

for a specific nutrient, and if suspicious signs are found, they must be confirmed with dietary and biochemical data. Failure to thrive is discussed in [Chapter 10](#). Obesity and eating disorders are discussed in [Chapter 16](#).

TABLE 4-1
Clinical Assessment of Nutritional Status

Evidence of Adequate Nutrition	Evidence of Deficient or Excess Nutrition	Deficiency or Excess*
General Growth		
Normal weight gain, growth velocity, and head growth for age and gender	Weight loss or poor weight gain, growth failure	Protein, calories, fats, and other essential nutrients, especially vitamin A, pyridoxine, niacin, calcium, iodine, manganese, zinc
	Excess weight gain	Excess calories
Sexual development appropriate for age	Delayed sexual development	Excess vitamins A, D
Skin		
Smooth, slightly dry to touch Elastic and firm Absence of lesions Color appropriate to genetic background	Hardening and scaling	Vitamin A
	Seborrheic dermatitis	Excess niacin
	Dry, rough, petechiae	Riboflavin
	Delayed wound healing	Vitamin C
	Scaly dermatitis on exposed surfaces	Riboflavin, vitamin C, zinc
	Wrinkled, flabby	Niacin
	Crusted lesions around orifices, especially nares	Protein, calories, zinc
	Pruritus	Excess vitamin A, riboflavin, niacin
	Poor turgor	Water, sodium
	Edema	Protein, thiamine Excess sodium
	Yellow tinge (jaundice)	Vitamin B ₁₂ Excess vitamin A, niacin
	Depigmentation	Protein, calories
	Pallor (anemia)	Pyridoxine, folic acid, vitamins B ₁₂ , C, E (in premature infants), iron Excess vitamin C, zinc
	Paresthesia	Excess riboflavin
Hair		
Lustrous, silky, strong, elastic	Stringy, friable, dull, dry, thin	Protein, calories
	Alopecia	Protein, calories, zinc
	Depigmentation	Protein, calories, copper
	Raised areas around hair follicles	Vitamin C
Head		
Even molding, occipital prominence, symmetric facial features Fused sutures after 18	Softening of cranial bones, prominence of frontal bones, skull flat and depressed toward middle	Vitamin D
	Delayed fusion of sutures	Vitamin D
	Hard, tender lumps in occiput	Excess vitamin A