NUTRISIZE HEALTH HANDBOOK, PRACTITIONER EDITION

Evidence at the point of practice

The numbers you are asked about, with their sources, the places where bodies disagree, and what each finding does not show. Drawn from NIH, CDC, FDA, CMS, HRSA, EPA, WHO, PAHO, EMA, the National Academies and peer-reviewed journals.

MOVEMENT

Activity guidance and where clients stand

The guideline numbers, side by side

WHO (2020) for adults 18 to 64: 150 to 300 minutes a week of moderate aerobic activity, or 75 to 150 vigorous, or an equivalent mix, with additional benefit above those ranges. Muscle strengthening at moderate or greater intensity on 2 or more days a week for all major muscle groups (a strong recommendation, moderate certainty). Adults 65 and over: varied multicomponent activity with functional balance and strength on 3 or more days a week. The CDC states the adult minimum as 150 minutes moderate or 75 vigorous plus strengthening on at least 2 days.

Source: Bull FC, Al-Ansari SS, Biddle S, et al. World Health Organization 2020 guidelines on physical activity and sedentary behaviour. Br J Sports Med 2020;54:1451-1462. doi.org/10.1136/bjsports-2020-102955; Adult Activity: An Overview, CDC. https://www.cdc.gov/physical-activity-basics/guidelines/adults.html

What this does not show: WHO notes that benefits accrue below the recommended levels, so these are targets and not thresholds. Evidence was insufficient to set a numeric sedentary-time limit.

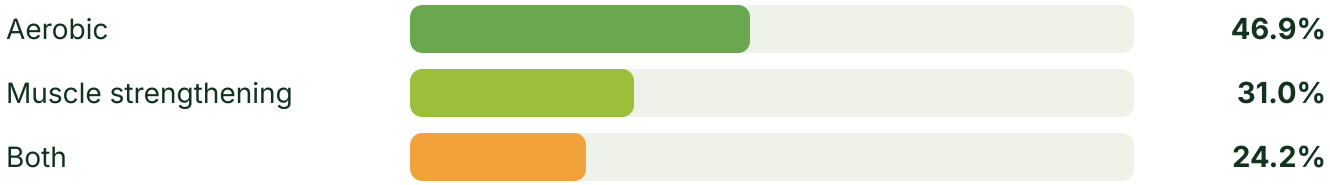
A free tool for this: The Nutrisize Health exercise library (5,404 exercises) can be filtered by equipment and difficulty, with how-to, common mistakes, breathing cues and contraindications on each. Free to browse, and it runs on your device.

Where clients stand: the strength gap

In 2020, 46.9% of US adults met the aerobic guideline, 31.0% the muscle-strengthening guideline, and 24.2% both. A pooled analysis across 32 countries found 17.12% of adults (95% CI 15.42 to 18.88) met both. Lifting was linked to 10 to 17% lower risk of death, heart disease, cancer and diabetes in 16 cohorts, with the largest gain at roughly 30 to 60 minutes a week.

US adults meeting each guideline (2020)

NHIS, adults 18 and over, self-reported



Source: Elgaddal N, Kramarow EA, Reuben C. Physical Activity Among Adults Aged 18 and Over: United States, 2020. NCHS Data Brief No. 443, CDC, 2022. https://www.cdc.gov/nchs/products/databriefs/db443.htm; Garcia-Hermoso A, Lopez-Gil JF, Ramirez-Velez R, et al. Adherence to aerobic and muscle-strengthening activities guidelines. Br J Sports Med 2023;57(4):225-229. doi.org/10.1136/bjsports-2022-106189; Momma H, Kawakami R, Honda T, Sawada SS. Muscle-strengthening activities are associated with lower risk and mortality in major non-communicable diseases. Br J Sports Med 2022;56(13):755-763. doi.org/10.1136/bjsports-2021-105061

What this does not show: The dose-response for lifting is J-shaped, so more is not shown to be better, and 30 to 60 minutes is not a proven optimum. Observational and self-reported.

Step targets and the cheapest first step

Across cohorts the mortality benefit of steps plateaued around 6,000 to 8,000 a day at age 60 and over, and 8,000 to 10,000 below 60 (15 cohorts, 47,471 adults). In US adults, 8,000 steps versus 4,000 was linked to hazard ratio 0.49 (0.44 to 0.55), and step intensity added nothing once steps were counted (HR 0.90, 0.65 to 1.27). A 2025 review put the inflection around 5,000 to 7,000 steps. For clients who do not exercise, short vigorous bursts in daily life (about 3 bouts of 1 to 2 minutes a day) were linked to 38 to 40% lower all-cause mortality in UK Biobank non-exercisers.

Study	Population	Finding
Paluch 2022	15 cohorts, 47,471 adults	Plateau 6,000 to 8,000 (age 60+); 8,000 to 10,000 (under 60)
Saint-Maurice 2020	NHANES, 4,840 adults 40+	8,000 vs 4,000 steps: HR 0.49 (0.44 to 0.55)
Ding 2025	Meta-analysis of cohorts	7,000 vs 2,000 steps: HR 0.53 (0.46 to 0.60)
Stamatakis 2022	UK Biobank, 25,241 non-exercisers	3 bouts/day of 1 to 2 min: 38 to 40% lower all-cause mortality

Source: Paluch AE et al. Lancet Public Health 2022;7(3):e219-e228. doi.org/10.1016/S2468-2667(21)00302-9; Saint-Maurice PF et al. JAMA 2020;323(12):1151-1160. doi.org/10.1001/jama.2020.1382; Ding D, Nguyen B, Nau T, et al. Daily steps and health outcomes in adults. Lancet Public Health 2025;10:e668-e681. doi.org/10.1016/S2468-2667(25)00164-1; Stamatakis E et al. Nat Med 2022;28(12):2521-2529. doi.org/10.1038/s41591-022-02100-x

> **What this does not show:** All observational. People with more steps are healthier in other ways; certainty was moderate for most outcomes in the 2025 review and lower for some.

Energy needs: the 2023 DRI update

The 2023 National Academies energy report revised the estimated energy requirement equations mainly because overweight and obesity prevalence kept rising, and it widened the reference population to the general population. Adult physical activity level (PAL) categories: inactive 1.0 to under 1.53; low active 1.53 to under 1.68; active 1.68 to under 1.85; very active 1.85 to 2.50. The equations do not predict requirements above a PAL of 2.5. Updated estimates are generally higher for the least active and lower for the most active than the earlier values.

Source: Dietary Reference Intakes for Energy, National Academies Press, 2023. https://www.nationalacademies.org/read/26818/chapter/3

> **What this does not show:** These are population-level estimating equations, not an individual's measured expenditure.

NUTRITION

Food, nutrients and the benchmarks you will be quoted

Protein per meal: a practical distribution

A review suggests about 0.4 g of protein per kg of body weight in each of at least four meals, which reaches roughly 1.6 g/kg/day. If the 2.2 g/kg/day upper level is spread over four meals the maximum is 0.55 g/kg/meal. The review argues against a hard ceiling of 20 to 25 g per meal.

Body weight	50 kg	60 kg	70 kg	80 kg	90 kg	100 kg
Per meal (g), derived at 0.4 g/kg	20	24	28	32	36	40

Source: Schoenfeld BJ, Aragon AA. J Int Soc Sports Nutr 2018;15. doi.org/10.1186/s12970-018-0215-1

What this does not show: A narrative review of mechanistic and acute studies. The grams above are derived from 0.4 g/kg, not measured outcomes.

A free tool for this: The Nutrisize Health food library lists protein and 74 other nutrients per 100 g across 4,995 foods, with serving sizes, so portions can be worked out for a client's usual foods. Free to browse.

Benchmarks differ by body: sodium, fibre and sugars

Practitioners meet several numbers for the same nutrient. They are not contradictions, since each answers a different question.

Nutrient	Benchmark	Source
Sodium	Under 2,000 mg/day (WHO); chronic disease risk reduction intake 2,300 mg/day for ages 14+, adequate intake 1,500 mg/day (NASEM 2019); Daily Value 2,300 mg (FDA); DASH 2,300 mg, with 1,500 mg lowering blood pressure further (NHLBI)	WHO, NASEM, FDA, NHLBI
Sodium, actual intake	About 3,400 mg/day in the US (FDA); global mean 4,278 mg/day in 2021 (WHO)	FDA, WHO
Fibre	At least 25 g/day over age 10 (WHO); Daily Value 28 g (FDA); largest risk reduction at 25 to 29 g/day in the Lancet 2019 meta-analyses	WHO, FDA, Reynolds 2019
Added/free sugars	Added sugars Daily Value 50 g (10% of 2,000 kcal) (FDA); free sugars under 10% of energy (WHO); PAHO flags 10% or more of energy as 'high in free sugars'	FDA, WHO, PAHO

Source: Sodium reduction fact sheet, WHO, 11 May 2026. https://www.who.int/news-room/fact-sheets/detail/sodium-reduction; Dietary Reference Intakes for Sodium and Potassium, National Academies of Sciences, Engineering, and Medicine, 2019. https://nationalacademies.org/news/2019/03/sodium-and-potassium-dietary-reference-intake-values-updated-in-new-report; Daily Value on the Nutrition and Supplement Facts Labels, FDA. https://www.fda.gov/food/nutrition-facts-label/daily-value-nutrition-and-supplement-facts-labels; DASH Eating Plan, NHLBI, updated 25 February 2026. https://www.nhlbi.nih.gov/education/dash-eating-plan; Sodium Reduction in the Food Supply, FDA, 2024. https://www.fda.gov/food/nutrition-food-labeling-and-critical-foods/sodium-reduction-food-supply; Healthy diet fact sheet, WHO, 26 January 2026. https://www.who.int/news-room/fact-sheets/detail/healthy-diet; Reynolds A et al. Carbohydrate quality and human health. Lancet 2019;393(10170):434-445. doi.org/10.1016/S0140-6736(18)31809-9; Added Sugars on the Nutrition Facts Label, FDA (content current March 2026). https://www.fda.gov/food/nutrition-facts-label/added-sugars-nutrition-facts-label; Nutrient Profile Model, PAHO. https://www.paho.org/en/nutrient-profile-model

What this does not show: The 2019 NASEM report set no potassium chronic-disease or upper level. Daily Values are label references on a 2,000-calorie diet, not individual prescriptions.

No single diet won the head-to-head trials

In DIETFITS (609 adults), healthy low-fat and healthy low-carbohydrate diets produced similar 12-month weight loss: 5.3 kg versus 6.0 kg, difference 0.7 kg (95% CI -0.2 to 1.6); neither genotype pattern nor insulin secretion predicted response. Adding time-restricted eating (8:00 to 16:00) to calorie restriction gave no extra weight loss at 12 months in 139 adults (net difference 1.8 kg, 95% CI -4.0 to 0.4). A Cochrane review of Mediterranean-style diets (30 trials, 12,461 people) found low-to-moderate certainty for clinical endpoints, with a modest systolic blood pressure fall of 2.99 mmHg.

Source: Gardner CD et al. JAMA 2018;319(7):667-679 (DIETFITS). doi.org/10.1001/jama.2018.0245; Liu D et al. N Engl J Med 2022;386(16):1495-1504. doi.org/10.1056/NEJMoa2114833; Mediterranean-style diet review. Cochrane Database Syst Rev 2019;3:CD009825. doi.org/10.1002/14651858.CD009825.pub3

> **What this does not show:** Trials with group counselling, 12-month weight outcomes; certainty was not graded in the abstracts for the two RCTs.

Hydration: total water, not only drinking water

The National Academies set an adequate intake for total water, which includes drinking water, other beverages and water in food: 3.7 L/day for men and 2.7 L/day for women aged 19 to 30.

Source: Dietary Reference Intakes for Water, Potassium, Sodium, Chloride, and Sulfate, National Academies Press, 2005. https://www.nationalacademies.org/read/10925/chapter/6

> **What this does not show:** A 2005 population reference for adults 19 to 30. It is not a target for any one person, and needs rise with heat and activity.

Fish and mercury advice you can hand to clients

EPA and FDA advise lower-mercury choices. Pregnant or breastfeeding: 8 to 12 ounces a week. Children: 1 to 2 servings a week, from 1 ounce at ages 1 to 3 to 4 ounces at 11 and over. EPA also quotes the Dietary Guidelines reference of at least 8 ounces of seafood a week on 2,000 kcal.

Source: EPA-FDA Advice about Eating Fish and Shellfish, EPA, updated 1 October 2026. https://www.epa.gov/choose-fish-and-shellfish-wisely/epa-fda-advice-about-eating-fish-and-shellfish

> **What this does not show:** Mercury-aware advice, not a disease-prevention claim.

Supplement use is common

In 2021 to 2023, 60.2% of US adults used a dietary supplement in the past 30 days (women 66.1%, men 53.9%; 75.9% at age 60 and over), and 38.7% used two or more.

Source: Dietary Supplement Use: United States, August 2021-August 2023. NCHS Data Brief No. 561, May 2026. https://www.cdc.gov/nchs/products/databriefs/db561.htm

> **What this does not show:** The brief describes use. It does not assess need, dose or safety.

SLEEP

Sleep as part of the plan

Sleep: what moves insomnia, what does not

A component network meta-analysis of 241 trials (31,452 participants) found that cognitive restructuring (OR for remission 1.68, 1.28 to 2.20), sleep restriction (1.49, 1.04 to 2.13), stimulus control (1.43, 1.00 to 2.05) and third-wave components (1.49, 1.10 to 2.03) were linked to remission, while sleep hygiene education (1.01, 0.77 to 1.32) and relaxation (0.81, 0.64 to 1.02) were not. In East Asian cohorts (322,721 adults), mortality followed a J-shaped curve with a 7-hour reference, and 10 hours or more was the strongest marker of risk.

Source: Furukawa Y et al. JAMA Psychiatry 2024. doi.org/10.1001/jamapsychiatry.2023.5060; Sleep duration and mortality in East Asian cohorts. JAMA Netw Open 2021. doi.org/10.1001/jamanetworkopen.2021.22837

What this does not show: Sleep duration was self-reported in the cohorts. Abstract-level reading for both papers.

Longer sleep, fewer calories

Adults aged 21 to 40 with overweight and habitual sleep under 6.5 hours, randomised to extend sleep by about 1.2 hours a night, ate about 270 fewer calories a day over two weeks (95% CI -393 to -147).

Source: Tasali E, Wroblewski K, Kahn E, Kilkus J, Schoeller DA. JAMA Intern Med 2022;182:365-374. doi.org/10.1001/jamainternmed.2021.8098

What this does not show: 80 adults, one centre, two weeks; no long-term weight effect shown.

A free tool for this: The Nutrisize Health daily dashboard includes sleep among its 10 scored KPIs, using what a client logs or chooses to sync from Apple Health or Health Connect.

PROGRAMMES AND POLICY

What works at scale, and the regulatory backdrop

What lifestyle programmes achieve: trial versus real world

In the NIH Diabetes Prevention Program (3,234 participants), a lifestyle intervention aiming for 7% weight loss and 150 minutes of activity a week lowered the risk of type 2 diabetes by 58% versus placebo (71% for ages 60 and over), and metformin by 31%. In real-world Medicare delivery of the same programme (9,015 beneficiaries, 2018 to 2024), average weight loss was 4.9%, and 53% reached the 5% goal. At HRSA-funded health centers, documented weight assessment with nutrition and physical activity counselling for children 3 to 17 rose from 68.72% in 2021 to 75.22% in 2025.

58%
lower diabetes risk, DPP lifestyle arm vs placebo

4.9%
average weight loss in Medicare's MDPP

75.22%
children 3 to 17 with counselling documented, health centers, 2025

Source: Diabetes Prevention Program (DPP), NIDDK, reviewed August 2021. https://www.niddk.nih.gov/about-niddk/research-areas/diabetes/diabetes-prevention-program-dpp; Medicare Diabetes Prevention Program Expanded Model: Findings at a Glance (April 2018 to March 2024), CMS Innovation Center, 2025. https://www.cms.gov/priorities/innovation/data-and-reports/2025/mdpp-finalevalrpt-fg; National Health Center Program Uniform Data System (UDS) Awardee Data, HRSA. https://data.hrsa.gov/tools/data-reporting/program-data/national

> **What this does not show:** A randomised trial and an administrative evaluation answer different questions. Programme reach in Medicare was limited.

Regulatory context: weight-management medicines

In the EU, tirzepatide (Mounjaro) is authorised as an adjunct to a reduced-calorie diet and increased physical activity for weight management in adults with BMI of 30 or more, or 27 to under 30 with at least one weight-related comorbidity. EMA also recommended an oral semaglutide form 'together with diet and physical activity', and states that GLP-1 receptor agonists are not approved for, and should not be used for, cosmetic weight loss.

Source: Mounjaro EPAR page, EMA (page updated 8 October 2026). https://www.ema.europa.eu/en/medicines/human/EPAR/mounjaro; First oral GLP-1 treatment for weight management, EMA, 22 May 2026. https://www.ema.europa.eu/en/news/first-oral-glp-1-treatment-weight-management; EU actions to tackle shortages of GLP-1 receptor agonists, EMA, 26 June 2024. https://www.ema.europa.eu/en/news/eu-actions-tackle-shortages-glp-1-receptor-agonists

> **What this does not show:** Regulatory wording, not treatment advice. Medicines are prescribed by clinicians.

Reference tools you can open with a client

Nutrisize Health is a free reference for iPhone and Android built from cited sources. It is not medical advice and does not replace your judgement.

- Food library: 4,995 foods, 75 nutrients, serving sizes, regional names, allergens and glycemic category
- Exercise library: 5,404 exercises with equipment filters, how-to, common mistakes, breathing cues and contraindications
- Daily requirements by demographic, regional units, and generated meal and exercise plans

Free to use, with optional Remove Ads and premium packs. Your health data stays on your device.

Sources

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This handbook is a compilation, paraphrased from the cited public sources, with each figure traceable to its source; it is not a peer-reviewed publication. It provides health and wellness information for educational purposes and is not medical advice. Consult your clinician before changing your diet or exercise. Published by Nutrisize Health, a product of EqualInformation, LLC, Sunnyvale, CA, USA. October 2026.

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