



People with Down syndrome need fewer calories than other people, but have the same nutrient requirements as everyone else.

Nutrition, weight management and physical fitness: some basic considerations

There are no known nutritional requirements specific to Down syndrome. Eating a healthy and balanced diet is as important for people with Down syndrome as it is for all of us.

Nutrient and calorie requirements of people with Down syndrome

Studies have shown that individuals with Down syndrome have a lower basal metabolic rate than that of the general population. This means that people with Down syndrome burn fewer calories at rest or in doing activities than other people do. It has been estimated that they may burn between 10 and 15 percent fewer calories, at rest, compared to the general population. This is an important finding since it means that *people with Down syndrome need fewer calories than other people*. Health guidelines for individuals with Down syndrome recommend, from early childhood, that total caloric intake should be below the recommended daily allowance for other children of similar height and age, and that physical recreation activities should be established early. Importantly, *individuals with Down syndrome still need as many nutrients as everyone else*, which means that food choices are very important to maintain a delicate balance of nutritional requirements and weight management. It is important that, generally speaking, all the calories consumed also contribute important nutrients, otherwise by limiting calorie intake there is a risk of deficiency of some important nutrients. The food pyramid is a good basis to guide food selection for a healthy diet.

Zinc has been studied more in relation to Down syndrome than other nutrients, and studies have shown that zinc deficiency is a possibility in people with Down syndrome (Marques et al, 2008). In some cases it may be advisable to use a children's multivitamin supplement but a qualified health professional should be consulted before introducing any vitamin supplements.

The early years: food textures and picky eating

In the early childhood years nutritional concerns often relate to children refusing to eat certain foods or food textures – picky eating. Down syndrome does not cause a child to reject some foods. Babies and children with Down syndrome may have low muscle tone, including the oral motor muscles used for eating and

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speaking. This can contribute to delay in chewing development and progression in food texture which means that a child may resist accepting some foods that are generally acceptable to their age peers.

In other cases food refusal may be related to sensory issues or mealtime dynamics, and parents are advised seek professional help (initially an occupational therapist or speech therapist) to support them in the introduction of new foods. There is no reason that a child with Down syndrome should not progress to eat a broad variety of foods and accepting a variety of food textures is important since the same muscle development aids speech development.

Another consideration is the effect that lower muscle tone may have on the gut muscles. If constipation is a problem, first ensure a well-balanced diet, high in fibre and with plenty of liquids. Exercise can also help with constipation.

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Encouraging healthy eating habits in older children

Concerns in adolescent years focus on good eating habits and weight management. Weight issues are common in individuals with Down syndrome, often as a result of eating too many calories and having too little exercise. Obesity is more prevalent than in the general population. All of this means that learning to make healthy food choices and maintaining a physically active lifestyle are important considerations for adolescents. Specific tuition regarding healthy food choices is likely to be beneficial for young people with Down syndrome... and the essential points will likely need to be revised and consolidated over a period of time. However, it is worth putting in this effort, as an investment to a healthy future. Eventually, the majority of young people with Down syndrome will need to make their own food choices, and unless guided by principles of healthy eating, they risk becoming, and remaining, overweight, which has both health and social implications.

Making physical activity a part of lifestyle

An important factor in health and weight management is getting regular exercise. In common with everyone, children with Down syndrome tend to become more sedentary as they get older and may struggle with maintaining an active lifestyle in teenage years and beyond. Since not everyone will be interested in playing different sports it is important to build opportunities for regular exercise and activity into the daily routines. Suggestions include:

- walking to and from school or the bus
- taking the dog for a walk
- walking to the shops or other trips for which you would usually use car or public transport
- parking the car further away from where you are going – or encourage getting off public transport further away

It is unlikely that the family member with Down syndrome will lead an active life if others in the family are not doing so.

from destination and walking the rest

- using the stairs rather than the escalator or lift
- daily chores which include physical activity – sweeping, putting out the recycling...

Try to build physical activities into the whole family's routine – it is important for everyone's health to be physically active and it is unlikely that the family member with Down syndrome will lead an active life if others in the family are not doing so. Do physical activities together (eg walking the dog – or just family evening walks or time in the park) and encourage everyone in the family to take up some sort of recreational physical activity. The 'Premier's Active Families Challenge' (see www.goforyourlife.vic.gov.au) is a good way to encourage physical activity in everyone in the family and provides lots of ideas for how to build 30 minutes of exercise into your day.

Participation in an age-appropriate exercise program or sporting activity should be encouraged – ideally, exercising consistently for at least 30 minutes, two or three times a week is recommended. The company of others is often an important factor in maintaining physical activity and practicing a sport is also a great way of socialising. A range of organisations are available to assist families in finding sporting opportunities to suit the family member with a disability – see 'Looking for physical activity and sporting opportunities?'

References

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