

Shift Work and Healthy Eating

Purpose

To learn about the nutrition challenges faced by shift workers and strategies for overcoming them

Intended Audience

Shift workers

Suggested Activities

- Place table tents on tables in kitchens, break rooms, worksite cafeterias, boardrooms, photocopier rooms, and other key areas.
- Hand out and/or post fact sheets by elevators, on bulletin boards, in stairwells, and in other key areas.
- Arrange educational sessions on the topic to be led by a dietitian (schedule a few different sessions, at varying times, to reach all shift workers).
- Provide information on shift work and healthy eating on the intranet and/or in newsletters.

Materials

- Diversity Checklist
- Table tents
(See the attached CD and inserts at the back of this binder:)
- Fact sheet: *Are There Special Nutritional Considerations for Shift Workers?* (Public Health Agency of Canada) (See p. 169)
- Fact sheet: *I Work Evening and Night Shifts. Can You Give Me Healthy Ideas for Healthy Food Choices?* (Public Health Agency of Canada) (See p. 171)
- Fact sheet: *Shift Work: How to Cope* (Ottawa Public Health) (See p. 173)
- Brochure: *Have SAS! Safe · Alert · Shiftwork* (Capital Health) (See p. 175)
- Fact sheets on lunches from home and food safety are available under the topics *Baggin' It* (p. 95) and *Food Safety* (p. 103).
- How to Access a Dietitian in Nova Scotia
(See Additional Resources, p. 244)
- Intranet/newsletter messages
(See Communication Materials, p. 205)
- *Healthy Eating in the Workplace Action Plan Worksheet*
(See Additional Resources, p. 221)
- *Healthy Eating in the Workplace Participant Evaluation Form*
(See Additional Resources, p. 225)



Canadian Health Network

Health info for every body

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Are there special nutritional considerations for shift workers?

Do you know that 1 in 4 Canadians (Statistics Canada) work outside of the 7 a.m. to 6 p.m. scheduled work period? Working against your natural body rhythms presents a special set of challenges, which can add extra stress. Shift workers may need to pay more attention when trying to maintain their mental, spiritual and physical health.

How does shift work affect our bodies?

Everyone has a natural sleep-wake cycle (called a circadian cycle or rhythm) during which time there are "peaks" and "valleys" to our biological processes. These processes control body temperature, heart rate, blood pressure, hormone levels and gastrointestinal function. We perform our jobs most efficiently during the "day" shift because during this time our body temperature is higher and all our biological processes are working at their peak. When evening approaches, these processes start to slow down resulting in a reduction in strength, alertness, and digestion. Shift work puts your body in conflict with its natural rhythm. For example, when you go home after your night shift you want to sleep but your body may think it is time to wake up.

Because eating habits are altered by shift work, workers often experience:

- higher rates of gastrointestinal problems such as constipation, diarrhea, gas, indigestion, heartburn, or stomach ulcers;
- altered appetite;
- gain or loss of body weight.

These issues occur for a number of reasons:

- Eating in a rush.
- Eating alone without family and friends.
- Eating poorly during the day and then over-eating on the night shift, at a time when the digestive processes are slowed.
- Consuming too much caffeine from coffee, tea, iced tea, colas, or chocolate during work in an attempt to stay awake.
- Tendency to consume more high-fat foods.

Nutrition challenges faced by shift workers

Caffeine consumption tends to be highest near the end of a night shift as energy levels decline. Caffeine may affect coordination, concentration, sleep patterns and behaviour. After drinking a caffeine-containing beverage, the level of caffeine in blood peaks within 5 to 45 minutes. The effects of caffeine linger up to 8 hours after consumption, which makes falling asleep after work more difficult. High caffeine consumption causes the kidneys to excrete excess water. When caffeine-rich beverages are consumed instead of water, dehydration is more likely to occur. Dehydration can also contribute to feelings of fatigue. Keep a water bottle at your workstation and drink regularly throughout your shift.

It can sometimes be hard for shift workers to make good food choices. Very often food service operations are closed during night shifts. That leaves just the vending machines, which are often sources of fat and high sugar snacks, which are frequently eaten instead of meals. The high sugar snacks can provide a quick burst of energy but contribute to feelings of fatigue later in the shift. Ordering take-out food for an evening meal is common amongst shift workers. These meals also tend to be high in fat.

To avoid this trap, try to bring a healthy range of snacks and meals to work. Workplaces can help by stocking the vending machines with alternatives to the chocolate bar such as cereal/breakfast bars,

pretzels, milk, juice, yogurt, soup, small cans of baked beans, etc.

Read the FAQ "[I work evening and night shifts. Could you give me ideas of healthy food choices?](#)"

Resources for Consumers

More detailed information about the health affects of shift work at "[How can shift work affect my health?](#)".

[Why is water so important for my body? How do I know when I am dehydrated?](#)

[What is caffeine? Is it bad for my health?](#)

Last Modified Date: October 2005

This FAQ was created for the Canadian Health Network by **Heather Schnurr (Alberta)**, member of [Dietitians of Canada](#). March 2004.



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I work evening and night shifts. Can you give me ideas for healthy food choices?

Eating certain types of foods at the right time can make you feel less tired or increase alertness. Health problems such as obesity, diabetes, accidents and high blood pressure, are all linked with shift work.

Shift work eating tips:

Whole grain, carbohydrate-based and low-fat foods tend to make us sleepy, which makes them an excellent choice for a meal before bed. Protein-rich foods keep us alert, which makes them a good choice for meals and snacks eaten during an evening or night shift. Since large meals can also decrease alertness, smaller meals should be eaten during the night shift.

Stimulants such as caffeine and alcohol can remain in your blood stream for up to 8 hours. You should avoid them for at least 4 hours before bedtime to reduce their effects on sleep. Try to limit your daily caffeine intake to no more than 3 - 4 cups of coffee or pop. Try drinking decaffeinated tea or coffee, fruit juice or water instead. Be aware that some medications such as cold remedies also contain caffeine.

Afternoon workers should have their main meal in the middle of the day rather than in the middle of their shift (Shift times vary from 2:00 p.m. to 10:00 p.m.; 3:30 p.m. to 11:30 p.m. or 4:00 p.m. to 12:00 midnight).

Night workers should eat their main meal before their shift starts, preferably at regular dinnertime between 5:00 p.m. and no later than 7:00 p.m. (Shift times vary from 7:30 p.m. to 7:30 a.m. or 11:30 p.m. to 7:45 a.m.). If you work the night shift, snack lightly during your shift, and eat a small meal at their midnight break (such as a meat or cheese sandwich).

3:00 a.m. to 4 a.m. is the time when you tend to feel more tired and sleepy. This is because your body is naturally programmed to be resting around this time. You'll need a pick-up; choose protein and a small amount of whole grain carbohydrates, such as an energy bar with added peanut butter or soy nuts. If you're still hungry, add a small piece of fruit/vegetable with low-fat cheese.

After your shift but before you sleep, eating a small, light snack that is high in carbohydrates and lower in protein and fat will help you to sleep. Some examples include breakfast cereal and orange juice or toast and jam.

Healthy foods for shift workers

If you work evening and night shifts, here are some good food choices that will help to keep you healthy:

Whole grain products

- pitas, breads, bagels, tortillas and soda crackers with hummus and vegetables
- rice cakes, rusks or bread sticks, fruit and cereal bars, dry cereals and grain salads such as couscous, quinoa, bulgur and barley
- small muffin with cheese or peanut butter.

Fruits and vegetables

- vegetables with cottage cheese
- peanut butter with fruit or vegetables

- fruit juices – but limit how much and how often
- vegetable juices
- fruit shakes made with low-fat milk, with ground flax seed or other nuts and seeds.

Meats and meat alternatives

- boiled eggs with any whole grain or vegetables
- sandwiches made with lower fat meats like chicken or turkey breast, roast beef, pork loin, and extra lean ground beef
- meat substitutes such as tofu, nut butters and tempeh
- vegetarian cold-cuts in a garden salad
- baked beans with salad or vegetables, split pea soups
- trail mix or nuts, seeds, dried fruits and soy nuts
- hummus with raw vegetables and whole grain tortillas or low-fat crackers.

Milk and milk products

- lower fat milk and cheeses
- lower fat cottage cheese, yogurt and puddings.

To eat well as a shift worker, you'll need to put some time into 'batch cooking' on your days off - making larger batches of healthy food recipes to stock up for when you're working. This will help to keep you from using vending machines at work and from eating restaurant foods too often. Keeping a well-stocked pantry of healthy snack foods will also help with your goal of healthy eating as a shift worker.

Resources for Consumers

[Canada's Guide to Healthy Eating and Physical Activity](#) – Public Health Agency of Canada

[Caffeine Content in Beverages](#) - American Beverage Association

[Dietitians of Canada](#)

Resources for Health Professionals

[Rotational Shiftwork](#) – [Canadian Centre for Occupational Health and Safety](#)

Shift Work, Circadian Rhythm and Satisfaction-Surviving Your Month in Emergency Medicine. Walter Kuhn, M.D., FACEP

Working Nights Health and Safety Guides, by Dr. Martin Moore-Ede. Order from the Circadian Information Resource Guide, 125 Cambridge Park Drive, Cambridge, MA 02140-2314.

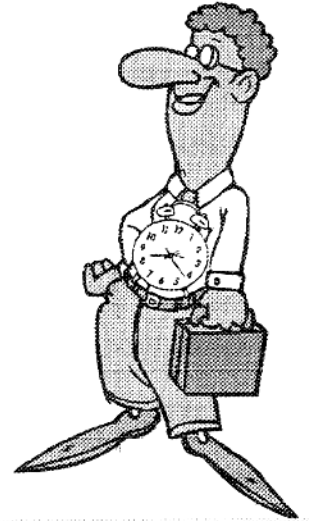
Last Modified Date: January 2006

This FAQ was written for the Canadian Health Network by Phyllis Reid-Jarvis, member (Manitoba), Dietitians of Canada.

Shift Work

Many Shift workers:

- report changes in their sleep pattern
- have a higher accident rate at work
- use alcohol and drugs to help them sleep
- experience more digestive problems
- feel fatigued or burned out
- have a higher divorce rate



How to Cope

TIPS TO HELP YOU SLEEP BETTER

- avoid caffeine, alcohol, sleeping pills
- eat lightly and don't go to bed hungry
- follow a relaxing routine e.g., take a warm bath
- allow enough time to sleep
- try to keep a regular sleep schedule
- be active each day

Tips to help Maintain Family and Social Life

- plan "quality" time with spouse, family and friends
- involve family with planning of activities
- try to have at least one meal together each day
- organize or participate in group activities e.g., ball tournament
- exercise with family e.g., cycling

TIPS TO HELP YOU EAT BETTER

- establish a regular meal schedule
- have several small healthy meals instead of a large one
- eat high-fibre, lower-fat foods such as raw fruits, vegetables, whole grain breads and cereals
- drink 6 to 8 glasses of water each day



**For more information call the Ottawa Public Health,
Business Health Line 613-580-6744, ext. 24197**

Make the Shift

Healthy Eating Anytime, Anywhere

DO YOU KNOW?

Shift work can affect your sleep, health, energy, social and family life. Working evening, night shifts or rotating shifts can upset your normal eating schedule. You are often eating at a time when digestion is normally turned off. This can make you more likely to develop stomach problems like ulcers, diarrhea, constipation, loss of appetite, or a weight problem.

WHAT CAN YOU DO?

You can minimize your chances of developing these conditions by making some small changes in the foods you eat and when you eat them.

WATCH OUT FOR:

- ✓ High fat vending machine foods such as chocolate bars, chips or peanut.
- ✓ Greasy favourites such as french fries, potato chips and fried foods, which are slower to digest and contribute to weight problems.
- ✓ Limit caffeine-containing foods such as coffee, cola and chocolate, which may affect sleep and irritate digestion.
- ✓ Bring your own lunch and snacks from home, this will give you a wider variety of healthier foods to choose from.

- ◆ Have a minimum of three meals in 24 hours.
- ◆ Keep meals at the same time each day.

Here is a meal schedule that works:

- ✓ **Breakfast:** First meal eaten after sleeping; try to make it the largest meal of the day.
- ✓ **Lunch:** Mid-meal can be taken before the shift or to break up the shift.
- ✓ **Supper:** Last meal of the day. Try to have a light meal before sleeping; a low fat and less spicy meal may disturb digestion less.

Canada's Food Guide to Healthy Eating can help you make the shift to healthy eating anytime, anywhere.

- ! Eat a variety of foods;
- ! Eat more cereals, bread, other whole grain products, vegetables and fruit;
- ! Choose low fat dairy products;
- ! Eat leaner meats and foods prepared with little or no fat;
- ! Limit salt, alcohol and caffeine.

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Ottawa

2005

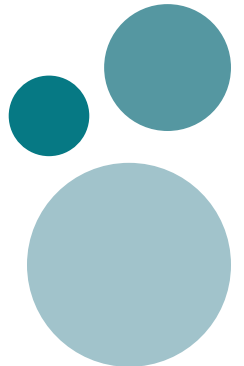
AFTER – sleep better

- Wear dark glasses on your way home from a night shift to keep morning sunlight from activating your internal "daytime" clock.
- Carbohydrate rich foods tend to make you feel sleepy which make them a good choice before bed. Examples of before bed meals include cereal with milk or toast with juice.
- Avoid alcohol as a way of getting to sleep.
- Go to sleep as soon as possible after you get home, to avoid "second wind".
- Keep your sleep area as dark and quiet as possible—wear an eye mask and ear plugs, get an answering machine to answer your phone and turn the phone off in the room where you sleep.
- Regular exercise can help you sleep, but avoid it one hour before going to bed. It can keep you awake!

This tip sheet was written by:
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in the Sleep Disorders Lab

Brought to you by the
Sleep Disorders Lab
and
Healthy Workplace

design by Capital Health Audio Visual Services



Be safe & alert during shiftwork

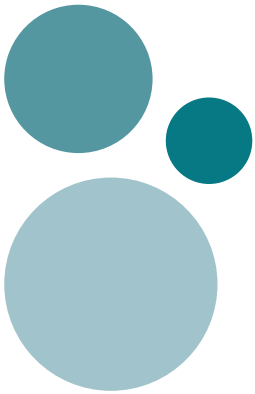
Feeling tired at work?

Have SAS!

safe • alert • shiftwork

Sleep Awareness Week
March 28 – April 3, 2005





Did you know?

People who work shifts are at risk for:

- More **errors** and **accidents** both on and off the job;
- **Digestive** problems (such as heart burn, indigestion and constipation) and
- Disrupted **sleep** patterns which over time can lead to lower energy levels and slower reaction times.

What can you do?

The following are tips on what you can try before, during and after a night shift.

BEFORE – plan to be alert

- Keep your regular bedtime routine (brush your teeth, put on your pajamas, read a little of a book, etc).
- Take a nap the afternoon before your first shift of nights.
- Try to make the first meal after waking the “main supper” meal with your family.

DURING – stay alert

- Eating certain foods can make you feel tired or alert¹
- Avoid sugary, fatty/greasy foods and large meals because these foods slow digestion, making you feel more tired.

¹ Canadian Health Network: Frequently Asked Health Questions. (March 2004)
I work evening and night shifts. Can you give me ideas of healthy food choices?
<http://www.canadian-health-network.ca>

- To help you stay alert; eat lighter, smaller meals that include protein rich foods like eggs, nuts, cheese and tuna. Examples of night shift meals include: half of a whole wheat english muffin with a boiled egg and small banana; four whole grain crisp breads (like Melba™ or Wasa™), cheddar cheese and a small glass of orange juice.
- Keep your work area bright, cool and well ventilated.
- Activate your body by taking short walks around your work area.
- Drink hot liquids between 2 a.m. and 4 a.m. These will increase core temperature which starts to drop at night making your body feel tired.
- Avoid coffee, tea and other caffeinated drinks after 4 a.m.
- Focus on short tasks. If possible, change what you are doing every 90 to 120 minutes.
- Listen to a radio or music at a low volume.

