

Screen it! Treat it! Beat it!

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Overview of Naturopathic Medicine



Introduction

Naturopathic Medicine is unique in how it treats the “why” of the disease. The body is seen as an ecosystem made up of various organs that depend on each other for survival (much like animals and plants depend on each other in the environment). When there are imbalances in our internal environment, we begin to see disease. Restoring a healthy internal environment to maintain a state of health is the goal of the naturopathic doctor.

Naturopathic Doctors are regulated health professionals in British Columbia, Saskatchewan, Manitoba, Alberta and Ontario with:

- 3 years of premedical undergraduate educational requirements
- 4 years of naturopathic medical college
- International and local licensing examination requirements

Among the different tools to treat the “why” are:

- Clinical nutrition
- Botanical medicine
- Chinese medicine and acupuncture
- Naturopathic manipulation
- Lifestyle counseling
- Hydrotherapy
- Infusion (intravenous) Therapy

Naturopathic Medicine and Colorectal Cancer

Naturopathic medicine is an important part of Colorectal Cancer Care. Over the past 2 decades research has shown how integrative therapies can improve cancer patient treatment outcomes. Naturopathic medicine offers therapies that support the individual throughout their cancer journey. Some of the potential benefits include:

1. Reduction in the risk of initially developing colorectal cancer
2. Supporting tolerability and treatment response with patients undergoing conventional cancer treatment including chemotherapy, radiation and/or surgery
3. Promoting patient's return to optimal health and prevention of recurrence once cancer has been successfully treated

Supportive naturopathic cancer care has undergone tremendous growth and evolution over the past 2 decades. Recently, Dr. Eric Marsden ND, was the lead author on a publication outlining the principles of care guidelines for naturopathic cancer care which was published in *Current Oncology* in February of 2019. [Click here to read the article.](#)

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1) Naturopathic Primary Preventive Care

Almost all colorectal cancers develop from adenomatous polyps (benign precursors of colorectal cancer cells) arising from "susceptible" cells lining the intestine which are characterized by hyperproliferation (rapid cell growth and division), impaired apoptosis (programmed cell death), and reduced differentiation (do not have the normal colon cell appearance). While removal of these polyps is preventive, it does not eliminate risk for adenoma recurrence (Fedirko et al., 2009) and adenoma recurrence can lead to cancerous changes.



There is hope, however, and the chance to make a change if preventive steps are taken early enough. Evidence suggests that adenomas (benign precursors to cancer) may present for ten or more years before cancer develops. (Leslie et al. 2002) Early prevention is extremely important in helping to stop polyp formation and/or the recurrence of these

polyps while allowing the body to be in its optimal, healthy state to offset any abnormal changes.

For many people, maintaining a healthy lifestyle and taking the steps towards wellbeing can be extremely difficult. There may be many barriers including things like stress, sleeping disorders resulting in an angry cycle of fatigue, preexisting medical conditions, decreased motivation and possibly lack of understanding or direction. Naturopathic doctors work in this area to help treat the root cause of the problem by using tools like dietary support, fitness modules, botanicals, supplements, acupuncture, lifestyle counseling and education. Looking at the mind, body and spirit of a person while using medical diagnostics allows for a thorough and complete plan of action to optimize health and prevent disease.

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a. Dietary Suggestions for Cancer Prevention

A diet that focuses on colorectal cancer prevention includes increasing overall fiber intake through fruits and vegetables and choosing whole grains. Increasing consumption of fruits and vegetables, particularly organically and locally farmed produce, has been shown to reduce the risk of colorectal and other types of cancer (Miller et al. 2010) (Randi et al. 2010). Consumption of whole grains has also been associated with decreased risk of developing colorectal cancer.



Those that consumed more whole grains were less likely to develop colorectal cancer than those who consumed less (Haas et al. 2009).

Also important to cancer prevention is decreasing animal products and processed meat intake, avoiding foods that harbor toxic substances, avoiding allergenic or

inflammatory foods, decreasing alcohol consumption, and drinking clean water.

The food we eat is important for physical sustenance but also for our families, communities and cultural groups. It is important to remember to keep the joy in both the preparation and consumption of the food we eat. Ensure your diet is not only physically healthy based on the recommendations but also emotionally nourishing. Eat a varied diet with flavors you enjoy and remember to experiment with new foods and new flavors!

For some individuals your naturopathic doctor may use therapeutic diets like intermittent fasting and carbohydrate restriction to help improve your specific metabolic state which can have a significant impact on cancer risk along with a variety of other chronic illnesses. Focused lab assessments are ordered to ensure these diets will be both safe and effective for each individual patient.

(For more information or to download our prevention diet plan, please visit the Marsden Centre website at marsdencentre.com)

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b. Fitness Plan for Cancer Prevention

Exercise is an important part of cancer prevention and disease prevention in general. Most of us know the benefits of exercise including increased energy and improved mood. However, physical activity is even more important in cancer for more significant reasons including decreased inflammation, decreased insulin-like growth factor levels which promote cancer growth, and increased immune function (Wolin et al. 2009). A study by the World Cancer Research Fund found that physical activity was associated with a 15% reduction in colon polyp

risk (World Cancer Research Fund/American Institute for Cancer Research, 2007). A separate meta-analysis supported this by finding a significant 16% risk reduction of polyp formation when comparing the most active to the least (Wolin et al. 2011).

The most important attribute of any successful fitness program is the ability to stick to it safely and consistently. What determines that is whether one can tolerate and sustain the intensity of activity or, often more importantly, whether or not the activity is enjoyable. Getting a group of people to join or joining an existing gym or exercise class can help to keep the motivation and the fun in fitness routines. *(For more information please visit the MARSDEN CENTRE website at www.Marsdencentre.com)*



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c. Primary Chemopreventive Therapies

The following is not a complete list but does contain some of the natural therapies with evidence-based research behind their use as chemopreventive agents. Chemopreventive agents are vitamins, herbs or other biological agents or medicines that help prevent or delay the development of cancer. This is not to be mistaken for chemotherapy that is the treatment of cancer with a drug or combination of drugs that interferes with the division of fast growing cells. Please note that nutrients – like drugs – have a therapeutic window. This means that too little or too much of the nutrient can lead to either no difference to one's health or adverse side effects. These natural therapies can also interact with medication or other supplements. Always consult a practitioner before supplementing.

Folic Acid (folate)

Folic acid is a water-soluble B vitamin (B9). While folic acid is the non-biologically active form, folate is the naturally occurring form most often found in leafy vegetables like spinach, legumes and sunflower seeds. It is essential in many bodily functions including DNA (the cell's genetic blueprint) synthesis and repair. *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

Calcium

Many are familiar with calcium and relate it mostly to healthy bones but calcium also appears to play a very important role in the prevention of cancer. There are multiple forms of calcium compounds including carbonate, citrate and phosphate. Each compound has a differing amount of “elemental calcium” – the actual amount of calcium in the supplement – and is absorbed differently by the body. Calcium carbonate contains more elemental calcium than other forms requiring fewer capsules. *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

Vitamin D



The major source for vitamin D for most people is the sun. Optimal daily UV-B sunlight exposure translates to an oral dose of 20 000 IU vitamin D and is the main source of vitamin D for most individuals (Wei et al., 2008). There are very few dietary sources of vitamin D which include fish (salmon, mackerel, sardines). However, among the same sources, amounts of vitamin D can differ based on where, for example, the fish are caught. While wild salmon contains approximately 500 to

1000 IU of vitamin D in 3.5 oz, farmed salmon contains only 100 to 250 IU in the same serving size (Holick 2008). Vitamin D3 (cholecalciferol) is the most optimal oral supplemental vitamin D as it takes advantage of the natural metabolism in the body to generate the most active form of vitamin D (Fedirko et al, 2009). *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

Curcumin

Turmeric (curcumin) has been used in Chinese and Ayurvedic medicine for thousands of years to treat digestive complaints, liver disorders, immune dysfunction and as an antiseptic. Turmeric is a member of the ginger family and is native to Asia. Curcumin is a yellow phytochemical produced in the rhizomes of the turmeric plant.

Modern uses have found that turmeric bears potent anti-inflammatory, antioxidant and anti-tumor actions making it useful for treating a variety of degenerative disease including arthritis, Alzheimer's, heart disease and cancer. Research suggest that curcumin has strong potential in

both treating and preventing a variety of types of cancer including breast, colorectal, prostate, pancreatic, skin, and lung.

Curcumin has been shown to have multiple effects, targeting a variety of receptors on cancer cells. The chemopreventive actions of curcumin include inhibition of cancer cell proliferation through cell cycle arrest at various phases depending on the cell type, induction of apoptosis or apoptosis-like changes within mitochondria-mediated pathways, and suppression of angiogenesis and metastasis. The antioxidant and anti-inflammatory properties of curcumin have demonstrated protection against carcinogenesis, preventing tumor formation and the development of several cancer types.

Green Tea

The Camellia genus has almost 300 species, native to the coastal and mountain regions of East Asia. The tea plant is an evergreen shrub that is cultivated best at higher altitudes where cooler temperatures encourage complexity in flavour. Green tea is used for its antioxidant, anticancer, diuretic, stimulant, antibacterial, antilipidemic, and antiatherosclerotic properties.

The constituents responsible for the majority of benefits provided by green tea are referred to as catechins. Catechins inhibit the production of COX-1 and other mediators of the inflammatory pathway. Animal studies have shown that the active constituents in green tea have antimutagenic and protective effects on DNA. Catechins also prevent angiogenesis in tumors, inhibit tumor cell proliferation, cause cell cycle arrest and induce apoptosis through reactive oxygen species formation and mitochondrial depolarization.

Certain Studies have shown Green tea may be effective in reducing the risk of colorectal, breast, ovarian, cervical, prostate, esophageal, and stomach cancer in humans. The catechins from green tea may also reduce the cardiovascular and liver diseases. Studies have also highlighted potential benefits of green tea in cognitive function associated with Parkinson's disease.

Please note that this is not an extensive list of natural therapies used for prevention and supportive treatments usable in colorectal cancer cases. Individualized treatment based on a person's health status, chemotherapeutic regimen or conventional treatment protocol is extremely important and requires expert guidance.

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2) Naturopathic Supportive Care

In 2010, an estimated 22 500 Canadians were diagnosed with colorectal cancer (Canadian Cancer Society 2010) and most would have received some sort of chemotherapeutic or surgical intervention.

Despite the notable improvements in overall survival with these therapies, they are not without significant side effects. One of the largest concerns for these conventional therapies are the considerable side effect profiles which can most notably include neurotoxic effects in the case of oxaliplatin which can become dose-limiting (Kono 2009) (Kurniall 2010) (Nishioka 2011), leading to inability to finish prescribed treatments.

The use of natural therapies in this way to help enhance chemotherapeutic effects by decreasing side effects and the need to discontinue treatment is a way by which integrated cancer care can work to enhance a patient's treatment journey.



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a. Dietary Suggestions during Chemotherapy and/or Radiation

Patients receiving chemo and radiation therapy often have significant gastrointestinal symptoms including nausea, vomiting, diarrhea, constipation, reduced appetite, etc. Proper nutrition is

very important during this time to ensure treatment efficacy and tolerance and prevent weight loss. In order to ensure adequate intake of essential nutrients, patients receiving chemotherapy and/or radiation should consume foods that are easy to digest while avoiding foods that will increase inflammation or stress in the digestive tract. This includes cooking vegetables and consuming nutrient rich broths and gentle meal replacement aids. General recommendations include eating enough fruits and vegetables (organic/local as much as possible), eating “free range” animal products as much as possible, avoiding canned food, drinking good water (reverse osmosis), and taking the time to eat slowly. Food can help mitigate chemotherapeutic side effects like ginger tea that has been shown to be one of the best therapies for reducing nausea and vomiting during chemotherapy (Pillai et al. 2011). *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

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b. Fitness Plan

Physical activity, no matter how minor, is beneficial before, during and after cancer treatment. Endurance exercise programs of 30 minutes or more per day can reduce the rate of cancer related fatigue, reduce the side effects of treatments, reduce the rates of cancer recurrence and improve survival. Chemotherapy and radiation therapy often cause side effects like anemia, cardiotoxicity, and neuropathy. All of these things can lead to increasing levels of fatigue. By reducing physical activity, you lose lean body mass and decrease cardiovascular fitness that results in decreased ability to complete daily activities and other physical tasks. Studies have shown that patients engaged in regular endurance training experience reduced side effects of cancer treatment (Halle et al. 2009). These improvements include reduced nausea and fatigue, increased physical endurance and quality of life. In addition to improving side effects, individuals that exercise have reduced rates of cancer recurrence and, in addition, improved survival rates (Ibrahim et al. 2010). Resistance training has also been shown to reduce some of the side effects of chemotherapy and radiation by improving stress coping mechanisms and increasing lean body mass (Esch et al. 2010).



Basic components of a cancer fitness plan during active cancer treatment can include a warmup, aerobic exercise, and resistance training. At this time, it is important that the fitness program is not too taxing to avoid weight loss and dehydration. In some instances, simply completing a warmup session with stretching and a brief walk (1-2 minutes) at home may be enough. After active cancer treatment, fitness goals should focus on

rebuilding body mass and overall exercise capacity. The warmup, aerobic exercise, and resistance training exertion levels can be higher than during active treatment, but care must still be taken. Regulating the intensity of a fitness program can often be a challenge for individuals who are used to a high level of physical activity but monitoring the level of exertion will allow for continuation of a fitness program more consistently by avoiding excessive times to recuperate.

Just like everything else, a fitness regime should not be undertaken without proper guidance and supervision. Attention needs to be paid to the length of exercise, the intensity of exercise and the perceived level of exertion. A well trained fitness professional with experience in guiding individuals who are currently undergoing cancer treatment is essential. *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

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c. Chemo supportive Therapies

Chemotherapy is most known for its side effects, specifically decreased immune states, digestive issues, and fatigue among a few. Chemo supportive therapies are natural ways to help mitigate some of the side effects while helping to increase the efficacy of the chemotherapy and not impede the effectiveness of the chemotherapeutic drug.

Locoregional Hyperthermia

Hyperthermia (or heat therapy) causing tumour regression was first reported in 1866 by Dr. Carl Busch (1826 – 1881). He documented the case of a woman with advanced sarcoma having tumour regression after a bout of erysipelas, a type of skin infection which caused high fever. This was the first reported case showing that high temperatures can selectively destroy cancer cells while not affecting normal cells. This prompted a great deal of research and experimentation for inducing fever in patients with cancer. An American surgeon, William B. Coley (1862-1936) investigated the correlation between infection and cancer regression by injecting bacterial pyrogens into tumours and observed their behavior. In 1891 Coley developed a toxin that caused infections that induced fevers which later became known as Coley's toxin. This was used for nearly a century to treat various types of cancer resulting in Coley being described as the father of modern hyperthermia and immunotherapy against cancer.

This method was largely abandoned for obvious reasons concerning inducing hyperthermic responses that could lead to unpredictable response/side effects. The goal was to find more effective and less invasive methods to heat tumors. With the advent of ionizing radiation for cancer research in hyperthermia waned.

Over the past few decades interest in hyperthermia has risen as recent research showing the potentiating effects of hyperthermia when given in combination with chemotherapy and radiation treatment has renewed interest. Hyperthermia has been shown to affect cancer in the following ways:

- Directly inducing cancer cell death or apoptosis
- Stimulating immune responses to cancer
- Increasing the effectiveness of chemotherapy by enhancing drug delivery to the tissue and reducing cancer cell chemotherapy resistance
- Increasing the effectiveness of radiotherapy by enhancing oxygen delivery to tissues and reducing DNA repair

Hyperthermia has become an integral part of comprehensive cancer therapy for clinics and institutions globally (Germany, United States, China, Denmark, Spain, Japan, South Korea etc.) and many patients from Canada have had to travel great distances to receive treatment.



(For more information please visit the Marsden Centre website at www.Marsdencentre.com)

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Viscum album (European Mistletoe)

While most are reminded of Christmas at the sound of “mistletoe” this is actually one of the oldest and most used natural cancer therapies in Europe, especially in German speaking countries. The introduction of mistletoe as an anticancer therapy goes back to 1920 and its use is now reaching almost a century. Mistletoe or as it is known scientifically *Viscum Album* is one of the most well researched natural therapies in cancer care. Several large meta-analysis of clinical trials have validated its important role as a supportive care for improving quality of life and positively influencing cancer recurrence and overall survival (Legnani et al. 2008).

(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)



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Curcumin



Curcumin is mostly associated with the very pungent smells often linked with ethnic cuisines from India, South East Asia and the Caribbean cuisine. It is the major active ingredient in turmeric (*Curcuma longa*) with no apparent toxicity as demonstrated in multiple human studies and has been found to be effective in inhibiting the growth of a variety of tumors. Using curcumin with conventional chemotherapy regimens could be an effective strategy to prevent

emergence of chemoresistant colon cancer cells (Patel 2007). *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

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Docosahexaenoic acid (DHA)

DHA is an omega 3 fatty acid that is found in highest amounts in cold water fish along with eicosapentaenoic acid (EPA). It is important for brain development and function and helps cardiovascular health. A diet rich in omega 3 fatty acids has been linked to reduced risk of colorectal cancer.



DHA has also been shown to prevent neurological side effects when administered alongside neurotoxic chemotherapeutics.

(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)

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Glutamine

Glutamine is, in normal circumstances a non-essential amino acid, which may be conditionally essential in patients with cancer who experience glutamine depletion. It is necessary in the body for protection and function of the gut and appears to have potential benefits as a supportive cancer therapy by reducing immune, gastrointestinal and neurological side effects of standard chemotherapy. *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

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Ascorbic Acid (Vitamin C) Vitamin C or Ascorbic Acid (AA) was first implicated as an anti-cancer agent through the research of Dr. Linus Pauling PhD and Dr. Ewan Cameron MD. Their first clinical trial began in 1971 and the results of this and other research was published in the book “Cancer and Vitamin C” in 1979. In their clinical trial they found a four-fold increase in survival



time by those individuals treated with 10,000 mg of AA intravenously. A later trial done by the Mayo clinic could not repeat these findings leading to a dismissal of AA potential role in Oncology. The major difference from the two trials was that the Mayo clinic trial used orally administered vitamin C while the Cameron and Pauling trial used intravenously administered vitamin C. Ongoing research has shown the potential importance of vitamin C delivered in high doses by

infusion as a supportive therapy in cancer care. (For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)

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Please note that this is not an extensive list of natural therapies used for prevention and supportive treatments usable in colorectal cancer cases. Individualized treatment based on a person's health status, chemotherapeutic regimen or conventional treatment protocol is extremely important and requires expert guidance.

3) Naturopathic Recurrence Preventive Care

After treatments are undergone patients may be left wondering what to do. In a majority of cases where chemotherapeutic regimens produce a response, emergence of resistance and recurrence of cancer can occur (Patel 2010). Prevention not only begins from the absence of cancer but continues after the presence and treatment of cancer.

Diet, fitness and natural therapies are just as important in this stage or more so to maintain a healthy immune system and to create a hostile environment for the formation of cancer. This step in a continuum of health is not only needed but is imperative in helping to ensure continued treatment success.



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a. Diet Suggestions for Cancer Recurrence Prevention

There are unique metabolic attributes of cancer cells. While healthy cells can utilize fats and protein as part of their regular energy source, cancer cells generally require sugar to drive their metabolic engines. In addition, over consumption of simple carbohydrates like starches or sugar rich foods can increase the levels of insulin in an individual's blood and insulin can potentiate cancer growth. Therefore, avoiding foods that contain substantial amounts of simple carbohydrates and starches (sugars), and also limiting foods that have moderate levels of carbohydrates becomes very important. By reducing (not eliminating) carbohydrate intake, we can "starve" tumor cells of their fuel and limit the activity of certain enzymes found to be elevated in cancer cells (Demetrius, Coy and Tuszynski 2010). There is also evidence that intermittent or therapeutic fasting may also have a potential role in cancer and other chronic disease prevention. Supervised, intermittent fasting

Secondly, epidemiological evidence has shown that the consumption of fruits and vegetables has been shown to reduce the rates of cancer and of cancer recurrence (Millen et al., 2007). Furthermore, produce such as green, leafy vegetables and certain berries are known to inhibit cancer growth (Hara et al., 2003) or prevent cancer cell creation. One way to easily ingest nutrient dense vegetables in substantial amounts is through juicing.

The MARS DEN CENTRE cancer prevention diet also makes recommendations around the avoidance of foods that may contain environmental toxins which may contribute to illness or inhibit healthy immune and detoxification responses. Therefore, place emphasis on consuming organically and locally grown produce in addition to organic, antibiotic and hormone free animal products. Also proceed with caution when purchasing seafood as many may harbor potentially harmful toxins such as PCBs, mercury and cadmium. Finally, patients who have a history of inflammatory bowel conditions are encouraged to avoid certain foods that are more likely to cause allergic or hypersensitive reactions and consequently gastrointestinal tract dysfunction. *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

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b. Fitness Plan for Cancer Recurrence Prevention

Perhaps the most important moment in the treatment journey is the time after all conventional treatments have successfully ended and "regular" life begins. If exercise is important for primary prevention it is just as important for recurrence prevention. Those with high physical activity have a lower risk of colon cancer



recurrence and cancer related death (Vrieling et al. 2010).

Returning back to pre-treatment levels of activity may take some time or perhaps this may be a good time to create a new fitness plan that is enjoyable and works with the current state of health. It is important that patients seek the advice of their naturopathic or conventional physician prior to initiating a physical fitness program as there may be the need to include modifications due to limitations created after conventional treatment (e.g. stoma). *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

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4. Secondary Chemopreventive Therapies

Prevention of recurrent cancer after an initial diagnosis and successful treatment should involve the use of natural therapies that aggressively address factors in cancer development. These therapies are additive to lifestyle measures like diet, exercise and meditation. Some examples of therapeutics that have strong chemopreventive potential are:

Mushroom Extracts

Medicinal mushrooms have been used for thousands of years to boost qi (life energy), remedy exhaustion and weakness, prevent aging, and as antitumor agents. Currently, mushrooms are extracted for polysaccharides (complex sugars) by medical researchers for their cancer fighting properties. In addition, these polysaccharides provides strong immune support and have been shown to decrease the side effects brought on by various conventional cancer therapies.

Polysaccharides is derived from the mycelia of several mushroom species including Reishi, Maitake, Turkey Tail, Agaricus b., etc. and has been used to treat a number of health conditions, including cancer. Compromised immune function is the significant cause of disease.

Polysaccharides provide strong immune support and are thought to decrease the side effects brought on by various conventional cancer therapies.

Polysaccharides have been found in vivo and in human clinical trials to enhance immune function by stimulating both innate and adaptive immune responses through increasing the number of dendritic cells, T-cells, macrophages, various cytokines, and the activity of natural killer cells.

Data from treatment of over 100,000 patients with various cancer types have shown benefit in up to 60% of its cases, with particular success seen in treating liver, lung, stomach, colon, breast, thyroid, ovarian, testicular, tongue, kidney and pancreatic cancers.

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Viscum album (European Mistletoe)

While most are reminded of Christmas at the sound of “mistletoe” this is actually one of the oldest and most used natural cancer therapies in Europe, especially in German speaking countries. The introduction of mistletoe as an anticancer therapy goes back to 1920 and its use is now reaching almost a century. Mistletoe or as it is known scientifically *Viscum Album* is one of the most well researched natural therapies in cancer care. Several large meta-analysis of clinical trials have validated its important role as a supportive care for improving quality of life and positively influencing cancer recurrence and overall survival (Legnani et al. 2008). *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*



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Curcumin

Curcumin is mostly associated with the very pungent smells often linked with ethnic cuisines from India, South East Asia and the Caribbean cuisine. It is the major active component of turmeric (*Curcuma longa*) with no apparent toxicity as demonstrated in multiple human studies and has been found to be effective in inhibiting the growth of a variety of cancer cell lines in vitro. *(For more information please visit the MARS DEN CENTRE website at www.Marsdencentre.com)*

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