

PSYCHOLOGY WORKS Fact Sheet: Pediatric Oncology

Cancer in Childhood and Adolescence

Compared to cancer in adults, cancer in children and adolescents (hereby referred to as ‘childhood cancer’) usually grow in different types of body tissues, result from unknown causes, tend to grow rapidly and aggressively, and are generally more responsive to therapy (Pizzo & Poplak, 2010). The three most common types of childhood cancers are leukemia (cancer of the blood), CNS-related cancers (e.g., brain tumours), and lymphomas (cancers in the lymphatic system). Although childhood cancer is relatively rare, 1000 children are diagnosed yearly in Canada (Public Health Agency of Canada, 2021). Efforts to treat cancer continue to be an important focus of research, with the five-year survival rate for all childhood cancers combined now reaching 84% (Public Health Agency of Canada, 2021).

With increasing rates of survival, there has been a parallel increase in our appreciation for the impact that childhood cancers and their treatments can have long after treatments ends. The risk of these ‘late effects’ depends on the type and amount of treatment received; however, research suggests that more than 60% of childhood cancer survivors will experience at least one chronic condition while about 30% will experience severe or life-threatening conditions (Health Canada, 2017). Late effects can include: growth impairment, infertility, damage to major organs (e.g., heart, kidney, lungs, central nervous system), neurocognitive impairments (e.g., learning disabilities; difficulty with memory, processing speed, attention) and secondary cancers (Health Canada, 2017). Not surprisingly, these effects can further impact other areas of individual and family functioning such as social relationships, academic success, employment, and daily living.

Cancer Treatments and Supports

Childhood cancers can be treated with a combination of treatments, chosen based on the type and stage of cancer. More traditional medical treatment for childhood cancers can include chemotherapy, radiation, surgery, and bone marrow and stem cell transplants; however, new and innovative approaches to treating childhood cancer, such as immunotherapies, continue to be explored and are beginning to be used.

Most children with cancer in Canada and the United States are treated at a university affiliated children’s center that is a member of the Children’s Oncology Group (COG). Being treated in these centers offers the advantage of a team of specialists who know the differences between adult and childhood cancers, as well as the unique needs of children with cancer and their families. This team usually includes pediatric oncologists, surgeons, radiation oncologists, pathologists, pediatric oncology nurses, and nurse practitioners. These centers also have psychologists, social workers, child life specialists, nutritionists, rehabilitation and physical therapists, and educators who can support and educate the entire family. Palliative care supports may also address physical, psychological, emotional, and social areas of need. It is important to also acknowledge that beyond the treatments mentioned, a number of additional treatments and supports may also be provided or sought out by families. For example, complementary



and alternative medicine approaches such as herbal remedies, diet and nutrition interventions, faith-healing, homeopathy, mind-body therapies, and massage therapy may be used.

For childhood cancer survivors, continued supports and treatments for identified late effects may continue to be a critical component of their lives. Formal childhood cancer survivorship clinics (e.g., ‘after care clinics’) have been established to (a) promote health and health education, and (b) monitor survivors at regular intervals for potential late effects so they can be both identified and treated as early as possible.

How Can Psychology Help?

Cancer diagnoses create many changes and challenges for children, adolescents, and their families. For example, they may have difficulty adjusting to the illness and experience a number of stressors related to the illness (e.g., frequent medical appointments and hospitalizations, side effects, maintaining complex care regimens, inconsistent school attendance, the need to make difficult decisions, approaching the end of life). Many factors (e.g., age, developmental level, personality, normal coping style, support system, previous life experiences) can affect how one copes with the current crisis and early adaptive adjustment is associated with adjustment over time. Successful coping provides relief from both short and long-term stress and leads to adjustment and adaptation. When other life stressors such as death, loss of a job, moving, marital problems, divorce, emotional problems, or substance abuse exist in a family prior to the child’s cancer diagnosis, coping difficulties that negatively impact daily functioning may arise.

Pediatric clinical and health psychology are specialized areas of practice that focus on addressing the psychological aspects of illness, injury, and the promotion of health behaviours in children, adolescents, and families in a pediatric health setting. Pediatric psychologists have a strong and growing presence in childhood cancer programs, and can play an important role throughout the entire process of a child or adolescent’s experience with cancer, including:

- at the initial time of diagnosis
- throughout treatment
- at the end of treatment
- after treatment ends
- at times of relapse
- at the end of life

Specifically, pediatric psychologists use evidence-based approaches to:

- Assess and treat behavioural, cognitive, and emotional problems associated with pediatric cancer diagnosis (e.g., adjustment), cancer-related treatment (e.g., procedural distress, pain, worry, feelings of sadness), during after care for cancer survivors, and at end-of-life (e.g., bereavement counselling) for children, adolescents, and their families.
- Conduct specialized neuropsychological assessments to evaluate and monitor how cancer and related treatments affect one’s cognitive functioning and related academic, social, and work-related functioning. Results from these assessments can provide an understanding of the child or adolescent’s learning needs and related recommendations.



- Consult with school staff or others in the community and assist with school participation and reintegration. For example, children and adolescents may need help transitioning back to school or may need individualized education plans.
- Collaborate with other health care providers and team members to provide appropriate and coordinated care to children, adolescents, and their families. For example, psychologists might help to develop strategies to improve medication adherence.
- Assist with problem solving and making difficult decisions in structured ways. For example, psychologists may help families in considering different perspectives and information involved in making difficult decisions related to cancer treatments and approaches.
- Conduct research related to the individual and family impact of childhood cancer and develop evidence-based interventions to ameliorate difficulties.

Where Can I Go for More Information?

More information on pediatric oncology, interventions, follow-up, coping, and more can be found through the [Children's Oncology Group \(COG\)](#) website. Provincial websites and resources such as the [Pediatric Oncology Group of Ontario \(POGO\)](#) may also be helpful resources.

You can consult with a registered psychologist to find out if psychological interventions might be of help to you. Provincial, territorial, and some municipal associations of psychology may make available a referral list of practicing psychologists that can be searched for appropriate services. For the names and coordinates of provincial and territorial associations of psychology, go to <https://cpa.ca/public/whatisapsychologist/PTassociations/>.

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Your opinion matters! Please contact us with any questions or comments about any of the **PSYCHOLOGY WORKS** Fact Sheets: factsheets@cpa.ca

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