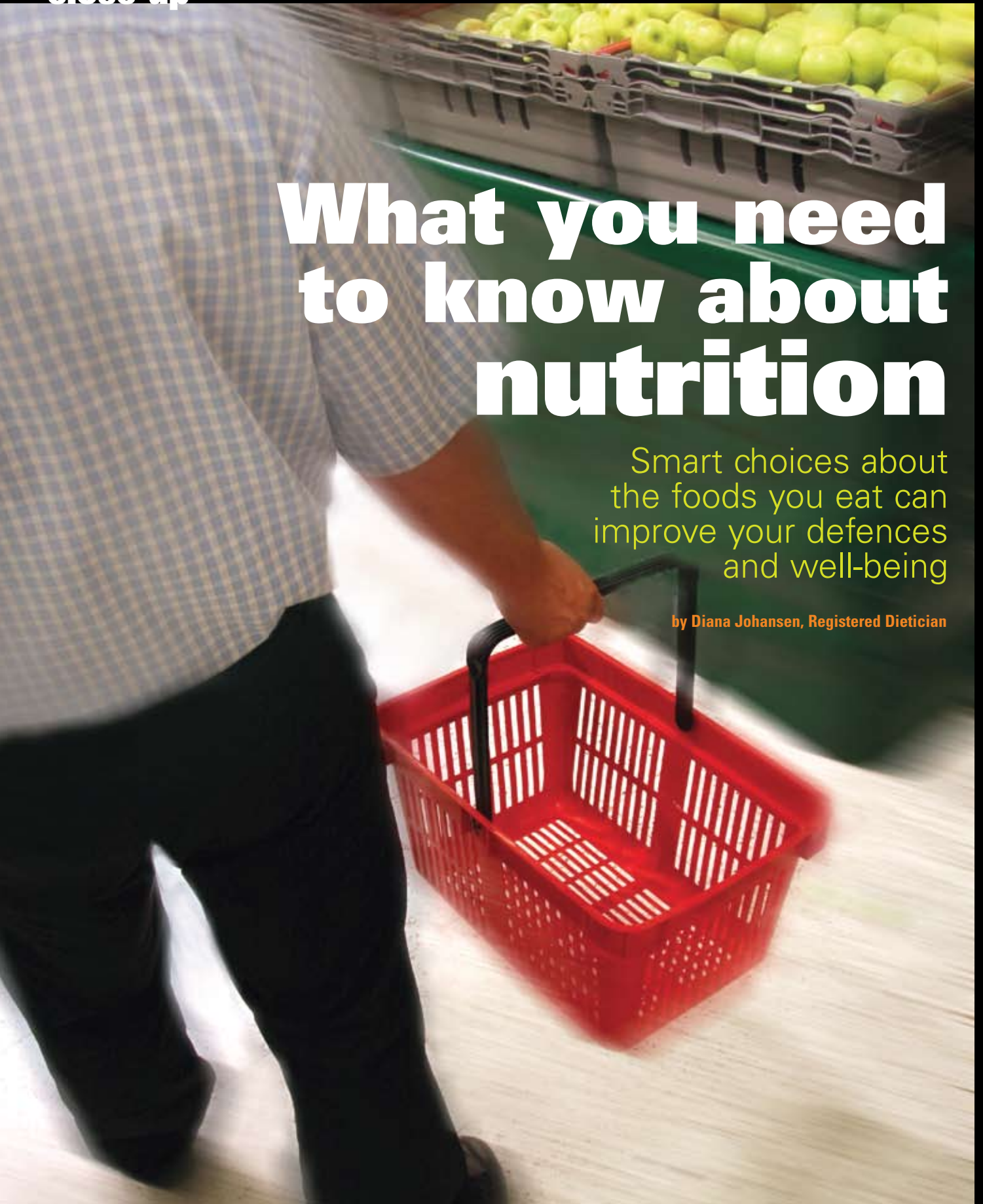


close up

What you need to know about nutrition

Smart choices about
the foods you eat can
improve your defences
and well-being

by Diana Johansen, Registered Dietician



Nutrition is one of those areas of self-care that requires commitment and patience but brings great rewards. Taking care of your nutritional health is something you do for yourself. It's not about doctor's prescriptions or pills but about making healthy choices every day over a lifetime. And it's well worth the investment: people with good nutrition generally have better health, more energy and greater well-being.

What is nutrition?

Nutrition can be defined as the sum of all the processes involved in taking in nutrients, absorbing them and then using them as fuel and structural components for growth, repair, movement, thought and other critical functions. In essence, nutrition sustains life. It sounds fairly straightforward, but there are any number of physical, social, economic, psychological, and spiritual factors that significantly impact our ability to achieve good nutritional health.

Nutrition and the immune system

We know that nutrition plays a major role in the immune system's ability to respond to infection. Nutrients work in several parts of the body to keep the immune system functioning properly. For example, your skin and the linings of your respiratory and intestinal tracts provide the first line of defence by acting as physical barriers to invading organisms (e.g. viruses and bacteria). When nutrition declines, these barriers break down and allow bacteria and viruses greater access into the body.

Once an invader enters, the body mounts a defence using different types of immune cells and chemicals to help them work. This defence process is supported by energy, proteins and nutrients contained in the food you eat.

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The added challenge of HIV

Living with HIV makes managing nutritional health more challenging, though the nature of these challenges has changed somewhat over the 14 years since highly active antiretroviral therapy (HAART) was developed. The focus of our work as dieticians has shifted from the use of nutrition to prevent wasting, or losing weight, to the prevention and treatment of chronic health issues. People living with HIV are now at increased risk of developing conditions such as high cholesterol and heart disease, diabetes, osteopenia and osteoporosis (reduced bone density) and obesity. These problems are due in part to the fact that people are now growing older with HIV, in part to HIV itself, and in part to the side effects of antiretroviral therapy (ARVs).

Healthy eating

Food is the foundation of nutritional health. You can supplement it, adjust it, increase or decrease amounts, but you can't entirely get away from it. Food provides macronutrients, including carbohydrates, proteins and fats, and micronutrients (vitamins and minerals). There are also components in foods we still don't fully understand, called phytochemicals. All of these are needed for survival, and eating a wide variety of foods ensures that all the necessary nutrients will be consumed.

Healthy eating requires planning ahead. The right foods must be readily available where and when you'll be consuming them. This involves planning meals and snacks and buying the required groceries. It's easier to choose nourishing foods if they're close

at hand when you're hungry. That might involve stocking up your home, car, workplace, purse or backpack. Think about situations or circumstances that make it more difficult for you to eat well and try to find ways of addressing them.

Many eating behaviours are grounded in old habits that you never really think about. Mindful eating involves becoming more conscious about your eating behaviour, and more aware of feelings of hunger and fullness. It helps to reflect on your appetite, think about what you're really hungry for, and take note of food choices and the reasons behind them. You can learn to be conscious of the difference between hunger and other eating cues such as painful emotions, loneliness, boredom or tiredness. Mindful eating helps to eliminate guilt and create a positive relationship with food that fosters good health.

Understanding food

Macronutrients, such as carbohydrates, proteins and fats, provide your body with energy and structural building blocks. They have specific functions that sustain life. The energy density of different foods depends on the composition of macronutrients and is measured in calories. For example, carbohydrates and proteins have four calories per gram whereas fat has nine calories per gram. A healthy diet includes all these components in balanced amounts.

Carbohydrates are used by the body for energy. They fall into two groups, simple and complex carbohydrates. The simple form includes sugars and white starchy foods. The complex group includes whole grains, whole fruits and vegetables. Complex carbohydrates are by far the healthiest choices in this category. Carbohydrates affect blood sugar more rapidly than other nutrients and are best handled by the body when their intake is spread throughout the day.

Protein is composed of amino acids, which have many important functions in every cell and system in the body. Proteins are used to make cell structures, hormones, enzymes

and components of the immune system. People living with HIV need slightly greater amounts of protein to maintain lean body mass and provide key nutrients for the immune system.

Fats and oils are the most concentrated source of energy in our food supply. Although we don't need very much fat in our diet, some is

required to provide the fatty acids that keep cell membranes healthy. The healthiest fats include monounsaturated fats such as olive and canola oils, polyunsaturated fatty acids such as sunflower oil, and omega-3 fatty acids from fish, flax oil and walnuts.

Fluids are required to keep the chemical reactions that occur every second of the day working smoothly. Because we lose fluid through urine, stool and sweat, it needs to be replaced frequently. The amount of fluid a person needs depends on the size of their body and how much fluid they lose. Some medications require a high intake of fluids to protect the kidneys.

Vitamins and minerals are micronutrients. They're only needed in very small or micro amounts, but are essential in the diet because the body can't make them on its own. They perform vital regulatory functions for the many activities and chemical reactions that take place in the body. For example, they have a crucial role in releasing energy from food, helping repair cells and tissues, protecting the barrier defence system, cell differentiation, antioxidant protection, bone metabolism and many other activities.

Micronutrients and HIV

There's a dynamic relationship between infectious diseases, such as HIV, and micronutrient status. People living with HIV may be more likely to develop micronutrient deficiencies because they eat less, or because nutrients aren't absorbed properly or are lost due to diarrhea. At the same time, more micronutrients are needed by the immune system and antioxidant defences. Research has shown that micronutrient deficiencies can increase the rate of HIV disease progression. For these reasons, it's believed that the micronutrient requirements for people living with HIV are higher than for the general population. How much higher remains uncertain.

Some scientists and health care providers recommend very high doses of micronutrients, up to 10 times the normally recommended daily amounts, as therapy to protect the immune system and slow disease progression. However, there's a lack of agreement in the medical and scientific community, and many experts prefer to take a more conservative approach. Although there's no consensus, most health care providers agree that everyone living with HIV/AIDS will benefit from taking a broad-spectrum multivitamin-mineral daily. Any other recommendations should be made on an individual basis. When making decisions about supplementation, it's best to be well informed and involve your health care team in the process. **R**

For more detailed information see *A Practical Guide to Nutrition for People living with HIV* a CATIE production available in print (tel: 1-800-263-1638) or online at www.catie.ca.

1 Eat more vegetables, legumes, fresh fruits, whole grains, fish, low-fat dairy products or milk alternatives and lean sources of protein.



2 Eat fewer sweet beverages, sugary snacks and treats, white starchy foods (e.g. white pasta and rice), fatty snacks and fried foods.



3 Choose healthy fats from oils and nuts.

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Exercise for at least 30 minutes daily and get plenty of sleep.

10 tips for good nutrition

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Eat foods in their most natural form; less processing is best.

9 Take a multivitamin daily and be sure to get enough calcium and vitamin D.



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Read food labels so you know what you're eating.

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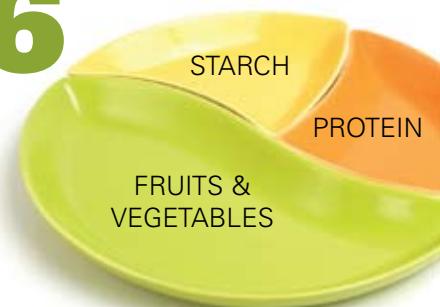


Keep body weight in a healthy range.

7 Don't skip meals as this often leads to less healthy eating behaviour later in the day.



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Learn what a healthy portion size is.