey data

S A Rose [1], P S Poynter, J W Anderson, S M Noar, J Conigliaro

The impact of physician weight discussion on weight loss in US adults

Andrew C Pool [1], Jennifer L Kraschnewski [1], Lindsay A Cover [1], Erik B Lehman [1], Heather L Stuckey [1], Kevin O Hwang [1], Kathryn I Pollak [1], Christopher N Sciamanna [1]

Source	Intervention Main Mode (Total mo)	Intervention No.	Intervention Change From Baseline, Mean (SD), kg	Control No.	Control Change From Baseline, Mean (SD), kg	Mean Difference Change From Baseline (95% CI), kg
Ackermann et al,[25] 2015	Group (12)	257	-2.5 (NR)	252	-0.2 (NR)	-2.30 (-3.40 to -1.10)
Ahern et al,[140] 2017	Group (12)	528	-6.8 (9.7)	211	-3.3 (9.9)	-3.50 (-5.07 to -1.93)
Anderson et al,[27] 2014	Individual (12)	148	-3.5 (4.9)	157	-0.8 (3.8)	-2.69 (-3.67 to -1.70)
Appel et al,[29] 2011	Mixed (24)	123	-5.4 (7.8)	108	-1.1 (5.2)	-4.30 (-5.90 to -2.60)
Aveyard et al,[32] 2016	Group (3)	940	-2.4 (6.5)	942	-1.0 (5.5)	-1.43 (-1.97 to -0.89)
Beeken et al,[135] 2017	Individual (3)	143	-2.4 (5.5)	152	-2.3 (5.0)	-0.06 (-1.25 to 1.13)
Bennett et al,[35] 2012	Individual (24)	180	-1.4 (5.1)	185	-0.3 (4.9)	-1.05 (-2.09 to -0.01)
Bhopal et al,[36] 2014	Individual (36)	84	-0.9 (7.2)	83	-0.3 (6.7)	-0.63 (-2.74 to 1.48)
Burke et al,[39] 2005	Mixed (16)	106	-3.9 (5.5)	98	-1.4 (5.2)	-2.50 (-3.9 to -1.03)
Cadmus-Bertram et al,[40] 2016	Individual (12)	59	-2.9 (4.3)	29	-1.2 (3.8)	-1.70 (-3.47 to 0.07)
Christian et al,[42] 2011	Technology (6)	133	-1.5 (5.3)	130	0.1 (4.0)	-1.65 (-3.85 to 0.56)
Cohen et al,[43] 1991	Individual (12)	15	-0.9 (4.0)	15	1.3 (3.0)	-2.18 (-4.71 to 0.35)
de Vos et al,[46] 2014	Individual (30)	187	-0.6 (5.5)	181	0.6 (5.4)	-1.22 (-2.09 to -0.35)
Demark-Wahnefried et al,[47] 2014	Technology (12)	23	-3.8 (4.8)	18	-0.9 (3.0)	-2.90 (-5.29 to -0.51)
Eaton et al,[49] 2016	Individual (24)	106	-5.4 (7.9)	105	-3.8 (7.8)	-1.60 (-3.72 to 0.52)
Fischer et al,[136] 2016	Technology (12)	78	-1.2 (5.8)	79	-0.3 (4.4)	-0.95 (-2.54 to 0.63)
Fitzgibbon et al,[53] 2010	Mixed (18)	93	-2.3 (7.4)	97	0.5 (5.7)	-2.59 (-4.40 to -0.78)
Godino et al,[55] 2016	Technology (24)	202	NR	202	NR	-1.33 (-2.30 to -0.35)
Greaves et al,[56] 2015	Group (9)	55	-3.7 (5.2)	53	-1.9 (6.7)	-1.85 (-4.08 to 0.38)
Haapala et al,[58] 2009	Technology (6)	62	-3.1 (4.9)	62	-0.7 (4.7)	-2.40 (-4.09 to -0.71)
Hunt et al,[62] 2014	Group (12)	333	-5.6 (8.1)	355	-0.6 (5.2)	-4.94 (-5.94 to -3.95)
Huseinovic et al,[63] 2016	Individual (12)	44	-9.3 (4.8)	45	-5.6 (7.3)	-3.70 (-6.26 to -1.14)
Jakicic et al,[64] 2011	Mixed (18)	88	-1.3 (3.8)	84	-0.9 (3.8)	-0.40 (-1.53 to 0.73)
Jansson et al,[65] 2013	Individual (24)	45	-2.5 (5.0)	49	-0.8 (5.4)	-1.70 (-3.80 to 0.40)
Jebb et al,[66] 2011	Group (12)	377	-4.1 (6.0)	395	-1.8 (3.8)	-2.29 (-2.99 to -1.58)
Jolly et al,[68] 2011	Group (3)	100	-2.5 (5.9)	100	-1.1 (5.1)	-1.65 (-3.33 to 0.04)
Katula et al,[71] 2011	Mixed (24)	151	-6.9 (6.9)	150	-2.1 (7.4)	-4.85 (-6.46 to -3.24)
Knowler et al,[73] 2002	Individual (38)	1026	-6.8 (5.4)	1027	-0.4 (5.4)	-6.34 (-6.81 to -5.87)
Kuller et al,[75] 2012	Group (36)	208	-7.8 (7.1)	213	-1.6 (5.5)	-6.20 (-7.42 to -4.98)
Kulzer et al,[76] 2009	Group (10)	91	-3.8 (5.2)	91	-1.4 (4.0)	-2.40 (-3.75 to -1.05)
Kumanyika et al,[145] 2012	Individual (12)	89	-1.6 (5.1)	98	-0.6 (4.1)	-0.98 (-2.33 to 0.36)
Little et al,[78] 2016	Technology (6)	221	-3.8 (7.4)	227	-2.6 (9.0)	-0.37 (-1.66 to 0.92)
Logue et al,[141] 2005	Individual (24)	329	-1.4 (3.2)	336	-0.9 (3.4)	-0.52 (-1.02 to -0.02)
Luley et al,[79] 2014	Individual (12)	58	-7.3 (6.3)	60	-2.7 (6.5)	-4.50 (-7.40 to -1.70)
Ma et al,[80] 2013	Group (15)	79	-6.3 (8.0)	81	-2.4 (0.1)	-3.90 (-5.66 to -2.14)
Marrero et al,[81] 2016	Group (12)	94	-5.5 (6.1)	81	-0.2 (6.2)	-5.30 (-7.14 to -3.46)
Martin et al,[83] 2008	Individual (6)	68	-1.4 (3.7)	69	-0.2 (3.6)	-1.22 (-2.64 to 0.20)
Mensink et al,[142] 2003	Individual (24)	40	-3.1 (3.8)	48	-0.2 (3.5)	-2.90 (-4.43 to -1.37)
Moore et al,[85] 2003	Individual (12)	279	-0.5 (NR)	286	-0.9 (NR)	1.00 (-1.90 to 3.90)
Morgan et al,[86] 2011	Technology (3)	34	-5.3 (6.4)	31	-3.1 (6.4)	-2.20 (-5.50 to 1.05)
Nakade et al,[88] 2012	Mixed (12)	115	-4.5 (4.4)	111	0.1 (5.8)	-4.60 (-5.94 to -3.26)
Nanchahal et al,[89] 2012	Individual (9)	103	-2.4 (5.6)	114	-1.3 (5.1)	-0.70 (-2.17 to 0.76)
Nicklas et al,[91] 2014	Technology (12)	36	-2.8 (6.1)	39	0.5 (5.9)	-3.30 (-6.00 to -0.60)
Nilsen et al,[144] 2011	Group (18)	93	-2.5 (9.6)	89	-3.0 (10.1)	0.50 (-2.37 to 3.37)
O'Brien et al,[138] 2017	Group (12)	30	-4.0 (3.9)	28	0.8 (4.0)	-4.80 (-7.30 to -2.20)
Pacanowski and Levitsky,[93] 2015	Technology (12)	81	-2.1 (5.6)	67	-0.4 (4.4)	-1.70 (-3.31 to -0.09)
Patrick et al,[95] 2011	Technology (12)	217	-0.9 (7.1)	224	-0.2 (6.9)	-0.69 (-1.52 to 0.14)
Penn et al,[97] 2009	Individual (60)	51	-2.3 (NR)	51	0.0 (NR)	-2.50 (-4.20 to 0.70)
Phelan et al,[147] 2017	Mixed (12)	174	-3.2 (5.7)	193	-0.9 (5.7)	-2.30 (-3.50 to -1.10)
Puhkala et al,[100] 2015	Individual (12)	47	-3.4 (6.6)	48	0.7 (3.9)	-4.00 (-6.20 to -1.90)
Rock et al,[103] 2007	Individual (12)	35	-6.6 (10.2)	35	-0.7 (5.5)	-5.90 (-9.74 to -2.06)
Rock et al,[102] 2015	Mixed (24)	297	-5.3 (6.8)	288	-1.2 (6.7)	-4.10 (-5.19 to -3.01)
Rodriguez-Cristobal et al,[146] 2017	Group (24)	283	-1.8 (6.7)	302	-1.3 (1.7)	-0.50 (-1.54 to 0.54)
Rosas et al,[104] 2015	Mixed (24)	84	-1.4 (4.9)	41	-0.7 (4.8)	-0.70 (-2.49 to 1.09)
Ross et al,[105] 2012	Individual (24)	249	-2.4 (5.4)	241	-0.9 (5.6)	-1.56 (-2.53 to -0.59)
Shapiro et al,[107] 2012	Technology (12)	81	-1.7 (5.4)	89	-1.0 (4.3)	-0.62 (-2.10 to 0.86)
Stevens et al,[115] 1993	Group (18)	293	-3.8 (6.1)	235	0.1 (4.0)	-3.90 (-4.77 to -3.03)
Stevens et al,[116] 2001	Group (36)	545	-2.0 (5.8)	551	0.7 (4.2)	-2.70 (-3.30 to -2.10)
Svetkey et al,[117] 2015	Mixed (24)	120	-3.6 (NR)	123	-2.3 (NR)	-1.33 (-3.19 to 0.53)
Thomas et al,[139] 2017	Technology (12)	91	-1.6 (4.9)	86	-1.2 (5.0)	-0.40 (-1.85 to 1.05)
Tsai et al,[121] 2010	Individual (12)	22	-2.3 (4.2)	25	-1.1 (4.0)	-1.20 (-3.56 to 1.16)
Tuomilehto et al,[122] 2001	Individual (48)	256	-4.2 (5.1)	250	-0.8 (3.7)	-3.40 (-4.18 to -2.62)
von Gruenigen et al,[126] 2012	Mixed (12)	41	-3.0 (8.8)	34	1.4 (11.1)	-4.60 (-5.80 to -3.50)
Wadden et al,[127] 2011	Individual (24)	131	-3.4 (6.9)	130	-2.3 (6.8)	-1.10 (-2.76 to 0.56)
Whelton et al,[143] 1998	Mixed (28)	294	-4.7 (2.6)	291	-1.1 (2.2)	-3.60 (-3.99 to -3.21)
Wing et al,[131] 1998	Group (24)	30	-7.4 (9.7)	29	-0.3 (4.5)	-7.10 (-10.94 to -3.26)
Wylie-Rosett et al,[132] 2001	Mixed (12)	194	-3.4 (7.3)	97	-1.0 (5.6)	-2.36 (-3.87 to -0.84)
Overall ($I^2 = 90.0\%$, $P < .001$)						-2.39 (-2.86 to -1.93)

Favors Intervention ← | → Favors Control

-10 -5 0 5
Mean Difference Change From Baseline (95% CI), kg

NR indicates not reported.

Recommendation Summary

Population	Recommendation	Grade
Adults	The USPSTF recommends that clinicians offer or refer adults with a body mass index (BMI) of 30 or higher (calculated as weight in kilograms divided by height in meters squared) to intensive, multicomponent behavioral interventions.	B

"B" rating, meaning there is "high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial"

The AHA requires that interventions with a grade A or B rating be covered without a copay by insurance

Benefits of Weight Loss by Percent Body Weight Lost

0 to 5%[1]	5 to 10%[1]	10 to 15%[1,2]	> 15%[2-4]
Hypertension	Prevention of T2DM	CV Disease	T2DM Remission
Hyperglycemia	MASLD	MASLD	CV Mortality
	PCOS	OSA	HFpEF
	Hyperlipidemia	GERD	
		Osteoarthritis	

1. Garvey WT et al. Endocr Pract 2016;22(Suppl. 3):1–203;
2. Look AHEAD Research Group. Lancet Diabetes Endocrinol 2016;4:913–21
3. Lean ME et al. Lancet 2018;391:541–51;
4. Benraoune F and Litwin SE. Curr Opin Cardiol 2011;26:555–61.

Adapted from Barenbaum, S. (2024). *Overview of the Medical Assessment of Adult Obesity*. [Conference Presentation]. 2024 Columbia Cornell Obesity: Etiology, Prevention, and Treatment On-Demand.

One Model for Primary Care

Initial Visit

Dedicated Weight-Loss Visit

Check-in Visits

Start the conversation → Assess Motivation

Weight History → Education → Goal Setting

Follow-Up

One Model for Primary Care

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Dedicated Weight-Loss Visit

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Follow-Up

Start the Conversation

- Ask for permission!
  - Supports autonomy
  - Signals that you will approach sensitively

- Helpful to tie to other problems (if possible)

- Sometimes may need simply to ask

"When someone has back pain, I like to check in on weight. Would it be okay to chat about that for a few minutes today?"

"I noticed today that your BMI is higher than we would usually recommend. Would it be alright if we talked about that? I know it can be a sensitive topic and only want to do so if you are okay with it and feel it would be helpful"

Stages of Change

Elements of Effective Counseling

- Behavior change needs to come from the patient
- The patient must see a compelling need to make change
- They must feel confident that they can make change
- They need to believe that the proposed change will help
- They need to feel supported in making change

Weight History

- Let the patient tell their story

- Maintain a non-judgmental and curious tone

- Some example questions:
  - Open ended:
    - "Tell me about how your weight has changed over time?"
  - Factors contributing to weight gain:
    - "What factors do you think have contributed to your weight gain?"
    - "Were there specific times in your life when you gained more weight?"
  - Past efforts:
    - "Have you thought about or tried to lose weight before? What happened? What worked well? What were the challenges?"
  - Motivation:
    - "What concerns you most about your weight?"
    - "What benefits do you think losing weight would have?"

- Elucidate root causes of weight gain for your patient

- Help understand where patients are coming from and how best to help

First Visit

Dedicated Weight Loss Visit

Check-in Visits

Start the conversation → Assess Motivation

Weight History → Education → Goal Setting

Follow-Up

Education

1. **Review underlying forces causing weight gain**
2. Nutritional strategies for weight loss

Figure. Age-adjusted trends in overweight, obesity, and severe obesity among men and women aged 20–74: United States, 1960–1962 through 2017–2018

NOTES: Data are age adjusted by the direct method to U.S. Census 2000 estimates using age groups 20–39, 40–59, and 60–74. Overweight is body mass index (BMI) of 25.0–29.9 kg/m². Obesity is BMI at or above 30.0 kg/m². Severe obesity is BMI at or above 40.0 kg/m². Pregnant women are excluded from the analysis.
SOURCES: National Center for Health Statistics, National Health Examination Survey and National Health and Nutrition Examination Surveys.

Why are we all gaining weight?

Again, only about 1 in 4 have a BMI less than 25.0!

Why are we all gaining weight?

- Our body has a complex neuroendocrine system that regulates our weight

Adapted from Rosenbaum, M. (2024). *Why is it So Hard to Keep Weight Off?* [Conference Presentation]. 2024 Columbia Cornell Obesity: Etiology, Prevention, and Treatment On-Demand.

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- For the vast majority of us, that process is *sub-conscious* – I'd like to illustrate that for you:

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  - Average American eats ~900,000 kcal per year

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- We do this without counting calories

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- We do this without counting calories

- We do this without measuring number of calories we are burning

Why are we all gaining weight?

- Obesity is a ***neuro-metabolic disease*** that is characterized by the ***inappropriate dysregulation of defended mass*** leading to excess accumulation of fat which can lead to poor health outcomes

Obesity Pathogenesis:
An Endocrine Society Scientific Statement

Michael W. Schwartz,[1] Randy J. Seeley,[2] Lori M. Zeltser,[3] Adam Drewnowski,[4] Eric Ravussin,[5]
Leanne M. Redman,[5] and Rudolph L. Leibel[3,6]

Why are we all gaining weight?

Why are we all gaining weight?

Individual

Why are we all gaining weight?

Environment / Society

Individual

Why are we all gaining weight?

Environment / Society

Individual

- Our individual system for weight homeostasis evolved over *millions* of years

Why are we all gaining weight?

Environment / Society

Individual

Then:
- Food was scarce
- Foods were different
- Foods required more time and energy to obtain, prepare, and consume

- Our individual system for weight homeostasis evolved over *millions* of years

Why are we all gaining weight?

Environment / Society

Individual

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- Food was scarce
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Why are we all gaining weight?

Environment / Society

Individual

Now:
- Food is always available
- Food industrially designed to be hyper-palatable
- We are more sedentary

- Our individual system for weight homeostasis evolved over *millions* of years

Why are we all gaining weight?

Environment / Society

Individual

Now:
- Food is always available
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- We are more sedentary

- Our individual system for weight homeostasis evolved over *millions* of years

Why are we all gaining weight?

Obesity rates are rising because the biological systems that control our body's weight were not designed for the environment we live in today, and they don't work for most people

So what do we do?

Environment and/or society

Eating culture · Television · Transportation · Smoking
Policies · Computer games · Social media · Food marketing
Economic systems · Food environment · Workplace · Recreational drug use
Noise pollution

Food intake · Metabolism and energy expenditure · Physical activity · Shift work
Genetics · Sleep
Brown fat · Stress

Epigenetics
Internal clocks · Signals from adipose tissue, pancreas, liver and gut · Brain · Neurocircuits of appetite and satiety regulation
Inflammation · Central reward system · Microbiota · Addiction
Medications · Sarcopenia
Pain
Weight cycling (intentional weight loss and subsequent weight regain) · Adipose tissue expandability and distribution · Insulin resistance · Psychiatric diseases

Biology

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Biology

Education

1. Review underlying forces causing weight gain
2. **Nutritional strategies for weight loss**

Many Diets Out There

- We will not go through details on various diets

Many Diets Out There

The NEW ENGLAND JOURNAL of MEDICINE

SPECIALTIES ∨   TOPICS ∨   MULTIMEDIA ∨   CURRENT ISSUE ∨   LEARNING/CME ∨   AUTHOR CENTER   PUBLICATIONS ∨

REVIEW ARTICLE | NUTRITION IN MEDICINE

Diets

Authors: Mary Yannakoulia, Ph.D. , and Nikolaos Scarmeas, M.D., Ph.D.   Author Info & Affiliations

- Many diets have evidence for weight loss

- We see commonalities among these diets

- You can teach those commonalities and provide patients with *principles* of healthy eating

- Meet patients where they are at – if they want to try a diet, support them in that

DASH diet
- 26–27% of calories from fat

USDA food patterns
- 20–35% of calories from fat recommended
- Includes vegetarian variations

No emphasis on oily fish consumption

Emphasis on reduced sodium intake

- Increased vegetables, fruits, whole grains, nuts, legumes, unsaturated oils, low fat dairy, and lean protein (including seafood)
- Decreased trans fat, saturated fat, and added sugars
- Moderate or no alcohol consumption

Can be adapted for vegetarians

Mediterranean-style diets
- No emphasis on sodium restriction
- Emphasis on extra virgin olive oil use for cooking and dressings
- Greater emphasis on regular consumption of oily fish and α-linolenic acid
- ~35% of calories from fat

FIGURE 27.5 Commonalities and unique features of the DASH diet, Mediterranean-style diets, and the USDA food pattern recommended by the Dietary Guidelines for Americans 2015. Source: *C.K. Richter, A.C. Skulas-Ray, P.M. Kris-Etherton, Recent findings of studies on the Mediterranean diet: what are the implications for current dietary recommendations? Endocrinol. Metab. Clin. North Am. 43 (4) (2014) 963–980.*

Nutritional Strategies

1. Increase your fiber intake

2. Increase your "low calorie density" foods

3. Avoid ultra-processed foods

Nutritional Strategies

1. **Increase your fiber intake**

2. Increase your "low calorie density" foods

3. Avoid ultra-processed foods

What percentage of Americans meet the recommended intake of daily fiber?

A. 3%

B. 11%

C. 24%

D. 41%

E. 55%

What percentage of Americans meet the recommended intake of daily fiber?

A. 3%

B. 11%

C. 24%

D. 41%

E. 55%

Increase fiber

- Fewer than 3% of Americans reach the recommended daily intake of fiber
- Compare with protein, which 97% of Americans reach the recommended daily intake of

Pears 5.5g/Pear 3.1g/100g
Oats 16.5g/Cup 10.6g/100g
Broccoli 2.4g/Cup 2.6g/100g

Avocados 10g/Cup 6.7g/100g
Quinoa 1.6g/Cup 2.8g/100g
Lima Beans 13g/Cup 7g/100g

Coconuts 7g/Cup 9g/100g
Popcorn 1.2g/Cup 14.5g/100g
Flaxseeds 2.8g/Tbsp 27g/100g

Artichoke 6.9g/Artichoke 5.4g/100g
Dark Chocolate 3.1g/Ounce 10.9g/100g
Carrots 3.4g/Cup 2.8g/100g

Raspberries 8g/Cup 6.5g/100g
Banana 3.1g/Banana 2.6g/100g
Pearled Barley 3.8g/Cup 6g/100g

Edamame 8g/Cup 5g/100g
Kidney Beans 11.3g/Cup 5.4g/100g
Millet 17g/Cup 8.5g/100g

Split Peas 16.3g/Cup 8.3g/100g
Strawberries 3g/Cup 2g/100g
Chia Seeds 10g/Ounce 34g/100g

Brussels Sprouts 3.3g/Cup 8.3g/100g
Black Beans 15g/Cup 8.9g/100g
Figs 1.6g/Fig 2.9g/100g

Almonds 11g/Cup 12.5g/100g
Sweet Potatoes 3.8g/Medium size 2.5g/100g
Kale 2.6g/Cup 2g/100g

Beets 3.8g/Cup 2.8g/100g
Apples 4.4g/Apple 2.4g/100g
Chickpeas 12.5g/Cup 7.6g/100g

Increase fiber

- The "3D's" of Fiber
  - **D**istension of stomach
  - **D**elayed GI transit
  - **D**umping of calories
    - Our bodies can only absorb nutrients through direct physical contact. Fiber is not absorbable and can block absorption of other nutrients
    - Typical American diet: 1 g protein = 4 calories, 1 g fat = 9 calories, 1 g of carbs = 4 calories
    - High fiber diet: 1 g protein = 3.5 calories, 1 g fat = 8.7 calories, 1 g of carbs = 3.8 calories
    - People who eat a high fiber diet poop out about twice as many calories as those eating a typical American diet
    - This leads to, on average, 100 fewer calories per day!

JUICE VS. WHOLE FRUIT

16oz apple juice

4 apples

220 calories
46g sugar
0g fiber

220 calories
40g sugar
9.6g fiber

100 calories / day = 700 calories per week = 36,400 calories per year = ~10 lbs!

Increase fiber

- Other possible impacts of a high fiber diet on weight:
  - Increased thermic effect of food
  - Interaction with the gut microbiome, which plays an important role in the gut brain axis

Check for updates

Taylor & Francis
Taylor & Francis Group

The Thermic Effect of Food: A Review

Manuel Calcagno[a], Hana Kahleova[a], Jihad Alwarith[a], Nora N. Burgess[a], Rosendo A. Flores[a], Melissa L. Busta[a], and Neal D. Barnard[a,b]

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Breaking down a gut-to-brain circuit that prevents malabsorption

Brooke C. Jarvie[1,2] and Zachary A. Knight[1,2,3,*]
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https://doi.org/10.1016/j.cell.2022.06.012

CellPress

Trends in
Endocrinology & Metabolism

Review

Influence of the gut microbiota on satiety signaling

Jacco J.A.J. Bastings,[1] Koen Venema,[1,2] Ellen E. Blaak,[1,*] and Tanja C. Adam[3]

Increase fiber

Single-component versus multicomponent dietary goals for the metabolic syndrome: a randomized trial

Yunsheng Ma, Barbara C Olendzki, Jinsong Wang, Gioia M Persuitte, Wenjun Li, Hua Fang, Philip A Merriam, Nicole M Wedick, Ira S Ockene, Annie L Culver, Kristin L Schneider, Gin-Fei Olendzki, James Carmody, Tingjian Ge, Zhiying Zhang, Sherry L Pagoto

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- Randomized controlled trial comparing two groups:
  1. The American Heart Association (AHA) Diet
     - Consume vegetables and fruits
     - Eat whole grain, high fiber foods (> 30 g / day)
     - Eat fish twice weekly
     - Reduce sugary beverages
     - Consume lean animal and vegetable proteins
     - Minimize sugar intake
     - Minimize sodium intake
     - Moderate to no alcohol intake
     - 30-35% of calories from carbohydrates
     - 15-20% of calories from protein
     - 30-35% of calories from fat
     - Limit saturated fat to < 7% of energy, trans fat to < 1%, and cholesterol to < 300 mg per day
  2. High fiber diet (> 30 g / day)
     - Eat more fiber! No calorie goals were specified

Increase fiber

Single-component versus multicomponent dietary goals for the metabolic syndrome: a randomized trial

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- Study Design
    - Primary endpoint: weight loss at 12 months
    - Participants all received two individual and 12 group sessions

Increase fiber

Single-component versus multicomponent dietary goals for the metabolic syndrome: a randomized trial

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- Results
  - No significant difference between the two treatment groups
  - Suggests dietary intervention focusing on a targeted fiber goal may be able to achieve clinically meaningful weight loss similar to the more intense AHA dietary guidelines

Quick Fiber Check

Beans: For each serving of beans or lentils (one serving = 1/2 cup cooked) or any food that includes about this amount of beans or lentils as an ingredient	**7 points**
Soy: One cup of soy milk or 1/2 cup tofu	**1 point**
Vegetables: For each serving of vegetables (one serving = 1 cup)	**3 points** (lettuce = 1 point)
Fruit: Medium piece of fruit (e.g., apple, banana, 1 cup of applesauce, a banana smoothie)	**3 points**
Grains: Whole grains score higher than processed grains (one serving = 1 cup cooked).	**8 points = bran** **4 points = oatmeal** **3 points = whole grains** (e.g., whole-grain cereal, brown rice) **2 points = whole-wheat processed grains** (e.g., whole-grain bread, whole-grain pasta) **1 point = processed grains** (e.g., white bread, bagel, white rice, processed cereal)
Nuts/Seeds/Avocado (1 ounce): Limit these due to high fat content.	**2 points**
Meat, Poultry, and Fish	**0 points**
Eggs and Dairy	**0 points**
Soda	**0 points**

The **Quick Fiber Check** is a handy little tool. Using its simple scoring concept, which takes only a minute or two to learn, you'll automatically be able to estimate the fiber content of virtually everything in the grocery store.

To check your own meals, write down everything you ate or drank for one full day on this form (see next page). Now, next to each food, jot in its fiber score (each point = 1 gram of fiber), using this guide.

Physicians Committee
for Responsible Medicine
PhysiciansCommittee.org

Food (only one ingredient per line)	Fiber Score
Total Points	

Interpreting Your Quick Fiber Check Score

Less than 20:
You need more fiber in your diet. As it is, your appetite will be hard to control, and you may have occasional constipation. Boosting fiber will help tame your appetite and can cut your risk of many health problems.

20-39:
You are doing better than most people in Western countries, but as you bring more fiber into your diet, you will find that it makes the food you eat more satisfying and cuts your calorie intake a bit.

40 or more:
Congratulations! You have plenty of healthful fiber in your diet. It tames your appetite and helps keep you healthy. Fiber also reduces your risk of cancer, heart disease, diabetes, and digestive problems.

Some Tips for Increasing your Fiber

- A good goal is 30 to 40 g per day

- Try to get through whole foods; if you can't, supplements are okay. If you use supplements, I recommend a ***soluble*** fiber like psyllium husk

- Increase your fiber gradually – if you go too fast, you may struggle with stomach cramping and gas. I recommend starting at an extra 3 or 4 g/day for the first week and then increasing from there

Nutritional Strategies

1. Increase your fiber intake

2. **Increase your "low calorie density" foods**

3. Avoid ultra-processed foods

Eat more "low calorie density" foods

- The "eat less" approach can leave people hungry and unsatisfied

- Shift from "eat less" to "eat more" of healthy, low energy density foods

- Help you feel full with fewer calories

- Naturally crowd out less healthy alternatives

CALORIE DENSITY
OF COMMON FOODS

Food	Calorie Density
Romaine Lettuce	170 kcal/kg
Tomatoes	180 kcal/kg
Watermelon	300 kcal/kg
Cantaloupe	340 kcal/kg
Winter Squash	400 kcal/kg
Orange	470 kcal/kg
Pineapple	500 kcal/kg
Farina (Cooked)	530 kcal/kg
Nonfat Greek Yogurt	590 kcal/kg
Oatmeal	680 kcal/kg
Boiled Potatoes	870 kcal/kg
Bananas	890 kcal/kg
Brown Rice	1,120 kcal/kg
Kidney Beans	1,270 kcal/kg
Black Beans	1,300 kcal/kg
White Rice	1,300 kcal/kg
Whole Wheat Pasta	1,490 kcal/kg
Hard-Boiled Egg	1,550 kcal/kg
Chicken Breast	1,590 kcal/kg
Multi-Grain Bread	2,670 kcal/kg
Ground Beef (80% Lean)	2,700 kcal/kg
Plain Bagel	2,870 kcal/kg
Kellogg's Froot Loops	3,750 kcal/kg
Kellogg's Special K	3,770 kcal/kg
Pretzels	3,840 kcal/kg
Diet Bar	3,860 kcal/kg
Rice Cakes	3,870 kcal/kg
Fruit and Nut Bar	4,030 kcal/kg
Cheddar Cheese	4,040 kcal/kg
Croissant	4,060 kcal/kg
Granola Bar	4,260 kcal/kg
Potato Chips	4,870 kcal/kg
Peanut Butter	5,890 kcal/kg
Mixed Nuts	6,070 kcal/kg
Olive Oil	8,840 kcal/kg

Calories Per Kilogram

Research has shown that the total weight of food we eat each day tends to remain constant even if our caloric intake varies greatly. Many otherwise healthy foods may be sabotaging our weight loss efforts simply because they are too calorie-dense.

SOURCE: https://www.nourishlab.com/caloric-density

nourish LAB
NourishLab.com

The number of "stomachfuls" to reach 2,000 calories

Chopped broccoli

Watermelon balls

Apple slices

Sweet potato cubes

Oatmeal

Eggs

Cashews

Cheese

Cookies

Average human stomach: 4 cups of food. 1 stomachful of broccoli is about 125 calories

Adapted from Greger, M. (2019). *How not to diet: the groundbreaking science of healthy, permanent weight loss*. Flatiron Books.

Eat more "low calorie density" foods

Eat More	On Target	Eat Less	Eat Sparingly
< 100 calories per cup	< 300 calories per cup	300-600 calories per cup	> 600 calories per cup
Most fresh fruit	Avocados and bananas	Dried fruit	Oil
Most vegetables	Starchy vegetables	French fries & onion rings	Chocolate
	Whole grain pasta and grains	Bread	Cheese
		Eggs	Bacon
	Beans, lentils, & chickpeas	Beef, pork, and poultry	
	Yogurt		
	Seafood and wild game		

Greger, M. (2019). *How not to diet: the groundbreaking science of healthy, permanent weight loss*. Flatiron Books.

Example goal

- Four days per week, I would like to start my lunch by eating a piece of fruit or a salad (low-calorie density foods)

Nutritional Strategies

1. Increase your fiber intake

2. Increase your "low calorie density" foods

3. **Avoid ultra-processed foods**

Ultra-processed foods comprise what percentage (in terms of calorie intake) of the typical American diet?

A. 40%

B. 50%

C. 60%

D. 70%

Ultra-processed foods comprise what percentage (in terms of calorie intake) of the typical American diet?

A. 40%

B. 50%

C. 60%

D. 70%

What are ultra-processed foods?

Ultra-processed Foods, Weight Gain, and Co-morbidity Risk

Anthony Crimarco[1] · Matthew J. Landry[1] · Christopher D. Gardner[1]

Fig. 1 Spectrum of processing of foods based on the NOVA classification. The figure provides examples of foods and types of processing methods within each NOVA classification group. Definitions are adapted from Monteiro et al. (2018) [8]

Group 1
Unprocessed or Minimally Processed Foods

Fresh, dry, or frozen vegetables or fruit, grains, legumes, meat, fish, eggs, nuts and seeds.

Processing includes removal of inedible/unwanted parts. Does not add substances to the original food.

Group 2
Processed Culinary Ingredients

Plant oils (e.g., olive oil, coconut oil), animal fats (e.g., cream, butter, lard), maple syrup, sugar, honey, and salt.

Substances derived from Group 1 foods or from nature by processes including pressing, refining, grinding, milling, and drying.

Group 3
Processed Foods

Canned/pickled vegetables, meat, fish, or fruit, artisanal bread, cheese, salted meats, wine, beer, and cider.

Processing of foods from Group 1 or 2 with the addition of oil, salt, or sugar by means of canning, pickling, smoking, curing, or fermentation.

Group 4
Ultra-Processed Foods

Sugar sweetened beverages, sweet and savory packaged snacks, reconstituted meat products, pre-prepared frozen dishes, canned/instant soups, chicken nuggets, ice cream.

Formulations made from a series of processes including extraction and chemical modification. Includes very little intact Group 1 foods.

Increasing Level of Processing

Avoid ultra-processed foods

- Ultra-processed foods *comprise about 60% of the caloric intake of the average American* adult (and about 70% of the average American child)

- They are inexpensive, have a long shelf life, and are highly convenient (often ready-to-eat or ready-to heat)

Food can be classified in four categories

Unprocessed/ Minimally processed	Processed ingredients	Processed	Ultra - processed
Fruit	Oils	Ham	Supermarket bread
Vegetables	Sugar	Cheese	Ready meals
Eggs	Salt	Bread	Breakfast cereal
Milk	Honey	Bacon	Cakes
Meat	Butter	Salted nuts	Crisps

Note: Nova classification of food categories. "Processed ingredients" are also known as "processed culinary ingredients".

Source: University of Sao Paulo, Brazil, Getty Images   BBC

Avoid ultra-processed foods

- Processed foods are often designed to be "hyper-palatable"

- In nature, fat, sugar and salt rarely co-exist. In processed food, these are combined and concentrated.

Flamin' hot addictions: why is America so hooked on ultra-processed foods?

Habit-forming and intrinsically nutritionally unbalanced junk foods elevate the levels of hormones responsible for hunger

📷 Researchers say that junk food can interact with the brain to make it look like a person is consuming a drug. Photograph: Chicago Tribune/MCT/Getty Images

The Guardian US

Cell Metabolism

Clinical and Translational Report

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

Authors
Kevin D. Hall, Alexis Ayuketah, Robert Brychta, ..., Peter J. Walter, Shanna Yang, Megan Zhou

Avoid ultra-processed foods

- Have drawn comparisons to other addictive substances:
  - Can trigger the "feel good" messengers in our brains such as dopamine, serotonin, and endocannabinoids
  - Trigger cravings
  - Lead to compulsive overuse in the face of negative consequences

Obesity and food addiction: Similarities to drug addiction

Bruna Campana, Poliana Guiomar Brasiel*, Aline Silva de Aguiar,
Sheila Cristina Potente Luquetti Dutra

Review
What Is the Evidence for "Food Addiction?"
A Systematic Review

Eliza L. Gordon [1,*], Aviva H. Ariel-Donges [1], Viviana Bauman [1] and Lisa J. Merlo [2]

Avoid ultra-processed foods

- To summarize, processed foods tend to be:
  - More calorie dense
  - Less filling and more quickly absorbed (less fiber and less water)
  - Hyperpalatable and hard to stop eating

PHOTO: FOOD & WINE / GETTY IMAGES

Avoid ultra-processed foods

- Is there evidence to suggest they are harming our health?
  - Consistently associated with an increase in all-cause mortality in cohort studies

Ultra-processed food intake and all-cause mortality: DRECE cohort study

Carmen Romero Ferreiro[1,2,*], Cristina Martín-Arriscado Arroba[1,2], Pilar Cancelas Navia[1,2], David Lora Pablos[1,2,3,4] and Agustín Gómez de la Cámara[1,2,3]
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MAYO CLINIC

Consumption of Ultra-Processed Foods and Mortality: A National Prospective Cohort in Spain

Ruth Blanco-Rojo, PhD; Helena Sandoval-Insausti, MD, MPH; Esther López-Garcia, MhPharm, PhD; Auxiliadora Graciani, MD, PhD; Jose M. Ordovás, PhD; Jose R. Banegas, MD, PhD; Fernando Rodríguez-Artalejo, MD, PhD; and Pilar Guallar-Castillón, MD, PhD

Original Investigation

February 11, 2019

FREE

Association Between Ultraprocessed Food Consumption and Risk of Mortality Among Middle-aged Adults in France

Laure Schnabel, MD, MSc[1,2]; Emmanuelle Kesse-Guyot, PhD[1]; Benjamin Allès, PhD[1]; et al
» Author Affiliations | Article Information

Association between consumption of ultra-processed foods and all cause mortality: SUN prospective cohort study

Anaïs Rico-Campà,[1,2] Miguel A Martínez-González,[1,2,3,4] Ismael Alvarez-Alvarez,[1] Raquel de Deus Mendonça,[1,5] Carmen de la Fuente-Arrillaga,[1,2,3] Clara Gómez-Donoso,[1] Maira Bes-Rastrollo[1,2,3]

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

Authors

Kevin D. Hall, Alexis Ayuketah, Robert Brychta, ..., Peter J. Walter, Shanna Yang, Megan Zhou

Cell Metabolism

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

Authors

Kevin D. Hall, Alexis Ayuketah, Robert Brychta, ..., Peter J. Walter, Shanna Yang, Megan Zhou

Figure 1. Overview of the Study Design

Twenty adults were confined to the metabolic ward at the NIH Clinical Center, where they were randomized to consumed either an ultra-processed or unprocessed diet for 2 consecutive weeks followed immediately by the alternate diet. Every week, subjects spent 1 day residing in a respiratory chamber to measure energy expenditure, respiratory quotient, and sleeping energy expenditure. Average energy expenditure during each diet period was measured by the doubly labeled water (DLW) method. Body composition was measured by dual-energy X-ray absorptiometry (DXA) and liver fat was measured by magnetic resonance imaging/spectroscopy (MRI/MRS).

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

Table 1. Diet Composition of the Average 7-Day Rotating Menu Presented to the Subjects during the Ultra-Processed and Unprocessed Diet Periods

	Ultra-Processed Diet	Unprocessed Diet
Three Daily Meals		
Energy (kcal/day)	3,905	3,871
Carbohydrate (%)	49.2	46.3
Fat (%)	34.7	35.0
Protein (%)	16.1	18.7
Energy density (kcal/g)	1.024	1.028
Non-beverage energy density (kcal/g)	1.957	1.057
Sodium (mg/1,000 kcal)	1,997	1,981
Fiber (g/1,000 kcal)	21.3	20.7
Sugars (g/1,000 kcal)	34.6	32.7
Saturated fat (g/1,000 kcal)	13.1	7.6
Omega-3 fatty acids (g/1,000 kcal)	0.7	1.4
Omega-6 fatty acids (g/1,000 kcal)	7.6	7.2
Energy from unprocessed (%)[a]	6.4	83.3
Energy from ultra-processed (%)[a]	83.5	0

Cell Metabolism

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

Figure 3. Body Weight and Composition Changes

Cell Metabolism

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

Example goal

- I want to cook two dinners each week that are completely free of ultra-processed foods

Is it easy to identify ultra-processed foods?

Are the Foods in Your Cart Ultraprocessed?

Take a virtual shopping trip to learn more about what's on grocery store shelves.

By Jancee Dunn Illustrations by Simon Bailly   Jan. 5, 2025

The New York Times

Browse →

Which would you choose?
Click on the ingredients for clues.

Post Original Spoon Size Shredded Wheat

Ingredients ⌄

Special K Fruit & Yogurt Cereal

Ingredients ⌄

Nature Valley Oats and Honey Protein Granola

Ingredients ⌄

Fiber One Original Bran Breakfast Cereal

Ingredients ⌄

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Post Original Spoon Size Shredded Wheat
Not Ultraprocessed

YOUR PICK

This cereal, a favorite among nutritionists, has only two ingredients: whole-grain wheat and BHT, a common preservative. The presence of preservatives does not make a food ultraprocessed.

Special K Fruit & Yogurt Cereal
Ultraprocessed

The first ingredient in this cereal is whole-grain wheat, but it also contains corn syrup as well as soy lecithin, an emulsifier derived from soybeans. These ingredients make it a UPF.

Nature Valley Oats and Honey Protein Granola
Ultraprocessed

This cereal has soy protein isolate and soy lecithin, making it ultraprocessed.

However, federal guidelines recommend that adults consume at least 48 grams of whole grains per day, and one serving of this cereal provides more than half that amount. Many UPFs provide essential nutrients, such as protein, fiber and vitamins and minerals.

Fiber One Original Bran Breakfast Cereal
Ultraprocessed

This cereal is high in fiber. But it also contains additives that make it a UPF, including guar gum and cellulose gum, both of which are often used as thickeners. It also contains sucralose, an artificial sweetener that makes it a UPF.

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Which would you choose?
Click on the ingredients for clues.

Arnold Whole Grains 100% Whole Wheat Bread

Ingredients ↝

Applegate Organics Chicken & Apple Sausage

Ingredients ↝

Progresso Southwest-Style Black Bean Soup

Ingredients ↝

Jif Reduced Fat Creamy Peanut Butter Spread

Ingredients ↝

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Applegate Organics Chicken & Apple Sausage

Not Ultraprocessed

With familiar ingredients such as chicken, dried apples and garlic, this sausage is not ultraprocessed.

Arnold Whole Grains 100% Whole Wheat Bread

Ultraprocessed

It can be difficult to find packaged breads that are not ultraprocessed. Many have at least one or two ingredients that make them a UPF. This one has wheat gluten, commonly used to make dough more elastic, and soy lecithin, an emulsifier that can increase a bread's volume.

Progresso Southwest-Style Black Bean Soup

Ultraprocessed

This soup is ultraprocessed because it has ingredients such as modified food starch and soy protein isolate. It also has some good things going for it: It's high in fiber and contains a half-cup of vegetables.

Jif Reduced Fat Creamy Peanut Butter Spread

Ultraprocessed

Some peanut butters contain just two or three ingredients (peanuts, oil and salt). This version is ultraprocessed because it has extra ingredients like mono and diglycerides, which are emulsifiers, and corn syrup solids, a dehydrated version of corn syrup typically used to add sweetness. When something is labeled "reduced-fat," as this peanut butter is, it is often a UPF.

TrueFood is a user-friendly interface designed to unveil the degree of processing of food products, powered by GroceryDB, a comprehensive database. GroceryDB is part of a research project *[Prevalence of Processed Food in Grocery Stores, Nature Food, 2024],* that provides the data and methodologies necessary to quantify food processing and analyze ingredient structures within the U.S. food supply. By integrating large-scale data on food composition with machine learning, TrueFood offers valuable insights into the current state of food processing in the U.S. grocery landscape, highlighting distributions of food processing scores and the variability in product offerings across different grocery stores.

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Categories

Pizza	Mac & Cheese	Pasta, Noodles & Couscous	Soup Stew Broth	Prepared Meals & Dishes	Meat & Meat Alternatives
Sausage-Bacon	Jerky	Seafood	Cookies & Biscuit	Cakes	Chocolate & Candy
Shakes & Other Drinks	Soft, Energy & Mixed Drinks	Juice	Coffee Related	Tea Related	Bread

Nutritional Strategies

1. Increase your fiber intake

2. Increase your "low calorie density" foods

3. Avoid ultra-processed foods

Goal Setting

In addition to setting short term SMART goals, it can also be helpful for patients to set long term goals:

- "I want to be able to hike with my kids when we go camping"
- "I want to feel more confident"
- "I want to fit into my old clothes again"

Follow-Up

- More frequent follow-up has been associated with better results for weight loss

- Frequent visits allows for:
  - Celebration of success
  - Accountability
  - Support
  - Refreshers on nutritional or behavioral strategies
  - Problem solving

- I recommend every 4 weeks for the first 6 months, if you and your patients can swing it

- Virtual okay if patients are self-monitoring

Select Resources

Oregon Department of Human Services

OHSU CPD

Learn how to eat healthy with MyPlate

Remember the food pyramid? Meet MyPlate, the official symbol of the five food groups. Learn how to make MyPlate work for you.

Explore MyPlate

Click on a food group to explore!

Fruits
Grains
Dairy
Vegetables
Protein

MyPlate.gov

Oregon Department of Human Services

OHSU

the YMCA

CPD

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Fruits · Grains · Dairy · Vegetables · Protein

MyPlate.gov

Oregon Department of Human Services

EAT WELL ON $4/DAY
GOOD AND CHEAP
LEANNE BROWN

the Y YMCA

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Fruits | Grains | Dairy
Vegetables | Protein

MyPlate.gov

Summary

- Obesity is hurting our health

- Obesity is not an individual failing

- Weight loss through lifestyle changes is doable

- 3 Nutritional Strategies:
    1. Increase fiber intake
    2. Increase "low calorie density" foods
    3. Avoid processed foods

Objectives

1. Review basic epidemiology of obesity in the United States

2. Convey the value of nutrition counseling in primary care

3. Present an example of a practical model for nutrition counseling in primary care

4. Provide 3 examples of *specific* nutrition recommendations you can discuss with your own patients

Questions?

4. Sleep

- While insufficient sleep increases energy expenditure by ~100 kcal / day, it increases energy intake by > 250 kcal / day

- Sleep restriction increases drive for hedonic eating: poor dietary choices (high carbohydrate foods, fats, sugar-sweetened beverages, and alcohol)

Fig. 4 | **Insufficient sleep affects energy intake and energy expenditure, which leads to a positive energy balance and the risk of weight gain.** During experimental

Goal Setting

SMART Goal Setting Worksheet

Name: _____

1. What is the goal? _____
_____
_____
_____

2. Why is the goal important? _____
_____
_____
_____
_____

3. SMART goal checklist

Specific — Is the goal clearly written, with no ambivalence? Is it clear who needs to accomplish the goal, and any support they might expect? ☐

Measurable — Does the goal answer the questions of how many, how much and/or how often? ☐

Achievable — Can you get the support needed to achieve the goal by the target date? Do you have all the resources needed to achieve the goal? Are the results expected realistic? ☐

Relevant — Does the goal make a difference in your career? Is it going to make an improvement in your personal life? Is it going to significantly make a difference to your business? ☐

Time-bound — Does the goal state a clear and specific completion date? ☐

4. List potential problems that might keep you from completing your goal.
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

5. Goal Completion date _____

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- [Strategies for Eating Well on a Budget - The Nutrition Source](#)