

## Nutrition Data for Fitness and Diet - Bangladesh Context

### Overview

This section offers an extensive nutritional dataset tailored to Bangladesh, focusing on foods that dominate local diets and addressing fitness and health needs.

Bangladesh's food system is shaped by rice as the primary staple (70-75% of caloric intake), complemented by fish, pulses, vegetables, and limited fruits and dairy. With 80% of the population rural, diets reflect seasonal availability, affordability, and cultural preferences, yet face challenges like low dietary diversity (avg. 4.3 food groups vs. 10 recommended), micronutrient deficiencies (iron, zinc, vitamin A, calcium), and high stunting rates (31% children). This dataset leverages local foods to support balanced nutrition and fitness goals.

### Macronutrient Breakdown

- **Protein:** Builds muscle and supports recovery. Target: 1-1.5g per pound of body weight daily.
  - **Hilsa Fish (*Tenualosa ilisha*)** (100g, steamed): 230 kcal, 25g protein, 0g carbs, 14g fat. National delicacy, omega-3 rich.
  - **Rohu Fish (*Labeo rohita*)** (100g, fried): 150 kcal, 20g protein, 0g carbs, 7g fat. Freshwater staple.
  - **Mola Fish (*Amblypharyngodon mola*)** (100g, cooked with bones): 97 kcal, 17g protein, 0g carbs, 3g fat, 850mg calcium. Small indigenous species (SIS).
  - **Darkina Fish (*Esomus danricus*)** (100g, cooked): 90 kcal, 15g protein, 0g carbs, 3g fat, 500mg calcium. Nutrient-dense SIS.
  - **Prawn (*Chingri*)** (100g, cooked): 99 kcal, 21g protein, 1g carbs, 1g fat, 1.6mg zinc. Riverine protein.
  - **Tilapia (Farmed)** (100g, cooked): 128 kcal, 26g protein, 0g carbs, 3g fat. Aquaculture growth.
  - **Catfish (*Magur*)** (100g, cooked): 150 kcal, 19g protein, 0g carbs, 8g fat. Local favorite.
  - **Chicken (*Deshi*)** (100g, grilled): 165 kcal, 31g protein, 0g carbs, 3g fat. Rural poultry.

- **Beef (Local)** (100g, cooked): 250 kcal, 26g protein, 0g carbs, 15g fat. Urban/rural treat.
- **Mutton (Goat)** (100g, cooked): 294 kcal, 25g protein, 0g carbs, 21g fat. Festive dish.
- **Egg (Deshi)** (1 large, 50g, boiled): 68 kcal, 6g protein, 0.5g carbs, 5g fat. Increasing use.
- **Lentils (Masoor Dal)** (100g, cooked): 116 kcal, 9g protein, 20g carbs, 0.4g fat. Red lentil staple.
- **Chickpeas (Chola)** (100g, cooked): 164 kcal, 9g protein, 27g carbs, 3g fat. Snack or curry.
- **Khesari Dal (Lathyrus sativus)** (100g, cooked): 118 kcal, 8g protein, 21g carbs, 0.5g fat. Rural pulse.
- **Mung Bean (Moong Dal)** (100g, cooked): 105 kcal, 7g protein, 19g carbs, 0.4g fat. Light protein source.
- **Soybean (Local)** (100g, cooked): 173 kcal, 17g protein, 10g carbs, 9g fat. Emerging crop.
- **Carbohydrates:** Fuels energy. Target: 45-65% of daily calories, favoring complex sources.
  - **Rice (Polished White)** (100g, cooked): 130 kcal, 3g protein, 28g carbs, 0.3g fat. Avg. 328g daily intake.
  - **Rice (Brown, Parboiled)** (100g, cooked): 123 kcal, 3g protein, 25g carbs, 1g fat. More fiber, B-vitamins.
  - **Rice (Red, Atap)** (100g, cooked): 125 kcal, 3g protein, 26g carbs, 0.5g fat. Traditional variety.
  - **Roti (Whole Wheat)** (100g): 250 kcal, 9g protein, 50g carbs, 2g fat. Rural flatbread.
  - **Puffed Rice (Muri)** (100g): 402 kcal, 7g protein, 90g carbs, 1g fat. Low-nutrient snack.
  - **Flattened Rice (Chira)** (100g): 360 kcal, 7g protein, 81g carbs, 1g fat. Breakfast/snack.

- **Potato (Alu)** (100g, boiled): 77 kcal, 2g protein, 17g carbs, 0.1g fat. Second staple.
- **Sweet Potato (Ranga Alu)** (100g, boiled): 86 kcal, 2g protein, 20g carbs, 0g fat. Vitamin-rich.
- **Banana (Green, boiled)** (100g): 89 kcal, 1g protein, 23g carbs, 0.3g fat. Rural side dish.
- **Sago (Sabudana)** (100g, cooked): 88 kcal, 0.2g protein, 22g carbs, 0g fat. Festive use.
- **Corn (Bhutta)** (100g, boiled): 96 kcal, 3g protein, 21g carbs, 1g fat. Seasonal crop.
- **Taro Root (Kochu)** (100g, boiled): 112 kcal, 2g protein, 26g carbs, 0.2g fat. Wetland staple.
- **Fats:** Supports hormones and energy. Target: 0.4g per pound of body weight.
  - **Mustard Oil** (1 tbsp, 14g): 124 kcal, 0g protein, 0g carbs, 14g fat. Primary cooking oil.
  - **Ghee** (1 tbsp, 15g): 135 kcal, 0g protein, 0g carbs, 15g fat. Festive/high-calorie.
  - **Coconut (Fresh)** (100g): 354 kcal, 3g protein, 15g carbs, 33g fat. Coastal dishes.
  - **Peanuts (Badam)** (100g, roasted): 567 kcal, 26g protein, 16g carbs, 49g fat. Snack/garnish.
  - **Sesame Seeds (Til)** (100g): 573 kcal, 18g protein, 23g carbs, 50g fat. Used in sweets.
  - **Sunflower Oil** (1 tbsp, 14g): 120 kcal, 0g protein, 0g carbs, 14g fat. Urban alternative.
  - **Butter (Local)** (1 tbsp, 14g): 102 kcal, 0g protein, 0g carbs, 11g fat. Rare use.

### **Micronutrient Highlights**

- **Vitamin A:** Addresses deficiency (20% children, 5.4% women).

- **Spinach (Pui Shak)** (100g, cooked): 23 kcal, 3g protein, 4g carbs, 0.3g fat, 540µg Vitamin A.
- **Red Amaranth (Lal Shak)** (100g, cooked): 21 kcal, 2g protein, 4g carbs, 0.2g fat, 300µg Vitamin A.
- **Pumpkin (Misti Kumra)** (100g, cooked): 26 kcal, 1g protein, 7g carbs, 0.1g fat, 426µg Vitamin A.
- **Carrot (Gajor)** (100g, raw): 41 kcal, 1g protein, 10g carbs, 0.2g fat, 835µg Vitamin A.
- **Mango (Ripe)** (100g): 60 kcal, 1g protein, 15g carbs, 0.4g fat, 54µg Vitamin A.
- **Iron:** Combats anemia (36.7% women, 40% children).
  - **Water Spinach (Kolmi Shak)** (100g, cooked): 27 kcal, 3g protein, 5g carbs, 0.2g fat, 1.5mg iron.
  - **Jute Leaves (Pat Shak)** (100g, cooked): 34 kcal, 3g protein, 6g carbs, 0.3g fat, 2.7mg iron.
  - **Beef Liver** (100g, cooked): 191 kcal, 29g protein, 5g carbs, 5g fat, 6.5mg iron.
  - **Lentils (Masoor Dal)** (100g, cooked): 2.5mg iron.
  - **Drumstick Leaves (Sajna)** (100g, cooked): 40 kcal, 5g protein, 8g carbs, 1g fat, 4mg iron.
- **Calcium:** Boosts bone health (avg. 250mg vs. 1000mg RDA).
  - **Mola Fish** (100g, with bones): 850mg calcium.
  - **Darkina Fish** (100g, with bones): 500mg calcium.
  - **Milk (Cow, Local)** (100ml): 60 kcal, 3g protein, 5g carbs, 3g fat, 120mg calcium.
  - **Yogurt (Doi)** (100g): 61 kcal, 3g protein, 4g carbs, 3g fat, 121mg calcium.
  - **Pointed Gourd Leaves (Potel Shak)** (100g, cooked): 30 kcal, 2g protein, 5g carbs, 0.3g fat, 150mg calcium.

- **Zinc:** Enhances immunity (57% women deficient).
  - **Prawn (Chingri)** (100g, cooked): 1.6mg zinc.
  - **Oyster (Local)** (100g, raw): 60 kcal, 7g protein, 5g carbs, 2g fat, 16mg zinc. Coastal rarity.
  - **Pumpkin Seeds** (100g): 546 kcal, 30g protein, 11g carbs, 49g fat, 7.8mg zinc. Emerging use.
  - **Chickpeas (Chola)** (100g, cooked): 1.5mg zinc.
- **Vitamin C:** Supports immunity (low intake due to fruit scarcity).
  - **Guava (Peyara)** (100g): 68 kcal, 3g protein, 14g carbs, 1g fat, 228mg Vitamin C.
  - **Amla (Indian Gooseberry)** (100g): 44 kcal, 1g protein, 10g carbs, 0.3g fat, 600mg Vitamin C. Seasonal.
  - **Tomato (Local)** (100g, raw): 18 kcal, 1g protein, 4g carbs, 0.2g fat, 13mg Vitamin C.

### Daily Recommendations (Bangladesh Context)

- **Cereals:** 300-450g (rice, roti; avg. 328g exceeds diversity needs).
  - **Rice Noodles (Shemai)** (100g, cooked): 131 kcal, 3g protein, 28g carbs, 0.5g fat. Festive dish.
- **Vegetables:** 200-300g (target 400g; avg. 126g).
  - **Brinjal (Begun)** (100g, cooked): 25 kcal, 1g protein, 6g carbs, 0.2g fat.
  - **Okra (Dherosh)** (100g, cooked): 33 kcal, 2g protein, 7g carbs, 0.2g fat.
  - **Bottle Gourd (Lau)** (100g, cooked): 15 kcal, 1g protein, 3g carbs, 0.1g fat.
  - **Pointed Gourd (Potol)** (100g, cooked): 20 kcal, 1g protein, 4g carbs, 0.2g fat.
  - **Ridge Gourd (Jhinge)** (100g, cooked): 17 kcal, 1g protein, 4g carbs, 0.1g fat.

- **Cauliflower (Fulkopi)** (100g, cooked): 25 kcal, 2g protein, 5g carbs, 0.3g fat. Winter crop.
- **Fruits:** 100-200g (avg. 14g vs. 200g goal).
  - **Jackfruit (Kathal, ripe)** (100g): 95 kcal, 2g protein, 23g carbs, 0.6g fat.
  - **Papaya (Pepe)** (100g): 43 kcal, 0.5g protein, 11g carbs, 0.3g fat.
  - **Pineapple (Anaras)** (100g): 50 kcal, 0.5g protein, 13g carbs, 0.1g fat.
  - **Lychee (Lichu)** (100g): 66 kcal, 1g protein, 17g carbs, 0.4g fat. Seasonal.
  - **Watermelon (Tormuj)** (100g): 30 kcal, 0.6g protein, 8g carbs, 0.2g fat.
- **Protein Foods:** 60-120g (avg. 67g fish, 40g meat, 12g egg).
- **Dairy:** 130-250ml (avg. <100ml due to cost/access).
- **Oils:** 20-30g (avg. 10g; mustard oil dominant).

### Traditional Dishes

- **Bhorta (Mashed):**
  - **Potato Bhorta** (100g): 100 kcal, 2g protein, 18g carbs, 2g fat (with mustard oil).
  - **Fish Bhorta (Hilsa)** (100g): 250 kcal, 20g protein, 2g carbs, 18g fat.
- **Bhuna (Curry):**
  - **Chicken Bhuna** (100g): 200 kcal, 25g protein, 5g carbs, 10g fat.
  - **Beef Bhuna** (100g): 280 kcal, 24g protein, 5g carbs, 18g fat.
- **Pitha (Rice Cakes):**
  - **Chitoi Pitha** (100g): 150 kcal, 3g protein, 30g carbs, 1g fat.
  - **Bhapa Pitha (with coconut)** (100g): 200 kcal, 4g protein, 35g carbs, 5g fat.

### Bangladesh-Specific Insights

- **Rice Dominance:** 328g avg. daily intake (70% calories); polished white rice strips B-vitamins, fiber. Parboiled/red rice retains more nutrients.
- **Fish Consumption:** 67.8g avg. daily; SIS (e.g., Mola, Darkina, Kachki: 100g, 85 kcal, 14g protein, 2g fat, 400mg calcium) are affordable, micronutrient-rich.
- **Pulses:** 12g avg. intake; key protein for vegetarians (e.g., Black Gram, 100g cooked: 105 kcal, 7g protein, 18g carbs, 0.4g fat).
- **Vegetable Intake:** 126g avg. vs. 400g recommended; homestead crops (e.g., Malabar Spinach, 100g cooked: 19 kcal, 2g protein, 3g carbs, 0.2g fat) critical.
- **Fruit Scarcity:** 14g avg. intake reflects poverty, seasonality; mango, guava, jackfruit dominate.
- **Micronutrient Deficiencies:**
  - **Iron:** 7.1% women iron-deficient, 40% anemic; leafy greens, SIS key.
  - **Zinc:** 57% women deficient; prawns, seeds boost intake.
  - **Vitamin A:** 5.4% women, 20% children deficient; orange-fleshed vegetables (e.g., pumpkin) vital.
  - **Calcium:** 250mg avg. vs. 1000mg RDA; SIS, dairy underutilized.
  - **Iodine:** 17% population deficient; iodized salt (15g, 0 kcal, 0.05mg iodine) essential.
- **Regional Variations:**
  - **Coastal:** Coconut, prawns, marine fish (e.g., Pomfret, 100g: 140 kcal, 22g protein, 0g carbs, 5g fat).
  - **North:** More beef, wheat (e.g., Paratha, 100g: 300 kcal, 6g protein, 45g carbs, 10g fat).
  - **Sylhet:** Tea, citrus fruits (e.g., Orange, 100g: 47 kcal, 1g protein, 12g carbs, 0.2g fat).
- **Socio-Economic Factors:**
  - Rural: Limited dairy (cost), reliance on rice/pulses.

- Urban: Higher meat, egg, processed food intake (e.g., Samosa, 100g: 300 kcal, 5g protein, 30g carbs, 18g fat).
- Gender: Men get 20-30% more protein; women/child malnutrition higher.
- **Sample Meal:** Rice (200g, 260 kcal), Hilsa curry (100g, 230 kcal), Masoor Dal (100g, 116 kcal), Kolmi Shak (100g, 27 kcal), Guava (100g, 68 kcal) = 701 kcal, balanced but veggie-light.