

Diet Creation

1. Data of the person

Anthropometric data and habits of the individual

Eating habits (surveys)

2. Assessment of nutritional status

already discussed

3. Calculation of total energy expenditure

Define the goal

normocaloric diet (maintain weight)

hypocaloric diet (↓20-30% kcal)

hypercaloric diet (gain weight)

Others: focus on macros & micros

Total energy expenditure = basal metabolism + food-induced thermogenesis + physical activity

Calculations: Approximate and Semi-Approximate Methods → Harris-Benedict * group of activity / each activity group energy expenditure

4. Calculation of macros & micros

EFSA recommendations

Carbs: 45-60% (sugar <10%)

Proteins: 10-15% (30-40% animal protein)

Fats: 20-35% (SFA<10%, PUFA 6-10%, TFA <1%, Cho <300 mg)

Water: 2L for ♀, 2,5L for ♂

Fibre: 25 g/day

Salt: <5 g/day (2 g Na⁺/day)

Vitamins & Minerals: Adaptation to needs

5. Distribution of daily meals

4 meals

30% Breakfast

35% Lunch

10% Snack

25% Dinner

5 meals

20% Breakfast

10% Snack

35% Lunch

10% Snack

25% Dinner

6 meals

15% Breakfast

10% Snack

30% Lunch

15% Snack

25% Dinner

5% Snack



6. Designing a diet

7. Monitoring the diet

Convert energy into quantities

Carbs 4 kcal/g
Proteins 4 kcal/g
Fat 9 kcal/g
Fibre 2 kcal/g
Polyalcohols 2,4 kcal/g
Alcohol 7 kcal/g
Organic Acids 3 kcal/g
Salatrim 6 kcal/g

Recommendations and portions

Veggies: ≥3/d 150-200g
Fruits: ≥2-3/d 120-200g
Grains: 3-6/d 40-80g
Legumes: ≥4/w 50-60g
Nuts: 3-7/w 30g
Fish: ≥3/w 125-150g
Eggs: ≤4/w 1 Egg ~60g
Dairy: ≤3/d 200ml, 125ml, 40-60g, 80-125g
Meat: ≤3/w 100-125g
Tubers: 150-200g
Olive Oil: daily 10ml/p

Convert nutrients into food

1. Grammage
2. Homemade food measures. Portions
3. Food equivalents system
4. Pre-established protein percentage system
5. Point system.

Grammage / Portions method

Set the portions in the meals starting with carbs

then protein

and the fats last

Food equivalents system

interchangeable foods inside a group, using equivalents

1 equivalent of carbs: 10g
1 equivalent of proteins: 10g
1 equivalent of fats: 5g



How to use equivalents

1. add half the carbs
2. **protein** adjustment
3. **fat** adjustment
4. **carbs** adjustment using fruits and sugars



Hypocaloric diet

Definition

Diet with +800kcal / day and a deficit of 500-1000 kcal / day

Macronutrients distribution similar to general recommendations (↑protein)

Generalities

progressive weight loss, losing fat and maintaining lean mass

mixed and balanced, providing all the nutrients in sufficient quantities

must be adapted to the lifestyle and diet of the patient

Types

Classic hypocaloric diets

Moderately low calorie diets

For obese or grade 2 overweight

For >2000kcal:
-500kcal/day → -500g/w

For <2000kcal:
-25%kcal/day

↓450-500g/week, quit alcohol, sugar, fats...
Always >1200 kcal/day

Very low calorie diets

For obesity >35kg/m²
Fatigue, weakness...
Not for pregnant women, old people, children and adolescents

mainly created with special formulations

always <12 weeks + medical control in hospital

400-800 kcal/day
Proteins: 25-50 % ↑BV
Total fats: <30%
Fiber: 10-30 g/day

Must cover 100% of the RDIs for vitamins and minerals.

Hypocaloric diets according to distribution

General Hypocaloric diets

Proteins: 15-25% ↑BioValue

Fats: 25-35% Cho <300mg

Carbs: 45-55% >100g/day

Water: a lot 2,-2,5ml/kcal

Micronutrients: supplement when <1500 kcal / day

Hypocaloric distribution diets

↑Protein ↑Fat ↓Carbs (<20%)

↓Fat (20-25%) ↑Protein (40-45%)

↑Carbs ↓Protein (25g) ↓Fat (<10%)

Contraindications & Side Effects

Contraindications

Pregnant women & Lactation

Children <6 years old

Mental diseases

Anorexia nervosa

Side Effects

Lean mass loss and ↓BMR

↑chance of acute gout attacks

Micronutrients deficiencies

Increased risk of gallstones

↑risk of osteoporosis in women

Occurrence of eating disorders

Family and/or social isolation

