

# Rigvir ViroTherapy for Cancer Patients

Rigvir viral therapy was developed in Latvia and has seen success in treating cancer patients. It is a live non-pathogenic ECHO-7 virus which has an affinity for tumor cells. It replicates in the tumor cells and destroys them. Rigvir improves the survival rates in patients with cancer and improves their quality of life.

Rigvir is approved by the State Agency of Medicines of the Republic of Latvia. Rigvir is also approved in Uzbekistan, the Republic of Georgia, and Armenia. [Tumor virotherapy](#) (using a genetically engineered [herpes simplex type 1-derived virus](#) called talimogene laherparepvec) has recently been added as a cancer treatment tool in the USA.

## Melanoma Cancer Cure With Virotherapy – Rigvir Virus

### Rigvir Research

One study monitored 79 patients who had surgery to remove the primary melanoma tumor and were considered free from the primary melanoma after surgery. They were classified into substages IB, IIA, IIB, and IIC. Stage IB and stage II is where cancer has spread to certain lymph nodes. Fifty-two patients received Rigvir treatments while twenty-seven patients were merely observed and did not receive Rigvir treatments.

The patients were treated in the Latvian Oncology Center of Riga Eastern Clinical University Hospital, the Latvian Virotherapy Center in Riga, and the Oncology Clinic of

Piejūras Hospital in Liepāja, Latvia.

Rigvir is administered over a prolonged period of time. It is not a single shot.

Injections of 2 ml of Rigvir intramuscularly took place for 3 consecutive days after surgery. Then, after one month and after two months 3 shots were given on 3 consecutive days. For the next 10 months, a single shot of Rigvir was given each month. In the second year Rigvir was given at 6-week intervals for the first 6 months, then every other month for the remainder of the second year. In the third year Rigvir was given at 3-month intervals.

Those patients who received Rigvir remained free of cancer recurrence or metastases for longer periods of time than those patients who were merely observed and did not receive Rigvir. Depending on the substage a patient was in, Rigvir treated patients had a 4.39–6.57-fold lower mortality than the non-treated patients.

Another study looked at three patients with stage III and IV cancers. In stage III, the cancer has spread to the lymph nodes and has started to spread into surrounding tissue. Stage IV cancer has spread to, or metastasized in, another organ.

Each of these patients sought treatment at the International Virotherapy Center in Rīga, Latvia.

The first patient had stage IV cancer in the lower back. The tumor surgically removed in December 2012. Rigvir therapy was begun in February 2013. The patient's condition has improved and has been stable since December 2014.

The second patient born in 1934 was a continuing smoker and was diagnosed with small cell lung cancer, stage IIIA, in May of 2009. The cancer had spread to several lymph nodes. Starting in June, 2009 the patient has been on a continuing course of Rigvir. Larifan was also prescribed on a weekly

basis. The patient's condition has improved and has remained stable since October 2009.

The third patient, born in 1970, had stage IV sarcoma. Starting in October 2009 the patient began Rigvir treatment. He also received radiotherapy applied to the lymph nodes and received six courses of chemotherapy with doxorubicin and cyclophosphamide. He also received Helixor P for some time. The patient's condition has improved and has remained stable since April 2012.

## Conclusions You Can Use

Rigvir has shown evidence of prolonging the life and improving the health of cancer patients. But, it is not a quick fix. It requires a prolonged course of treatment.

Because it is not yet available in the United States, it requires medical tourism.

Both these factors make Rigvir treatment rather costly.

## References about Rigvir ViroTherapy

[Adapted ECHO-7 virus Rigvir immunotherapy \(oncolytic virotherapy\) prolongs survival in melanoma patients after surgical excision of the tumour in a retrospective study published in the journal \*Melanoma Research\*](#)

[Long-term treatment with the oncolytic ECHO-7 virus Rigvir of a melanoma stage IV M1c patient, a small cell lung cancer stage IIIA patient, and a histiocytic sarcoma stage IV patient-three case reports published in \*Acta pathologica, microbiologica, et immunologica Scandinavica\*](#)

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# Relief from Chronic Constipation

## How to Cure Chronic Constipation Permanently

Chronic constipation is usually a benign condition that affects about 20% of the world's population, it is found more frequently in women and the elderly. Studies indicate from 12% to 27.2% of people in North American are afflicted with this condition.

Chronic constipation is characterized by 12 weeks in a year in which you experience difficult or infrequent passage of stool (less than 3 per week), hardness of stool, prolonged time to complete an evacuation, or feelings of incomplete evacuation.



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[Book Images](#)

Practically everyone experiences constipation at some point, but chronic constipation can cause serious difficulties including hemorrhoids, bleeding, fecal impaction, bowel perforation, incontinence and an overall decreased quality of life. Serious effects of chronic constipation include blood in the stool (hematochezia) and weight loss of 10 pounds or more.

Constipation may be caused by many factors including increased stress in life or a change in diet. However, that may be underlying organic disorders causing the constipation. Actual physical disorders may be diagnosed by tests or procedures such as a complete blood count, measuring serum calcium, thyroid function tests, flexible sigmoidoscopy, and a colonoscopy.

Chronic constipation is closely related to other gastrointestinal disorders such as irritable bowel syndrome, dyspepsia and GERD. For example, in one study 29% of GERD patients reported chronic constipation.

Treating chronic constipation usually involves both rapid constipation relief and then long term constipation management.

The long term management of constipation typically involves bulking agents, water and exerciser that helps stimulate movement through the intestines.

## **Bulking Agents**

Bulking agents are intended to increase the water content of the stool. These agents add water and bulk to the stool and are effective at increasing the stool frequency and consistency. Bulking agents can begin working in 12-24 hours but it takes 2-3 days to be fully effective.

- Psyllium husks are the outer coat of the psyllium seed (e.g., Metamucil, Konsyl)
- Calcium polycarbophil (e.g., Perdiem Fiber Therapy, Fibercon)
- Methylcellulose (e.g., Citrucel)
- Bran (e.g., wheat or corn bran)

# Stool Softeners

Stool softeners act on the surface and function like detergents, allowing water to penetrate and interact with the stool to soften it.

- Docusate sodium (e.g., Colace)
- Docusate calcium (e.g., Surfak).

# Osmotic Laxatives

Osmotic laxatives help the inner layers of the intestine (intestinal lumen) retain water, thereby allowing more water to contact the stool to soften it. This improves stool frequency and stool consistency. These laxatives often take 2-3 days to be effects and are not recommended for rapid relief of constipation.

- Polyethylene glycol (e.g., Miralax)
- Lactulose (e.g., Kristalose)
- Magnesium hydroxide (e.g., Milk of magnesia)

# Stimulant Laxatives

These agents stimulate the sensory nerve endings of the colon to help increase contractions of the intestines to move the stool along. Stimulant laxatives often work within 6-12 hours.

- Senna (e.g., Senokot, Ex-lax)
- Bisacodyl (e.g., Dulcolax, Correctol, Carter's Pills)

# Other Constipation Remedies

Enemas for constipation are often the last resort for people anxious about their slow elimination. If you go to the hospital because of constipation you will probably get an enema. Enemas typically try to soften the stool, lubricate the

colon, and stimulate muscles to help elimination. Sodium phosphate is sometimes used (e.g., Fleet) to keep water in the intestines to break apart and soften the stool.

Homemade enemas often contain mineral oil to help lubrication and common table salt with lukewarm water.

Other remedies typically include herbal remedies and biofeedback. Herbs such as aloe and mineral oil or biofeedback are sometimes touted as remedies for constipation. Most information about their effectiveness is anecdotal and no rigorous clinical trials have been reported.

## **Chronic Constipation Conclusions You Can Use**

Long term relief to prevent the repeated occurrence of constipation requires getting enough fiber and water. If you cannot change your diet to include more fruits and vegetables, then add one or more of the above bulking agents to your daily food intake.

For more immediate relief of constipation some combination of stimulant laxatives and stool softeners will probably work for you. As a last resort, try an enema.

## **References About Chronic Constipation**

- [Chronic Constipation](#) as published in the *New England Journal of Medicine*
- [An Evidence-Based Approach to the Management of Chronic Constipation in North America](#) as published in the *American Journal of Gastroenterology*
- [Systematic Review on the Management of Chronic Constipation in North America](#) as published in the

# Medical Marijuana Background What You Need to Know About Medical Cannabis

Cannabis, or marijuana (*Cannabis sativa*) is known for its psychoactive properties and its illegal recreational use to get “high” or “stoned”. The main psychoactive chemical in cannabis is tetrahydrocannabinol, commonly known as THC. This was isolated in 1964. Another important component, nonpsychoactive cannabidiol (CBD), was identified in 1963. All together, there are more than 60 pharmacologically active compounds called “cannabinoids”.

In the 1980s the endocannabinoid system was discovered. It is a complex neurotransmitter or signalling system consisting of receptors, endogenous ligands and enzymes that exists throughout the central nervous system (including the brain) as well as the peripheral nervous system.

This endocannabinoid system has been found to express elevated signalling in various neurodegenerative diseases including Parkinson’s disease, Alzheimer’s disease, allergic encephalomyelitis and multiple sclerosis. The purpose of this activation seems to be to reduce neuronal hyperactivity and local inflammation which could cause damage as well as to reduce tremors and spasticity.



# People Who Use Recreational Cannabis

By recreational use we usually mean “smoking weed” that is high in the psychoactive chemical THC.

THC has been shown to increase anxiety levels and present symptoms of psychosis in healthy individuals. As a contrast, CBD has been shown to reduce anxiety and depression, mediate pain perception, reduce nausea and vomiting, improve sleep, reduce inflammation, and displays anti-psychotic effects.

Many recreational users of marijuana simply concentrate on the THC levels and ignore CBD levels in the product they use. But, CBD levels may be important in the long term effects of marijuana use.

A study was done to analyze hair samples of 140 people. They were separated into groups based upon whether their hair showed THC (20 individuals), THC+CBD (27 individuals), CBD (8 individuals), or none of these compounds (85 individuals). The CBD only group was too small to analyze and was dropped from the analysis.

The short form of the [Oxford Liverpool Inventory of Life Experiences](#) was administered to the remaining 132 individuals. This questionnaire investigates ways of thinking including aberrations, magical thinking, hallucinations, poor decision-making, social anxiety, impulsive, anti-social, and eccentric forms of behavior.

The group with only THC in their hair showed a higher level of “unusual experiences” (such as aberrations, magical thinking, hallucinations) than the TCH+CBD group ( $p < 0.021$ ) and a very significant high level of “unusual experiences” compared with the non-cannabis group ( $p < 0.001$ ).

This study indicates the negative effects of use certain

strains of marijuana and suggests that CBD could have a psychologically protective effect on marijuana users.

Another [more recent study](#) confirmed that when THC and CBD were administered together, CBD was efficient in blocking most of the effects of THC, including reducing anxiety.

## Marijuana Strains

Not all marijuana plants are the same. Like most plants, marijuana has been bred to produce varying levels of psychoactive THC and nonpsychoactive cannabidiol or CBD.

Some recreational [marijuana strains](#) with high levels of THC include

- Cookies Kush (15-18% THC and 3% CBD)
- Violator Kush (19-23% THC and 2% CBD)
- Vanilla Kush (up to 20% THC and 1% CBD)

Medical [marijuana strains](#) high in CBD and low in THC include:

- ACDC (up to 20% CBD and 0.42% to 6% THC)
- Charlotte's Web (up to 20% CBD and less than 0.3% THC)
- Ringo's Gift (up to 20% CBD and as low as 1% THC)
- Harle-Tsu (up to 22% CBD and less than 1% THC)

## Medical Marijuana



Photo by [Jeffrey Beall](#)



The Chinese used marijuana more than 4600 years ago for ailments such as cramps, joint and menstrual pains. But, it

wasn't until the 19th century that western doctors began an investigation of marijuana. And, it was only in 1964 that the chemical structure of psychoactive component THC was identified.

It's actually the ratio of nonpsychoactive cannabidiol (or CBD) to the psychoactive substance tetrahydrocannabinol (or THC) that determines therapeutic vs psychoactive effects. Those strains with low THC will not enable users to get "high." Most people use medical marijuana with high levels of CBD. But, even THC can be beneficial for treating nausea from chemotherapy and weight loss from AIDs.

Medical marijuana laws typically allow patients with a physician recommendation to obtain marijuana at state supervised dispensaries. [One study](#) has found that states with such dispensaries have reduced opioid abuse and opioid deaths.

## **A doctor's case for medical marijuana | David Casarett**

Physician David Casarett was tired of hearing hype and half-truths around medical marijuana, so he put on his skeptic's hat and investigated on his own. He comes back with a fascinating report on what we know and what we don't – and what mainstream medicine could learn from the modern medical marijuana dispensary.

Here are just a few of the hundreds of published studies that show the effectiveness of medical marijuana.

## **Medical Marijuana for Epilepsy**

For many years only anecdotal evidence or small clinical trials were available to indicate the usefulness of medical marijuana for use in seizure control for epilepsy.

The first large study involved 162 patients who were studied for the complete 12 weeks of the program. A number of the patients experienced adverse effects and stopped taking oral cannabidiol, leaving 137 patients who were included in the efficacy evaluation. Patients were 1-30 years of age, all with childhood onset epilepsy.

The main goal of the study was to determine the safety, tolerability and effectiveness of cannabidiol.

In addition to their normal antiepileptic drugs, patients were given 2-5 mg of oral cannabidiol per kilogram of body weight per day in two divided doses. Over time the dose was increased until a maximum dose of 50 mg/kg or the patients reached intolerance. The mean dose was 22.7 mg/kg.

The patients and caregivers monitored and recorded the seizures of a patient during the study. The seizures affecting the motor complex were of particular interest in this study.

During the final four weeks of the trial, 15 (11%) patients were free of all motor seizures and 9 (7%) patients were free of all seizure types. In addition, 39% of the patients had a reduction of 50% or more in motor seizures and 21% saw motor seizures drop by 70% or more. The average person experienced a 34.6% decrease in seizures using cannabidiol.

This trial demonstrated a clinically meaningful reduction of seizures in most patients with safe and tolerable doses of cannabidiol.

## **Medical Marijuana for Anxiety and Sleep**

Various studies have shown the positive effects of cannabidiol on posttraumatic stress disorder (PTSD). This case of a ten year old girl illustrates this effectiveness.

This girl's mother used marijuana for the entire pregnancy. She was molested by an 11 year old boy when she was 3 years old. She received very little supervision from her parents. Her mother was addicted to methadone, suffered from alcoholism, bipolar disorder and depression. Her father died in a motor vehicle accident and she was cared for by her grandparents who received permanent guardianship.

This girl, at age 10, was evaluated and received a diagnosis of PTSD secondary to sexual abuse. She exhibited anxiety, insomnia, outbursts at school, had suicidal thoughts, and displayed self-destructive behaviors.

She was put on CBD supplementation with 25 mg at bedtime. She could use a sublingual spray during the day to help combat anxiety.

Gradually her sleep quality and quantity increased and here anxiety decreased. After 5 months the girl was sleeping much better and was able to handle the new school year without difficulties. No negative side effects of the CBD oil were noted.

The ultimate goal in this treatment is to slowly reduce the use of CBD oil and move into lifelong coping behaviors such as yoga, meditation and other such activities.

## **Conclusions You Can Use**

While some strains of marijuana plants have concentrations of THC that will get users "high," other strains will not.

The compound in the marijuana plant call CBD is effective in treating a number of ailments.

Access to medical marijuana is another option for treating numerous ailments and should be made available to the medical community.

# References

- [Effectiveness of Cannabidiol Oil for Pediatric Anxiety and Insomnia as Part of Posttraumatic Stress Disorder: A Case Report](#) as published in *The Permanente Journal*
  - [The endocannabinoid system and its therapeutic exploitation](#) as published in *Nature Reviews*
  - [Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders](#) as published in *Neurology*
  - [Cannabidiol in patients with treatment-resistant epilepsy: an open-label interventional trial](#) as published in *The Lancet*
  - [Effects of cannabidiol on schizophrenia-like symptoms in people who use cannabis](#) as published in *The British Journal of Psychiatry*
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## Aging, Telomers, Telomerase: Why You Age and How to Reverse Aging

Stress can cause poor health and make you look exhausted and haggard. Stress is a risk factor for cardiovascular disease, poor immune function, premature aging, high blood pressure, obesity and even diabetes. Exactly how stress brings about the early onset of age-related disease is not entirely clear. Many believe that stress increases the rate of aging within the cells themselves.

# Cellular Aging

Cellular aging is associated with oxidative stress, lowered telomerase activity, and shorter telomere lengths. These factors affect the longevity of your body's cells.

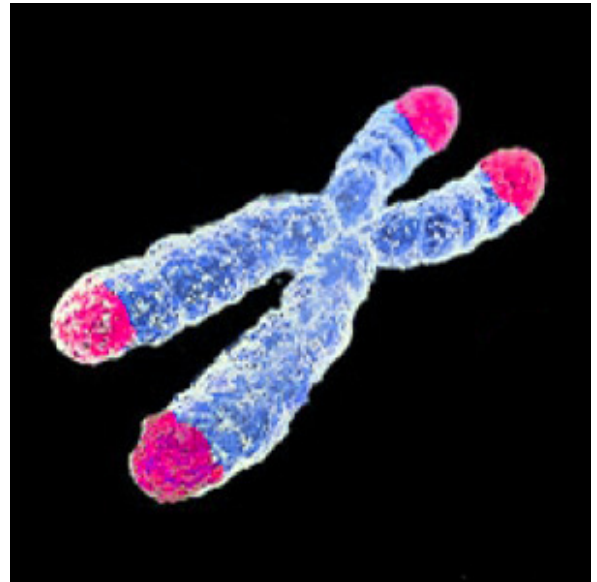



Photo by [AJC1](#) 

Telomeres are the caps or ends of chromosomes which provide protection and help give stability to the chromosomes. Telomeres are composed of terminal sequences of TTAGGG DNA base units at the ends of all chromosomes that signify the end of chromosomal information. At conception there are approximately 2,500 TTAGGG sequences as “end caps” to chromosomal data.

Telomers are a target of oxidative damage and become damaged and shortened due to the action of free radicals.

Psychological stress itself seems to accelerate the shortening of telomeres. In one study 58 mothers were studied. 19 of the mothers had a healthy child while 39 mothers cared for a chronically ill child. The research found that (adjusted for the age of the mother) the more years of caregiving, the shorter the mother's telomeres, the lower the telomerase

activity and the more oxidative stress the mothers experienced.

In addition, when adult cells undergo mitosis or cell division these telomere “end caps” are not completely replicated and are shortened by about 100 base units (around 15 TTAGGG sequences) with each cell division.

Telomere shortening is a normal condition that occurs when an adult cell divides. It is thought that there is a limit to the number of times a cell can divide (called the Hayflick limit which is between 50 to 70 cell divisions). When this limit is reached a telomeric crisis stage is reached and the cells no longer divide and approach senescence (deterioration with age).

Studies indicate that chronic emotional stress and frequent viral infections seem to accelerate telomere loss and cause premature aging.

This shortening of the telomeres is considered a risk factor for the onset and progression of many different conditions such as hypertension, atherosclerosis, cardiovascular disease, diabetes, metabolic syndrome, a number of cancers, fibrosis, Alzheimer’s disease, a lowered immune system allowing infections, and overall mortality.

## Telomerase

The cellular enzyme telomerase has a protective function on telomeres and can even synthesize new DNA telomere repeats at the end of chromosomes to lengthen telomeres. Telomerase is active during rapid fetal development. But, before birth telomerase is repressed for most cells and further cell division results in telomere shortening and, thus, aging.

Telomerase is still active in some adult cells like the [testes](#), [activated lymphocytes](#) and [stem cells](#). Nearly 90% of



human cancers including [leukemia](#) show telomerase activity which helps prevent cell death.

While it is somewhat controversial, some researchers think that telomerase activation may actually help cause some cancers. Other researchers disagree.

## **The Science of Cells That Never Get Old | Elizabeth Blackburn**

What makes our bodies age? Why does our skin wrinkle, our hair turn white, our immune systems weaken? Biologist Elizabeth Blackburn shared a Nobel Prize for her work finding out the answer, with the discovery of telomerase: an enzyme that replenishes the caps at the end of chromosomes, which break down when cells divide. Learn more about Blackburn's groundbreaking research – including how we might have more control over aging than we think.

### **Telomerase Activation**

A number of studies have been conducted to investigate increasing or activating telomerase.

In a study of lifestyle choices, 30 men with low-risk prostate cancer participated. The lifestyle changes consisted dietary changes and moderate exercise with stress management. The diet was low in fat (with 10% of calories from fat) mostly of whole plant-based vegetables and fruits, with unrefined grains, legumes, minimal refined carbohydrates with soy and tofu, fish oil, vitamins C and E and selenium. Exercise included 30 minutes of walking per day. Stress management included a hour per day of meditation, stretching, breathing, imagery and progressive relaxation.

The results after 3 months showed an increase of telomerase

from 8.05 to 10.38 standard raw units. In addition, there was a decrease in LDL cholesterol and a decrease in psychological distress.

Several studies have investigated a molecular component of Astragalus, a Chinese plant used in traditional medicine. This compound named TA-65 is a proprietary extract of the dried root of Astragalus membranaceus. It is formulated for humans in 5- to 10-mg capsules.

Several studies of TA-65 have been conducted with mice. Some interesting findings about TA-65 administered mice (compared to controls) include:

- There was a significant decrease in short telomeres indicating TA-65 promotes short telomere rescue.
- Glucose intolerance and insulin resistance (which normally increase with age) were significantly improved.
- Wound healing improved.
- Hair regrowth (after plucking) improved.
- Organ fitness improved.
- Bone density improved.

These results indicate a good potential for beneficial use of TA-65 in humans.

In one human study subjects were evaluated after 3, 6, 9, and 12 months on TA-65 supplementation. The number of subjects who were tested over the course of the trial varied from 43, 59, 27, and 37. The starting dose was from 5-10 mg per day. But, during the course of the trial some subjects increased their dose to 25-50 mg per day.

The results showed no statistically decline in telomere length. But, in most subjects there was a decline in the percentage of short telomeres, again showing short telomere rescue benefits. Senescent cytotoxic T cells (killer T cells responsible for killing infected cells) declined linearly from 39% to 30% indicating an age reversal with a higher percentage

of viable cells in a dose-responsive manner.

These results show promise for TA-65 in helping slow the aging process in humans.

## Results You Can Use

While research is attempting to find the “miracle pill” that will extend life, such pills are hard to come by. While TA-65 may help humans to slow aging and retain health, it is an expensive solution. Costs for TA-65 are around \$100 for 30 capsules.

Lifestyle changes (at least changes from what is typical) can also affect your healthy lifespan. And, everyone can eat a more healthy diet, exercise, and reduce their daily stress. This is the simple solution for everyone concerned about their health.

## References

- [Compositions and methods for increasing telomerase activity](#) US Patent 7846904B2 currently owned by Telomerase Activation Sciences Inc
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- [Increased telomerase activity and comprehensive lifestyle changes: a pilot study](#) as found in *The lancet Oncology*
- [Accelerated telomere shortening in response to life stress](#) as published in the *Proceedings of the National Academy of Sciences of the United States of America*
- [A Natural Product Telomerase Activator As Part of a Health Maintenance Program](#) as published in the journal *REJUVENATION RESEARCH*
- [The telomerase activator TA-65 elongates short telomeres and increases health span of adult old mice without](#)

[increasing cancer incidence](#) as published in *Aging Cell*