

TIPS TO BE PROACTIVE

FOLLOW THE 7 HEALING PRACTICES:



- Make “Heart Healthy” lifestyle choices that include several of the 7 Healing Practices, including: eating well,⁸ moving more,² managing stress,¹⁰ sleeping well¹¹ and sharing love and support.¹² See BCCT’s 7 Healing Practices¹³ for in-depth descriptions.
- Get regular aerobic exercise, aiming for 150 minutes weekly.^{14,15}
- If you smoke, consider seeking support to help you quit.
- Optimize body weight.
- Avoid drugs that stress the heart: cocaine, diet pills, ephedra (also known as ma huang), performance-enhancing drugs and caffeinated energy drinks.¹⁶
- Adopt a Mediterranean diet emphasizing vegetables, whole grains and healthy fats—good for both your heart and reducing your risk of dying from cancer.¹⁷



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REFERENCES

To download this brochure or view the references, please visit:
<https://bcct.ngo/patient-brochures>



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PROTECTING YOUR HEART

DURING
ANTHRACYCLINE/ADRIAMYCIN/
DOXORUBICIN CHEMOTHERAPY

AN INTEGRATIVE
ONCOLOGY APPROACH



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ANTHRACYCLINES AND INTEGRATIVE CARE

Anthracyclines are a class of drugs that include Adriamycin (also known as doxorubicin), daunorubicin, epirubicin and idarubicin. Anthracyclines are important chemotherapy agents but they can also damage the heart.¹ With people living longer after a cancer diagnosis than in the past, the problem of long-term heart damage has become more important. Early treatment of heart problems can prevent serious damage.² In this setting, complementary medicine may be helpful to protect the heart.



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WHO IS AT RISK?

Risk of heart damage depends on many factors including types and doses of treatment. Some risk factors include anthracycline chemotherapy, radiation to the heart area, trastuzumab therapy, previous heart attack or heart disease, and other heart disease risk factors such as smoking, high blood pressure, diabetes, high cholesterol, obesity, and being over 60 years old.³ Please talk to your doctor to understand your individual risk. If you have risk factors, ask your oncologist or primary care physician about seeing a cardiologist for a baseline test of heart function (usually an echocardiogram) and repeat testing at the end of treatment & 6-12 months later.⁴ If you received doxorubicin or other anthracycline treatment for childhood cancer, have an echocardiogram every one to five years throughout life⁵ and during late-stage pregnancy.⁶ Some patients with risk factors are given beta blockers, a type of blood pressure medication, to help prevent heart damage.⁷

NATURAL THERAPIES

Studies on some herbs or natural supplements show how these therapies have helped reduce heart damage from Adriamycin/doxorubicin or epirubicin.

Natural products are not safe for everyone and there can be problems with quality control of natural products,¹⁸ so please consult with a naturopathic doctor (www.oncanp.org) or integrative oncology professional (integrativeonc.org) for specific guidance.

➤ **Milk thistle:** In a controlled trial, children taking milk thistle with doxorubicin had better heart function compared to children who took the placebo.¹⁹ Milk thistle is not likely to change the way most drugs are broken down in the liver²⁰, and no known interactions have been found in studies combining milk thistle with chemotherapy.^{19,21}



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➤ **CoQ10:** In a small controlled trial, CoQ10 taken during doxorubicin treatment preserved heart function in children with acute leukemia.²² In other small controlled trials, CoQ10 preserved heart function in cancer patients receiving doxorubicin and radiation.^{23,24} Researchers hypothesize that CoQ10 prevents doxorubicin from binding to heart muscle cells.

➤ **Ginkgo:** In a controlled trial, people who took a ginkgo extract during doxorubicin treatment maintained normal echocardiograms following treatment.²⁵ Ginkgo is likely safe to combine with chemotherapy because it does not affect the metabolism of many medications,^{26,27} nor does it affect bleeding risk when used with aspirin.^{28,29}



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➤ **Iodine:** In a randomized controlled trial, women who took iodine during epirubicin chemotherapy for breast cancer had significantly lower levels of heart distress enzymes than those taking placebo.³⁰

NATURAL THERAPIES

➤ **L-carnitine:** In a meta-analysis not specific to cancer patients, taking L-carnitine after a heart attack was associated with a 27 percent lower risk of dying and 65 percent lower risk of irregular heart rate.³¹ Because young cancer survivors receiving doxorubicin have lower plasma carnitine levels than controls, L-carnitine use may prevent heart damage.¹ In a controlled trial, L-carnitine supplements safely led to an increase in plasma carnitine during doxorubicin treatment without interfering with chemotherapy effectiveness.³² A deficiency of L-carnitine during chemotherapy can weaken arm muscles or thighs (notable when climbing stairs) or result in cardiomyopathy and irregular heart rates (cardiac arrhythmias). *Note: L-carnitine is different from acetyl carnitine, also known as acetyl-L-carnitine. Caution should be used with combining acetyl carnitine with Taxol (paclitaxel) chemotherapy.*³³

➤ **L-arginine:** In a small controlled trial, L-arginine use during doxorubicin treatment prevented shortness of breath, palpitations and ECG changes seen in patients not receiving L-arginine.³⁴ *Note: L-arginine should not be used by those who have had a recent heart attack.*³⁵

➤ **Traditional Chinese medicine (TCM):** In a large observational study, TCM treatments decreased the risk of congestive heart failure by 32% in people with breast cancer receiving doxorubicin, either with or without radiotherapy.³⁶



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