

CASE STUDY 3 Young athlete. Melinda M. Manore

Athlete

Jackie was a 12-year-old gymnast, training at an elite gymnastics program away from her home. She lived in a boarding home and attended the local high school. She was happy with her current weight (40 kg), but did not want to get any heavier. She trained 4 h each day during the week, and twice on Saturday. She had recently added weight training (1.5-2 h a week) to her program. Jackie had not received much nutrition education but was concerned about what she ate. She suspected that her eating patterns were not ideal since she often got very hungry and shaky during her afternoon practice. She was frustrated about her recent lack of improvement during practice or competition. Jackie had not grown in the past year and had not started menstruating.

Reason for consultancy

Jackie's mother was concerned about her lack of growth, and her restrictive eating patterns. She also considered that Jackie was too young for weight training.

Current dietary and activity patterns

In order to prevent weight gain, Jackie had decided to limit fat intake. She kept only fat-free snacks in her room and ate low-fat foods at meals. Her daily schedule was as follows: 7.30 AM school starts, 11.00 AM lunch, 1.30 PM school ends, 2.00 PM practice starts, 7.00 PM dinner. She studied and watched TV after dinner, usually going to bed around midnight. Jackie's typical diet is outlined below.

Professional assessment

Mean daily intake from this self-reported eating plan was assessed to be about 5900 kJ (1400 kcal), low in fat (-15% of energy), and adequate in protein (1.3 g·kg⁻¹). Jackie's intake

of fruits and vegetables and dairy products was less than recommended daily intakes, and her cereal choices were highly processed (white bread, rice or pasta, sugar-rich breakfast cereals). Overall, her energy and fat intake was assessed to be too restrictive, and her intakes of many micronutrients and fiber were inadequate. The acute effect of inadequate intake of energy was the hunger and fatigue experienced during training, interfering with optimal performance. However, it was likely that chronic energy restriction failed to provide sufficient fuel for growth and the development of puberty.