

# Clinical Pearls

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## Bladder Cancer Pearls

- With bladder cancer, key exogenous toxins to consider include arsenic (can be in water supplies) and cigarette smoking.
- Food-wise, consider watermelon/cucumber juice and asparagus purée. These are good foods for the bladder.
- Kava is a specific herb for bladder cancer.
- Teas are great for bladder conditions: Consider a tea made with green tea and marshmallow root (could be a cold infusion).
- Taurine is very good for kidney-bladder, and it also assists with methylation pathways.

*Extracted from Mederi Foundation Roundtable discussion notes*

## Chemotherapy Appears to Have Long Term Effects on The brain and Possibly Other Tissues

Chemotherapy once given appears to have long term effects on the brain (and possibly other) tissues. A UCLA study has shown that chemotherapy can change the blood flow and metabolism of the brain in ways that can linger for ten years or more after treatment. Positron emission tomography (PET) was used to scan the brains of 21 women who had undergone breast cancer surgery five to ten years earlier. Sixteen had been treated with chemotherapy regimens. Thirteen control subjects, who never had breast cancer or chemotherapy, were also scanned. This UCLA study suggested that even 10 years after the fact, patients who had breast cancer and adjuvant chemotherapy, had long term effects on their brain function, as the scans revealed that they had to work harder at memory tasks than the control patients did.

*Breast Cancer Research and Treatment September 29, 2006, Science Blog October 5, 2006, USA Today October 5, 2006.*

**Submitted by Dickson Thom, DDS, ND  
Scottsdale, AZ**

## L-Carnitine Supplementation for Fatigue and Loss Of Muscle Mass

Carnitine is a naturally occurring hydrophilic amino acid derivative, produced endogenously in the kidneys and liver and derived from meat and dairy products in the diet. It plays an essential role in the transfer of long-chain fatty acids into the mitochondria for beta-oxidation. Many cancer patients and health conscious patients restrict both red meat and dairy products resulting in a diet low in sources of L-Carnitine.

**Submitted by Nalini Chilkov, LAc, OMD  
Santa Monica, CA**

## Fatigue Related to Mitochondriopathies

- Carnitine is essential for mitochondrial energy production.
- Disturbance in mitochondrial function may contribute to or cause fatigue.

- Cancer patients undergo therapies that compromise mitochondrial energy production. Cancer itself is characterized by abnormal mitochondrial function.

**Submitted by Nalini Chilkov, LAc, OMD  
Santa Monica, CA**

## Loss of Skeletal Muscle Mass

Loss of skeletal muscle mass is a common symptom of several chronic diseases, such as cancer and infectious diseases. L-Carnitine supplementation beneficially influences several critical mechanisms involved in pathologic skeletal muscle loss due to its anti-catabolic effects.

**Submitted by Nalini Chilkov, LAc, OMD  
Santa Monica, CA**

## Carnitine Supplementation

I recommend supplementing patients, especially those undergoing surgery, chemotherapy and radiotherapy and those with advanced disease with 1.5-3.0 grams L-Carnitine daily. Carnitine is available in capsule, powder and liquid forms. I find it easiest to add carnitine tartrate powder or liquid to a daily therapeutic nutrient-dense shake for best compliance.

*Eur J Nutr. 2013 Aug;52(5):1421-42. doi: 10.1007/s00394-013-0511-0. Epub 2013 Mar 19.*

*Mechanisms underlying the anti-wasting effect of L-carnitine supplementation under pathologic conditions: evidence from experimental and clinical studies.*

*Ringseis R, Keller J, Eder K. Institute of Animal Nutrition and Nutrition Physiology,*

*Justus-Liebig-University Giessen, Heinrich-Buff-Ring 26-32, 35390, Giessen, Germany.*

*Cruciani RA, Dvorkin E, Homel P, Malamud S, Culliney B, Lapin J, Portenoy RK, Esteban-Cruciani N. Safety, tolerability and symptom outcomes associated with L-carnitine supplementation in patients with cancer, fatigue, and carnitine deficiency: a phase I/II study. J Pain Symptom Manage. 2006 Dec;32(6):551-9.*

**Submitted by Nalini Chilkov, LAc, OMD  
Santa Monica, CA**

## Anti-Oxidants Do Not Interfere with Therapeutic Modalities for Cancer

Charles Simone MD (oncologist and radiotherapist), reviewed 280 peer-reviewed in vitro and in vivo studies that had been published since 1970. He said that 50 of these studies were human studies involving 8,521 patients, 5,081 of whom were given nutrients. These studies consistently showed that non-prescription anti-oxidants and other nutrients do not interfere with therapeutic modalities for cancer and actually enhance the killing of conventional cancer therapies and decreased their side effects, protecting normal tissue. In 15 human studies, 3,738 patients who took non-prescription antioxidants and other nutrients actually had increased survival.