The Benefits of Intravenous Vitamin C Treatment

For many years, holistic doctors have used nutritional intravenous therapies with their patients to great effect. One such treatment, intravenous vitamin C or IVC, has been noted in our clinic to not only improve patients’ quality of life, but provide a greater life expectancy, as well. Due to lack of funding, however, published research on this treatment is quite sparse. After all, effective studies require a great deal of money to run, and the typical source of funding for medical research is pharmaceutical companies. Unfortunately, as pharmaceutical companies cannot patent natural substances and don’t stand to make much money from its research, it goes unfunded.

One study that does exist was published in the 1970s by Linus Pauling and Dr. Ewan Cameron, former Chief of Surgery at Vale of Leven Hospital in Scotland. In this study, terminal cancer patients were given 10 gram doses of intravenous vitamin C – IVC – for 10 days, then 10 grams a day orally. They found that patients’ life expectancy increased 4-fold. The typical IVC dose with cancer patients today is much larger – 50 to 100 grams.

IVC can increase vitamin C blood levels 70 to 100 times higher than oral administration. This is critical in cancer patients, as the vitamin C is only effective in killing cancer cells at sufficiently high blood levels – 350 to 400 mg/dl according to the Riordan Clinic. But how exactly can IVC treatment help cancer patients?

When your immune system detects infections and cancer, one natural response is the production of hydrogen peroxide. Hydrogen peroxide’s effects are neutralized by healthy cells, which produce an enzyme called catalase. Cancer cells, on the other hand, lack this enzyme. IVC treatment gives this natural process a huge boost, creating more oxidant hydrogen peroxide to help destroy cancer and other foreign invaders. Additionally, a study published in the Proceedings of the National Academy of Science of the United States of America found that IVC selectively kills cancer cells while leaving healthy cells intact.

According to the 15 years of research done by the Riordan Clinic, “data has shown that vitamin C is toxic to tumor cells without sacrificing the performance of chemotherapy.” They also noted that there were “no serious complications. The most common adverse events reported were nausea, edema, and dry mouth or skin; and these were generally minor.”

As noted by Dr. Hunninghake from the Riordan Clinic, conventional cancer therapies, such as certain chemotherapy and radiation treatments, work by increasing cell oxidation to kill off cancer cells. In the process, however, the control mechanisms for cell death are also damaged, including the p53 gene, which suppresses tumor formation. Certain therapy-resistant cells survive this treatment, and other cells are left with less control over the formation of cancer.

In addition to IVC’s oxidant effect, high doses also act as an antioxidant. Many conventional doctors worry about the antioxidant effect of IVC for patients undergoing chemotherapy and radiation treatment, but this seems largely unfounded given recent research. The antioxidant effect of IVC, a bit less strong than its oxidant effect, helps control inflammation and therefore inhibits cancer cell replication. Additionally, research by Naturopathic Doctor, Paul Anderson, examined the published
information on IVC interaction with chemotherapy and other common cancer drugs. His research found little in the way of negative interactions.

Furthermore, high dose IVC aids in detoxification and improves oxygenation of the cells. Cancer cells thrive in anaerobic (without oxygen) environments. Oxygenation creates an aerobic (with oxygen) environment, in which cancer cells cannot replicate as easily.

Dr. Hunninghake also notes that his team has documented seven ways by which IVC helps fight cancer. These seven areas are:

1. Self-sufficiency of growth signals
2. Insensitivity to antigrowth signals
3. Evasion of apoptosis (cell death)
4. Unlimited proliferation potential
5. Enhanced angiogenesis (blood-vessel supply to the tumor)
6. Tissue invasion and metastasis
7. Inflammatory microenvironment

The Bastyr University Integrative Oncology Research Center (BIORC) in Seattle is another leading research institution looking into the effects of IVC in cancer patients. The center was opened in 2009 thanks to a grant from a man whose wife had passed from breast cancer. The man wanted to fund research which might find better treatments for cancer. Since its founding, the center has worked on a series of studies 521 cancer patients across all stages of cancer. Initially patients came from the surrounding Seattle area, but as word got out, patients from all over the country have come to participate.

Within this study series, the most common diseases have been breast, lung, colon, pancreatic, and brain cancers, and Merkel cell carcinoma – a type of skin cancer. 30% of the participating patients are in stage IV, in which cancer has spread throughout the body. According to their needs, patients are treated various nutritional therapies, including IVC. The lead investigator for the BIORC and for the School of Public Health at the University of Washington is Leanna Standish, PhD, ND, Lac. Her investigations compare the BIORC data with the data of the Seattle Cancer Care Alliance. Though this work is ongoing, there are already some striking findings:

- Among eight patients with stage IV colon cancer – **80% were still alive** three years after beginning treatment at the BIORC. In a similar group at Seattle Cancer Care, **only 15% were still alive** after three years.
- Among twelve patients with stage IV lung cancer – **64% were alive** three years after starting treatment at BIORC. At Seattle Cancer Care, once again, **only 15% of patients were still alive**. Even more astounding, SEER (National Statistics) reports a **3% survival rate**.
- In a group of eleven stage III ovarian cancer patients – **83% of patients were still alive**, versus SEER reports of **49% survival rate**.
- Finally, in forty-six stage IV breast cancer patients – 18 patients received IVC therapy, while 28 did not. The patients who received IVC therapy had a **31.1% survival rate** versus a **22.2% survival rate** among those without IVC treatment.
Lower doses of IVC have also been used to increase the quality of life in cancer patients, as shown in two published studies. The first showed that IVC significantly reduced negative side effects of cancer, chemotherapy, or radiation, including nausea, decreased appetite, fatigue, depression, dizziness, bleeding, and sleep disorders. No additional side effects were reported.

The second study, published very recently, involved a group of 25 women with ovarian cancer. Of these 25, 13 received chemotherapy and IVC. Once again, researchers reported that patients whose treatment included IVC were less likely to report side effects than the women who received chemotherapy alone. These same researchers also reported that IVC promoted cell death in culture-grown ovarian cells. An additional study found that patients complained less of fatigue, pain, decreased appetite, and nausea or vomiting with IVC treatment.

A typical IVC dosage is between 25 to 75 grams, as the oxidative effect only appears to take place in doses above 25 grams. Like with many treatments, optimal dosage and exact treatment varies according to the patient. Normally patients begin with lower doses of around 20 grams, and then have their doses increased as effects are assessed. Assessment of IVC efficacy generally takes, at a minimum, 12 to 15 treatments at about an hour and a half to two hours each treatment. Patients generally receive one to three of these treatments per week.

Possible Concerns

1. **Dehydration** – IVC can dehydrate, but this can easily be avoided if the patient makes sure to drink plenty of water before, during, and after treatment.
2. **Lowered Blood Sugar Levels** – the patient should eat a balanced meal before treatment to help avoid low blood sugar levels after IVC.
3. **Reduced blood levels of calcium and potassium** – the IVC solution includes these minerals to maintain blood electrolyte balance.
4. **Vein irritation or pain** – the IVC solution contains sodium bicarbonate to neutralize its acidity. Your doctor can also reduce the drip rate. Patients with ports (a surgically-placed medical appliance giving direct vein access) do not typically experience vein irritation.
5. **Overall health** – your doctor should analyze lab work, including both blood and urine testing, before and during treatments.
6. **Existing kidney issues or liver disease** – patients with either of these conditions should be monitored more closely, but negative side effects are still rare.
7. **High-dose IVC intolerance** – before beginning IVC treatment, your doctor should test for the Glucose 6 Phosphate Dehydrogenase – G6PD – especially if you are of African, Middle Eastern, Asian, or Mediterranean descent.

If you have a friend, loved one, or an acquaintance with cancer, be sure to let them know about the benefits of IVC and share the information above. Our clinic administers the IVC treatment very frequently to patients with a variety of cancers, and we have seen great success. If you have any questions or want to look into getting this treatment for yourself, call us at 855-DOC-MARK.

*Adapted from Dr. Stengler’s Health Revelations Newsletter with permission.*