

# UNIT 10

## Risk Reduction Activities

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## Quick Overview

- Compared with previous decades, cancer survivors can expect to live longer than their predecessors, necessitating a long term health promotion plan.
- In addition, cancer survivors die of non-cancer causes at a higher rate than persons in the general population.
- Many cancer survivors will spontaneously initiate positive behavioural changes, however, many do not. It is important that oncology nurses have the competencies to assess survivors' readiness for making a behavioural change and provide the necessary information about how to reduce risks of cancer recurrence and co-morbid health conditions.
- There is a significant body of knowledge that when cancer survivors modify behaviours related to exercise, nutrition, smoking cessation, and alcohol intake they can reduce the risk of recurrence of certain types of cancer and the development of co-morbidities that may impact on the quality of their lives and or life expectancy.
- The application of a specific theory helps to guide the use of risk reduction interventions. The Transtheoretical Model (TTM) can be used by nurses to assess cancer survivors' readiness for change, and to offer targeted interventions to support the adoption of risk prevention activities in the areas of exercise, nutrition, smoking cessation, and alcohol intake.

## Learning Objectives

By the completion of this module, nurses will:

- Understand the evidence-based rationale for promoting risk reduction behaviours in the areas of exercise, nutrition, smoking cessation, and alcohol intake for cancer survivors.
- Be able to apply the Transtheoretical Model (TTM) to assessing and intervening with cancer survivors in making behavioural changes for cancer recurrence and co-morbidity risk prevention.
- Be aware of resources for cancer survivors to assist them in making risk reduction behavioural changes.

## Meeting the CANO/ACIO Standards and Competencies for the Specialized Oncology Nurse:

Reviewing and using this section in practice, the nurse will be addressing in particular: Practice Standard: Teaching and Coaching. The standard states that the specialized oncology nurse prepares individuals with cancer and their families for the many different aspects of the cancer experience providing education, psychosocial-spiritual support, and counseling across the continuum.

### Relevant Competencies:

- assisting the individual/family to understand the importance of adopting healthy lifestyle behaviors to optimize treatment outcomes
- providing relevant information/education at the appropriate times to through the cancer experience related to recovery, rehabilitation, and survivorship

## Literature Review

The August 2008 issue of *Seminars in Oncology Nursing* is devoted to the health promotion of cancer survivors. Guest Editor, Deborah Mayer states, “We have come a long way to treating the disease, but we need to realize we are not yet actively promoting the health of the cancer survivor.” (p. 143). Health encompasses the physical, mental, spiritual, and social well-being of survivors. This module will focus on the following selected health promotion topics including exercise, nutrition, smoking cessation, and alcohol intake. Please refer to Unit 8: Psychosocial Health and Well-being for content on Psychosocial and issues.

### **Roland (2008) outlines seven compelling reasons why health promotion is an important role for nurses. These reasons are:**

- The population of cancer survivors is growing.
- Cancer survivors can expect to live longer than their predecessors, necessitating a long term health promotion plan.
- Cancer survivors tend to be older, and be at risk of other co-morbidities.
- Cancer and treatment for cancer have the potential to affect every aspect of a cancer survivor’s life.
- The risk of recurrence or multiple cancers heightens the need for screening and surveillance.
- Competing health conditions may be potentially life threatening if left untreated.
- Cancer may represent a “teachable moment” creating an opportunity for oncology nurses to help cancer survivors identify make lifestyle changes promoting health.

The National Centre for Health Statistics concluded that there is overwhelming evidence that cancer patients die of non-cancer causes at a higher rate than persons in the general population (Brown, Brauner & Minnotte, 1993). A substantial proportion of cancer survivors spontaneously initiate positive behavioural changes, however, many do not. Males and those with less education, people over the age of 65, or who live in urban areas are less likely to either initiate healthful changes in behaviour, or maintain them. (Demark-Wahnefried, Aziz, Rowland & Pinto, 2005). The number of studies reporting on health promotion for cancer survivors is limited, and the sample sizes tend to be small. In spite of the state of the evidence, enough is known about the issues cancer survivors face to direct oncology nurses to guide cancer survivors towards healthy lifestyles and away from illness.

## Theories used in Health Promotion with Cancer Survivors

Researchers and clinicians have used a variety of theories in designing and evaluating health promotion interventions with cancer survivors. The application of a specific theory helps to guide assessment and the use of interventions and contributes to the growing body of evidence in this area of study. Pinto and Floyd (2008) have reviewed theories used in 21 randomized clinical trials promoting healthy behaviour change in adult cancer survivors. The theories identified in their search included:

1. The Transtheoretical Model
2. Motivational Interviewing
3. Social Learning and Cognitive Theories
4. Theory of Planned Behaviour
5. Cognitive Behaviour Theory
6. Others

**Refer to Pinto & Floyd (2008) for a discussion of the above theories.**

### A Focus on The Transtheoretical Model (TTM)

The Transtheoretical Model (TTM) has been found to be effective in improving fitness, improving general health, reducing fatigue, and smoking cessation (Pinto and Floyd, 2008). Developed by Prochaska & DiClemente (1983), TTM targets both cognition and behavioural changes. Survivors are assisted in making healthy lifestyle changes by weighing the pros and cons, or evaluating the risks and benefits involved in making a change.

Use of the Transtheoretical Model provides the nurse with a framework for assessing cancer survivors' readiness for making behavioural changes. TTM-based interventions tailor nursing recommendations based on the cancer survivor's readiness for change. The following chart summarizes the five stages of change in the TTM. The stages are cyclic, not linear. The cancer survivor may move into and out of stages, or relapse and start at stage one several times before maintaining the change.

TTM Stage	Survivor Behaviour	Nursing Intervention
<b>1. Pre-contemplation</b>	<ul style="list-style-type: none"> <li>○ Not considering making a change within the next six months.</li> </ul>	<ul style="list-style-type: none"> <li>○ Provide education about the risks and benefits of making a change. Empower cancer survivors by emphasizing free choice.</li> <li>○ Assist cancer survivors to self-explore feelings about unhealthy choices and re-evaluate prospects of change.</li> </ul>

<b>2. Contemplation</b>	<ul style="list-style-type: none"> <li>○ Intending to make a change within the next six months.</li> <li>○ More conscious of the benefits, but aware of unwanted consequences (e.g. Cost, time constraints).</li> <li>○ May present as ambivalent, “procrastination”.</li> </ul>	<ul style="list-style-type: none"> <li>○ Health education and reinforcement of the benefits of the change.</li> <li>○ Openly discuss strategies to deal with possible negative consequences.</li> </ul>
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<b>TTM Stage</b>	<b>Survivor Behaviour</b>	<b>Nursing Intervention</b>
<b>3. Preparation</b>	<ul style="list-style-type: none"> <li>○ Ready to make the change within the next 30 days.</li> </ul>	<ul style="list-style-type: none"> <li>○ Offer social support.</li> <li>○ Make referrals to appropriate resources.</li> <li>○ Encourage and empower cancer survivor that they have the ability to make the change.</li> </ul>
<b>4. Action</b>	<ul style="list-style-type: none"> <li>○ Made specific changes to their lifestyle.</li> <li>○ The potential for relapse is high in this stage.</li> </ul>	<ul style="list-style-type: none"> <li>○ More frequent contact with the cancer survivor to help reinforce the positive lifestyle change and help problem solve obstacles to maintenance.</li> <li>○ Reinforce the long term benefits.</li> </ul>
<b>5. Maintenance</b>	<ul style="list-style-type: none"> <li>○ Working to prevent a relapse.</li> <li>○ Feels more confident about changes, may be a role model for others.</li> </ul>	<ul style="list-style-type: none"> <li>○ Less frequent contact, may be over the phone.</li> <li>○ Continue to reinforce benefits of the change.</li> <li>○ Discuss potential “triggers” that could invite a relapse.</li> </ul>

(Pinto & Floyd, 2008; Singer, 2007)

## Exercise

A growing body of evidence indicates that exercise has a positive effect on body composition, physical functioning, oxygen capacity, cardio-respiratory fitness, muscle strength, flexibility, pain, compromised mood, quality of life, fatigue, and other impairments related to cancer and its treatment (Schwartz, 2008). In a systematic review and meta-analysis by McNeely et al. (2006) the authors concluded that, “exercise is an effective intervention to improve quality of life (QOL), cardio-respiratory fitness, physical functioning, and fatigue in breast cancer patients and survivors” (p. 40). These positive results were similar to those reported elsewhere with other populations of cancer survivors (Schmitz, Holtzman, Courneya et al., 2005). Perhaps even more importantly, it has been suggested that exercise may reduce risk of cancer recurrence (Holmes, Chen, Feskanich, et al., 2005) and reduce the risk of developing cancer (Martinez, 2005; Moore, Park, & Tsuda, 1998). A recent systematic review conducted by Barbaric, Brooks, Moore and Cheifetz (2010) concluded that “there appears to be a trend toward increased survival among patients diagnosed with breast and colon/colorectal cancer who participate in greater levels of physical activity.” (p. 31). The National Cancer Institute (NCI) website concisely reviews key points from studies on the relationship between exercise and cancer. Cancer survivors report both interest in and the belief that they can participate in exercise. (Cheifetz & Park Dorsay, 2007).

Currently, cancer survivors and health care providers lack knowledge about the benefits of exercise, how to exercise safely, efficiently, and effectively. “To date, there are no evidence-based cancer-specific guidelines for exercise .... until there are guidelines, clinicians who may be hesitant to prescribe exercise for their patients need to consider the potential harm from inactivity compared with the short- and long-term benefits on health.” (Schwartz, 2008). Benefits of exercise have been demonstrated in exercising independently in the home, as well as in supervised settings.

## Nutrition

Comprehensive care of cancer survivors includes nutritional interventions targeting both cancer and co-morbidities. Cancer survivors may be ready to adopt healthy lifestyle behaviours. Nurses need to be aware of current literature and guidelines to in order to help cancer survivors make the best nutritional choices. (Toles & Demark- Wahnefried, 2008).

Traditionally, weight loss and cancer cachexia have been the areas of interest with respect to nutrition and cancer survivors. Cancer survivors who are under nourished or cachexic are often fatigued and experience poor quality of life (Toles & Demark- Wahnefried, 2008). For these cancer survivors, a referral to a registered dietician is important. The texture and temperature of foods may need to be modified based on difficulties with chewing or swallowing. Cancer survivors’ senses of taste and smell may be altered in response to treatment. The goal for cancer survivors with a low body mass index (BMI) is to take in

more energy than is used in activity. Nutritional counseling goes hand in hand with energy conservation and counseling about exercise and activity. The American Cancer Society last updated their guidelines on nutrition and physical activity in 2006.

Recently, researchers have been focusing on increased BMI and increased risk of developing cancer, cancer survivorship, and cancer recurrence. Approximately 70% of breast and prostate cancer survivors have increased BMI “There is compelling evidence to support weight control efforts in this (cancer survivor) population.” (Demark-Wahnefried et al., 2005, p. 5815). Toles and Demark-Wahnefried (2008) systematically reviewed studies related to diet and cancer survivorship following the publication of the ACS 2006 guidelines. They report that:

- Cancer survivors with increased BMI have a greater risk of cancer recurrence and mortality than survivors of normal BMI (non-hodgkin’s lymphoma, multiple myeloma, gastrointestinal, kidney, breast, gynecological, and prostate cancers).
- Increased BMI at time of diagnosis is associated with poorer outcomes (breast, prostate cancers).
- BMI greater than 35 strongly associated with recurrent colon cancer, colon cancer mortality
- Not enough is known about increased BMI after diagnosis and morbidity and mortality
- Increased BMI increases the risk of developing, or having poorly managed co-morbidities, for example, cardiovascular disease, diabetes, metabolic syndrome

## Smoking Cessation

The following comment, or something similar, about a cancer survivor who smokes is not true. “Well, the horse is out of the gate, so no point in quitting smoking now.” Improved diagnosis and treatments for cancer have resulted in longer survival rates for certain types of cancer. Preventing cancer survivors from starting or returning to smoking and helping others to quit is increasingly important (De Moor, Elder, and Emmons, 2008).

### The Risks

After a cancer diagnosis smoking is particularly harmful (De Moor et al., 2008). Adult survivors who continue to smoke after their diagnosis with cancer have the following risks:

- A poorer response to treatment
- Experience more toxicities and complications of treatment
- Increased risk of developing a second primary cancer
- Lower rates of survival than people who stop smoking

## The Benefits

There are health benefits of quitting smoking for all people, regardless of diagnosis, age, or gender. The benefits increase the longer someone abstains from smoking.

### Benefits of not smoking include:

Timeframe from smoking cessation	Physiologic Response
<b>8 hours</b>	carbon monoxide levels drop, oxygen levels in the blood return to normal limits.
<b>72 hours</b>	breathing becomes easier, lung capacity increases
<b>2 weeks to 3 months</b>	circulation improves, lung functioning increases up to 30%

Timeframe from smoking cessation	Physiologic Response
<b>6 months</b>	coughing, fatigue, and shortness of breath improve
<b>10 years</b>	risk of dying from lung cancer is cut in one half
<b>15 years</b>	risk of dying of a heart attack equals a person who never smoked

## Alcohol Intake

According to the Centre for Addiction and Mental Health (2007). “While many people have a sense of the risks of heavy drinking, and may be aware of problems such as drinking and driving, the link between drinking and cancer is less familiar to the general public (Giesbrecht et al. 2000; Anglin et al. 2005). Media coverage on the protective effects that alcohol can have on cardiovascular disease rarely mentions that alcohol consumption also increases the risk of cancer and other chronic diseases” (p. 1).

Research still needs to be done to provide further evidence of the impact of alcohol on cancer-specific morbidity and mortality. Regardless, the available and extensive international research that focuses on specific cancers can be used as the basis for prevention initiatives. (CAMH, 2007). As cited in the CAMH 2007 document, alcohol has been labeled as a carcinogen by both the International Agency for Research on Cancer (IARC 1988) and the US National Toxicology Program (2005). Research has shown that this association includes the risk of breast cancer, liver cancer, head and neck cancer, and cancers of the rectum and colon. Some studies have demonstrated increased risk with increased alcohol consumption on stomach, lung, ovary, and prostate cancers but, on balance, the body of scientific evidence has been inconclusive.

## Key Points for Practice: Exercise

It is important for nurses to educate cancer survivors about the definitions of activity and exercise.

1. **Physical activity:** skeletal muscle contraction resulting in bodily movement that requires energy use.
  - a. Physical activity can be thought of as energy expenditure throughout the day, for example, walking up and down stairs, shopping, and house cleaning.
  - b. Physical exercise (exercise training): a form of physical activity that is planned and performed with the goal of achieving/preserving physical fitness. Physical exercise results in increased heart rate.

For some cancer survivors who have not been regular exercisers, or who are de-conditioned as a result of cancer or its treatments, walking around the block may raise their heart rates sufficiently to be considered exercise. The goal then is to gradually increase physical activity to the point of exercise: physical activity that is planned and performed with the goal of achieving/preserving physical fitness.

## Helping Cancer Survivors to Incorporate Exercise into a Healthy Lifestyle: Applying the TTM Model

Nurses need to incorporate exercise into cancer survivorship care plans with the same priority as other nursing interventions. This includes applying a specific theoretical model, for example the TTM in the creation of cancer survivor self selected exercise goals, exercise counseling, and evaluation of interventions targeted at increasing exercise. In addition to educating cancer survivors about the benefits of exercise, nurses can demonstrate understanding, and help develop strategies to manage challenges to exercise. Challenges may include: embarrassment about exercising in public related to body image issues, fatigue, fear of experiencing pain or side effects, never having exercised/not knowing what to expect, lack finances related to inability to work.

TTM Stage	Survivor Behaviour	Nursing Intervention
<b>1. Pre-contemplation</b>	<ul style="list-style-type: none"> <li>○ Not considering making a change within the next six months.</li> <li>○ May lack information, may have attempted to exercise 30 min 3-5 times weekly, not been successful and now feels discouraged.</li> <li>○ Avoids talking about exercise or thinking about risk behaviours (sedentary lifestyle).</li> <li>○ Assessment question: When was the last time you thought about starting an exercise program?</li> </ul>	<ul style="list-style-type: none"> <li>○ Provide education about the risks and benefits of exercising/not exercising.</li> <li>○ Empower cancer survivor by emphasizing free choice.</li> <li>○ Assist cancer survivors to self-explore feelings about unhealthy choices and re-evaluate prospects of exercising.</li> </ul>
<b>2. Contemplation</b>	<ul style="list-style-type: none"> <li>○ Intending to make a change within the next 6 months.</li> <li>○ More conscious of the benefits, but aware of unwanted negative</li> <li>○ May present as ambivalent, “procrastination.”</li> </ul> <p><b>Assessment question:</b>  <b>What is the biggest barrier to starting an exercise program at this point in time?</b></p>	<ul style="list-style-type: none"> <li>○ Health education and reinforcement of the benefits of exercising 30 min. 3-5 times a week.</li> <li>○ Openly discuss strategies to deal with possible negative consequences (e.g. sore muscles from prolonged inactivity).</li> </ul>

TTM Stage	Survivor Behaviour	Nursing Intervention
<b>3. Preparation</b>	<ul style="list-style-type: none"> <li>○ Ready to start exercising within the next 30 days.</li> <li>○ Have a plan (joined the gym).</li> </ul> <p><b>Assessment questions:</b>  <b>When is your appointment with the personal fitness trainer at the gym?</b>  <b>What can I do, if anything to help you get started at the gym?</b></p>	<ul style="list-style-type: none"> <li>○ Offer social support.</li> <li>○ Make referrals to appropriate resources (eg. Assist with health clearance for exercise facility).</li> <li>○ Encourage and empower cancer survivor that they have the ability to start exercising.</li> </ul>
<b>4. Action</b>	<ul style="list-style-type: none"> <li>○ Exercising for 30 min 3-5 days most weeks for less than 6 months. Made specific changes to their lifestyle.</li> <li>○ The potential for relapse is high in this stage.</li> </ul> <p><b>Assessment question:</b>  <b>Now that you are exercising 3-5 times a week, you must be noticing changes in how you are feeling. Please tell me about them.</b></p>	<ul style="list-style-type: none"> <li>○ More frequent contact with the cancer survivor to help reinforce the positive lifestyle change and help problem solve obstacles to maintenance.</li> <li>○ Reinforce the long term benefits of exercise (eg maintenance of a normal BMI).</li> </ul>
<b>5. Maintenance</b>	<ul style="list-style-type: none"> <li>○ Regularly exercising for more than 6 months.</li> <li>○ Working to prevent a relapse.</li> <li>○ Feels more confident about changes, may be a role model for others.</li> <li>○ Assessment question: You recently started back on chemotherapy. How difficult has it been for you to maintain your exercise program?</li> </ul>	<ul style="list-style-type: none"> <li>○ Less frequent contact, may be over the phone.</li> <li>○ Continue to reinforce benefits of exercise.</li> <li>○ Discuss potential “triggers” that could invite a relapse (eg. Vacation, relapse of disease).</li> </ul>

(Pinto & Floyd, 2008; Singer, 2007)

Cancer survivors should always consult with their oncologist or primary health care provider before beginning an exercise program.

## Tips for starting an exercise program

1. Exercise every other day
  - Start slowly and gradually, increasing exercise to tolerance
  - Gradually increase exercise to 30 min every day
  - Combine both aerobic and strength training with stretching to increase flexibility
  - Exercise at a moderate intensity, 50-75% of predicted maximum heart rate (Schwartz, 2008)

## Exercise Safety

Safety is a priority for cancer survivors who are exercising. Cancer survivors need to be educated about the contraindications to exercise. They are:

- a. Shortness of breath with minimal exertion or at rest
- b. Unrelieved bone or any pain
- c. Extreme fatigue
- d. Severe muscle wasting
- e. Dizziness
- f. Anemia: recommend minimal exertion with hemoglobin less than 80 g/L
- g. Thrombocytopenia: minimal exertion with platelet less than 50 (X10 g/L)
- h. Absolute neutrophils  $\leq 1.0$  (x10 g/L)
- i. Fever of 38°C or greater
- j. Severe nausea and vomiting, potential for electrolyte imbalance (Na<sup>2+</sup> and K<sup>2+</sup>) (Courneya, 2000)

## Exercise Counseling

Jones et al. (2004) investigated the effects of an Oncologist's counseling to exercise on self-reported exercise behavior in newly diagnosed breast cancer survivors (N=450).

In this randomized controlled trial, participants were divided into three groups: usual care (no exercise counseling), counseling to exercise only, and counseling to exercise and referral.

Oncologists were trained to provide a 30 second exercise counseling script.

Participants correctly recalled exercise counseling from 41% to 77%.

- Those who received exercise counseling only were significantly more active than those who did not.
- Those who recalled receiving exercise counseling (correctly or incorrectly) were significantly more active than those who did not recall exercise counseling.

Nurses are in a prime position to provide exercise counseling to cancer survivors. Exercise counseling can take as little as 30 seconds to provide, and can be incorporated into the initial encounter and each follow-up visit.

## ***The exercise counseling script***

“Recent research has shown that some of the side effects you may experience during treatment may be controlled with a modest exercise program. I recommend trying to exercise 20-30 minutes every day at a moderate intensity. Even less may be beneficial, but try to do something everyday. Exercises such as brisk walking will meet these requirements.” (Jones et al, 2004).

## **Key Points for Practice: Nutrition**

Nurses can teach cancer survivors that gradual weight reduction may have a significant, positive impact on managing hypertension, elevated blood glucose levels, hyperlipidemia, pain, and improve physical functioning. Cardiovascular disease is the leading cause of deaths in Canada, and cancer survivors benefit from an assessment and interventions to reduce their risk of developing this significant co-morbidity.

### ***What is BMI?***

The distinction between overweight and obesity is made on the basis of the body mass index (BMI). The BMI is the most practical way to evaluate the degree of excess weight. It is calculated from the weight and square of the height as follows:

**BMI = body weight (in kg) ÷ height (in meters) squared**

The BMI can also be obtained from a nomogram, a table, or a calculator. Many web sites provide online tools to help calculate BMI, [click here](#) for an example from the National Institutes for Health.

Classification of BMI — The recommended classifications for BMI adopted by the National Institute of Health (NIH) and World Health Organization (WHO) and endorsed by most expert groups are:

- Underweight — BMI < 18.5 kg/m<sup>2</sup>
- Normal weight — BMI ≥ 18.5 to 24.9 kg/m<sup>2</sup>
- Overweight — BMI ≥ 25.0 to 29.9 kg/m<sup>2</sup>
- Class I obesity — BMI = 30.0 to 34.9 kg/m<sup>2</sup>
- Class II obesity — BMI = 35.0 to 39.9 kg/m<sup>2</sup>
- Class III obesity — BMI ≥ 40 kg/m<sup>2</sup>. This type of obesity is also referred to as severe, extreme, or morbid obesity.

## Helping Cancer Survivors Attain or Maintain a Healthy BMI

Cancer survivors should always talk with their oncologist or primary health care provider before starting a weight reduction or exercise program.

Nurses can role model healthy lifestyle behaviors by maintaining a normal BMI themselves.

The goal would be to lose no more than 1 kg per week. Encourage the intake of a well-balanced diet; increase the intake of low fat, plant-based foods, while limiting animal-based foods, especially red meats.

Encourage exercise and activity. Decreasing BMI will require lifestyle changes of both increased exercise (expenditure of energy) and decreased energy intake.

TTM Stage	Survivor Behaviour	Nursing Intervention
<b>1. Pre-contemplation</b>	<ul style="list-style-type: none"> <li>○ Not considering making a change within the next six months.</li> <li>○ May lack information, may have attempted to lose weight, not been successful and now feels discouraged.</li> <li>○ Avoids talking about weight loss or thinking about risk behaviours.</li> </ul>	<ul style="list-style-type: none"> <li>○ Provide education about the risks and benefits of weight reduction.</li> <li>○ Empower cancer survivor by emphasizing free choice.</li> <li>○ Assist cancer survivors to self-explore feelings about unhealthy choices and re-evaluate prospects of weight reduction.</li> </ul>
<b>2. Contemplation</b>	<ul style="list-style-type: none"> <li>○ Intending to make a change within the next six months.</li> <li>○ More conscious of the benefits, but aware of unwanted consequences (eg. Cost, time constraints).</li> <li>○ May present as ambivalent, “procrastination.”</li> </ul> <p><b>Assessment question: What is the biggest barrier to changing your eating behaviours at this point in time?</b></p>	<ul style="list-style-type: none"> <li>○ Health education and reinforcement of the benefits of changing</li> </ul>

TTM Stage	Survivor Behaviour	Nursing Intervention
<p><b>3. Preparation</b></p>	<ul style="list-style-type: none"> <li>○ Ready to start changing eating behaviours within the next 30 days.</li> <li>○ Have a plan (joined a weight loss program, joined a gym).</li> </ul> <p><b>Assessment question: When is your appointment with the dietician at the clinic?</b></p> <p><b>What can I do, if anything to help you start your weight reduction program?</b></p>	<ul style="list-style-type: none"> <li>○ Offer social support.</li> <li>○ Make referrals to appropriate resources (eg. registered dietician, certified fitness trainer).</li> <li>○ Encourage and empower cancer survivor that they have the ability to start losing weight.</li> </ul>
<p><b>4. Action</b></p>	<ul style="list-style-type: none"> <li>○ Exercising for 30 min 3-5 days most weeks for less than six months. Made specific changes to their lifestyle.</li> <li>○ The potential for relapse is high in this stage.</li> </ul> <p><b>Assessment question: Now that you have lost 5 kg, you must be noticing changes in how you are feeling. Please tell me about them.</b></p>	<ul style="list-style-type: none"> <li>○ More frequent contact with the cancer survivor to help reinforce the positive lifestyle change and help problem solve obstacles to maintenance.</li> <li>○ Reinforce the long-term benefits of exercise (eg maintenance of a normal BMI).</li> </ul>

<p><b>5. Maintenance</b></p>	<ul style="list-style-type: none"> <li>○ Regularly exercising for more than six months.</li> <li>○ Working to prevent a relapse.</li> <li>○ Feels more confident about changes, may be a role model for others.</li> </ul> <p><b>Assessment question: You talked about going on a cruise to celebrate your one year anniversary of finishing radiation. Have you thought about how you will make health food choices while you are on vacation?</b></p>	<ul style="list-style-type: none"> <li>○ Less frequent contact, may be over the phone.</li> <li>○ Continue to reinforce benefits of exercise.</li> <li>○ Discuss potential “triggers” that could invite a relapse (eg. Vacation, relapse of disease).</li> </ul>
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(Pinto & Floyd, 2008; Singer, 2007)

## Key Points for Practice: Smoking Cessation

### *Helping Cancer Survivors Quit or Not Return to Smoking*

In their systematic review of smoking cessation and prevention studies with cancer survivors, De Moor et al. (2008) outline characteristics of effective smoking prevention programs:

- Emphasis on the unique health risks and vulnerability to tobacco-related health problems of cancer survivors
- Goals are set for abstaining from tobacco
- Regular reinforcement of the importance of abstaining from tobacco
- Use of a theoretical framework to design interventions
- Combining pharmacologic (nicotine replacement) with behavioural strategies
- High intensity support over multiple session
- Focus on strategies for making healthy life style choices and avoiding high risk behaviours

### Assessment:

Prior to offering an intervention to help a cancer survivor quit or not return to smoking, the nurse can use the TTM as a framework to assess readiness to make the behavioural changes.

When did you last think about quitting smoking?	Pre-contemplation
When you think about quitting, what holds you back?	Contemplation
What date have you chosen as “quit day”?	Preparation
You’ve been smoke free for two weeks. That is quite an accomplishment! How does it make you feel?	Action
What advice would you offer other cancer survivors who want to quit smoking like you did?	Maintenance

For cancer survivors who smoke, it is important for nurses to offer at least a brief intervention to help them to quit. The diagnosis of cancer is a high risk time for former smokers to relapse, and a key time for nurses to reinforce the importance of abstaining from smoking. The United States Public Health Service 5A’s approach to tobacco use in the clinical setting is an important resource for oncology nurses. The 5A’s are:

- **Ask:** ask and document each person’s tobacco use at each clinical encounter
- **Advise:** in a clear, strong, and personalized manner, urge all smokers to quit
- **Assess:** evaluate the person’s stage of readiness to make a change within the next 30 days (Apply TTM framework)
- **Assist:** if the person is willing to make an attempt to quit, provide resources, help
- **Arrange:** schedule close follow-up, reinforce success, or intervene if relapsed

(summarized from De Moor et al, 2008)

One of the resources nurses can offer cancer survivors is information about smokers’ quit lines. A survey conducted to evaluate the effectiveness of a smoker’s helpline in Ontario reported on callers 28 days after they talked with a quit specialist. Thirty nine percent of callers reported they had made a quit attempt. Thirty one percent set a quit date, and 65% had cut down on the number of cigarettes smoked (Health Canada, 2005). This link lists “[Quit Lines](#)” by province.

## Key Points for Practice: Alcohol Intake

How is alcohol intake described?

One of the methodological challenges related to the research on the increased risks of certain types of cancers and alcohol intake is the description of alcohol intake. Different international studies describe low, moderate, and heavy alcohol intake differently. According to Dufour (1999), in Canada, moderate drinking for both males and females is described as:

- Two alcoholic drinks per day or nine drinks per week
- One alcoholic drink consists of five ounces of wine, one and one half ounces of a spirit, or 12 ounces of beer

## Assessment:

The assessment of alcohol use/misuse may follow a different order than that of other risk reduction behaviours. Prior to using the TTM framework, the nurse can use the CAGE Questionnaire (Ewing, 1984) as a screening tool to determine if it is appropriate to further assess and offer interventions to quit or modify alcohol intake.

The CAGE Questionnaire is a very brief, non-confrontational tool frequently used in primary care settings to screen for alcohol overuse. It takes less than one minute to complete. The cancer survivor can complete a paper and pencil version, or it can be done as part of the nurse-cancer survivor interview. It has been tested for validity and reliability. The CAGE Questionnaire is not a diagnostic tool. Answering more than two out of the four questions as “yes” does not diagnose a person with alcoholism. However, answering “yes” to two questions directs the nurse to further explore the potential for alcohol misuse.

### CAGE Questionnaire

- Have you ever felt that you should **C**ut down on your drinking?
- Have people **A**nnoyed you by criticizing your drinking?
- Have you ever felt bad or **G**uilty about your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (**E**ye opener)?

### Helping Cancer Survivors Make Informed Choices about Alcohol Intake

Brief interventions have been demonstrated to reduce high risk alcohol intake. Brief interventions are a useful strategy nurses can use to help cancer survivors modify their drinking behaviours. (CAMH, 2007). The 5 A's Framework used to help smokers quit, can be applied to helping cancer survivors modify their drinking behaviours.

- **Ask:** ask and document each person's alcohol use at each clinical encounter
- **Advise:** in a clear, strong and personalized manner, urge cancer survivors to cut down or quit drinking alcohol if they are more than moderate drinkers
- **Assess:** evaluate the person's stage of readiness to make a change within the next 30 days (Apply TTM framework)
- **Assist:** if the person is willing to make an attempt to cut down or quit provide resources
- **Arrange:** schedule close follow-up, reinforce success or intervene if relapsed

(modified from De Moor et al, 2008)

## Tips to Offer Cancer Survivors Cut Down or Eliminate Alcohol

### Review:

How much is a drink?

A drink is:

2. one 350 mL (12 oz) bottle of beer (5% alcohol)
3. one 145 mL (5 oz) glass of wine (12% alcohol)
4. one 45 mL (1.5 oz) shot of spirits (40% alcohol)

Drinking more than 3.5 drinks a day can double or even triple the risk of developing cancer. (Canadian Cancer Society, 2010)

If the cancer survivor chooses to drink alcohol, limit the amount consumed. One alcoholic drink a day for women and less than two drinks a day for men is recommended. According to the literature, even one drink a day on average can increase the risk of breast cancer.

### Practical tips include:

5. Try not to start drinking alcohol if you are thirsty instead quench your thirst with water or another non-alcoholic drink first.
6. Avoid salty snacks such as potato chips and nuts while drinking alcohol because these make you thirstier.
7. Have some non-alcoholic or low-alcoholic drinks during the evening.
8. Space out your drinks about an hour apart.
9. Always have a glass or bottle of water with you as well as your alcoholic drink.
10. Think about the strength of your drink. Choose beer or wine that contains less alcohol.

(Canadian Cancer Society, 2010)

[This link](#) is an excellent resource for survivors who are thinking about limiting the amount of alcohol they consume, or eliminating alcohol from their lifestyle. This National Institutes of Health resource provides a self assessment guide consistent with the TTM to help survivors gauge their readiness to make a change with respect to alcohol intake. Tips for cutting down or eliminating alcohol intake are provided.

## Learning Activity: Case Study

### Part Two

Note: This is a continuation of the case study you first read in Unit 2: Models of Care for Follow Up After Cancer Treatment and the survivorship care plan that was developed for G.L.

G.L is now 71-year-old and two years post external beam radiation treatment and androgen suppressant therapy for T2a N0 M0 adenocarcinoma of the prostate. His Gleason score was 2 + 4.

G.L. continues to be treated for hypertension with thiazide diuretic and a beta blocker. He is awaiting bilateral knee replacements for osteoarthritis. He is a life long non-smoker. He consumes 3-4 alcoholic beverages on most days. G.L. leads a sedentary lifestyle. He stopped playing golf after his treatment, fearing the embarrassment of urinary incontinence while on the course.

You are a nurse who has provided care to G.L. during and following his treatment. He is now coming to the clinic every six months. G.L. tells you that it is “too difficult” to see his primary care provider on a regular basis.

PSA 0.1      BP 154/88      Ht 179.0      Wt 114.0      BMI 35.2

**G.L. main concerns are:**

- “I’d like to be more active, but I’ve gained so much weight, and I’m so short of breath when I do the littlest activity. It’s an effort to do almost anything.”
- “My wife is only 65-year-old. She still looks healthy and pretty. We used to be really close, do lots of things together. I have trouble getting an erection. I tell her I’m just tired, but honestly, I just can’t do it.”
- “That guy at work with prostate cancer he slipped on the ice and broke his wrist. And now I hear he broke his hip! I’d like to be more active, but not if my bones are going to break like a china tea cup!”

Develop a survivorship care plan to address risk reduction issues identified in this case scenario. Provide examples of questions you would use, applying the TTM to assess G.L. readiness to make behavioural changes. Include both actual and potential issues for G.L. Part One and Part Two of the survivorship care plan should address actual and potential issues specific to G.L. Ongoing surveillance, as well as risk prevention activities should be addressed.

**Discussion of case study:**

Risk reduction issues include

- a. increased BMI (Class II Obesity)
- b. sedentary lifestyle
- c. increased alcohol intake

Health conditions G.L. is at risk for include

- cardiovascular disease: stage two hypertension in spite of treatment
- depression: withdrawing from social interactions related to urinary incontinence, fears of recurrence/complications of disease (pathologic fracture), marital issues related to ED
- excessive ETOH use: as above, self medicating for pain while awaiting hip replacements for osteoarthritis
- type two diabetes: age (72), increased BMI, ETOH use
- metastases from prostate cancer

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