

Quality of Life Improvements with Cord Blood Plasma



Introduction

The Quality of life protocol is based on years of research and current medical applications that have proven success using Human Umbilical Cord Blood and Cord Blood Plasma.

Originally considered as a therapy in the early 1950's when a paper was published claiming parabiosis could stop and even reverse the damaging effects of aging. More recently, Professor Tony Wyss-Coray of Stanford has advanced the research.

Cord blood derived products are safe and have been used in over 40,000 transplants worldwide for the treatment of blood and bone marrow cancers. While these cord blood cells have been shown to be highly therapeutic in a variety of diseases, the most recent advances in cord blood associated products and therapies involve applications of cord blood plasma and cord blood serum.

Currently, the FDA has approved the use of cord blood for other treatments as such bone marrow based cancers, and as serum for the treatment of persistent corneal epithelial defects (eye drops).

Studies has shown that inflammation plays a key role in the aging of humans. Research into the composition of cord blood plasma has found it to be rich in anti-inflammatory cytokines, growth factors, and other proteins; which have been shown to improve learning, memory, and other age-associated deficits. Additionally, current translational studies have identified specific proteins within cord blood plasma, such as TIMP2, that are believed to be responsible for this improve memory function and cognition.



Dr. Petersen

Dr. Andrew Petersen received his undergraduate degree in microbiology from Brigham Young University. He graduated from medical school at the University of North Texas Health Science Center in Fort Worth, Texas and completed a dually accredited AMA/ AOA residency in family medicine at Altoona Family Physicians, a Penn State affiliate program, where he served as Chief Resident.

Dr. Petersen began his career in rural towns in Kansas and Texas. After practicing a full scope of family medicine: providing office based care, making house calls, visiting his patients in the nursing home, caring for patients in the hospital, working in the local emergency room and delivering babies for nearly 10 years Dr. Petersen changed his practice to focus on the integrative care of chronically ill patients. During the first 10 years of his career he came to love caring for his patients through all stages of their lives, but he has seen that there is a disconnect between how allopathic medicine approaches disease, and what needs to be done for people to actually become and stay healthy.

Since that time, Dr. Petersen began to specialize in those areas that are he felt were inadequately treated by traditional allopathic approaches, including hormonal imbalance, hypothyroidism, chronic fatigue syndrome, fibromyalgia, metabolic disorders, weight loss, neurodegenerative diseases, addiction and pain medicine, and chronic infectious diseases such as Lyme disease. He is a fellow with the American Academy of Anti-Aging and Regenerative Medicine. He has completed the A4M fellowship in stem cell therapy. And he serves on the general board for the International Lyme and Associated Disease Society. Dr. Petersen works closely with Hexagon Therapies doing research in cord blood serum research.

In addition to providing cutting-edge medical care, Dr. Petersen enjoys hiking, skiing, running, biking, playing the guitar and singing. Dr. Petersen speaks fluent Spanish and especially enjoys traveling and spending time with his wife and 6 children.



Each year, *Science's* editors choose a singular scientific achievement as Breakthrough of the Year. Past winners have included the discovery of the Higgs boson, cancer immunotherapy, and the first quantum machine. This year's winner captured the world's attention and reminded us of the immense scope of human scientific accomplishment—as well as how far we have yet to go. Below we briefly summarize the winner and runners-up and link to the expanded stories, with references, in the magazine, which are freely available.

Chosen as a Top Medical Discovery in 2014



Using young blood to fight old age

In work with profound implications for aging, researchers showed that blood from a young mouse can rejuvenate an old mouse's muscles and brain. If the results hold up in people—an idea already in testing—factors in young blood could help fight the ravages of aging in people.

Today's Science is Tomorrow's Medicine

Today there are over 200 clinical trials that could be improving the quality of peoples lives.

Systemic Rejuvenation

University of Cambridge and Harvard researchers show that young blood promotes repair of damaged spinal cords in older mice.¹

Harvard neuroscientist finds that young blood sparks the formation of new neurons in the brain and olfactory system.²

Brigham and Women's Hospital in Boston, Massachusetts, cardiologists find that parabiosis reverses age-related thickening of the walls of the heart.³

1. Cell Stem Cell 2012;10:96-103.
2. Science. 2014;344:630-4.
3. Cell 2013;153:929-39.

nature

the international weekly journal of science

January 21, 2015

International Weekly Journal of Science

"I think it is rejuvenation...
We are restarting the aging clock."

Tony Wyse-Corsy, neurologist at Stanford University.

"We're not de-aging animals...but are
instead helping them to repair damage...
We're restoring function to tissues."

Amy Wagner, a stem-cell researcher at Harvard University.

Parabiosis Induces Longevity

- Researchers at the University of California in 1972 studied the life spans of old-young rat pairs.
- Older partners lived four to five months longer than controls, suggesting that circulation of young blood might affect longevity.
- This life span extension is the equivalent of 10 to 12 human years.

New York Academy of Sciences. 1972 Nov;24(7):592-7.

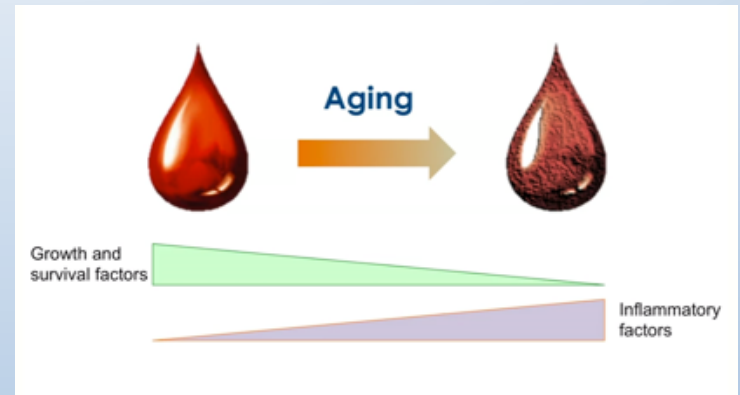
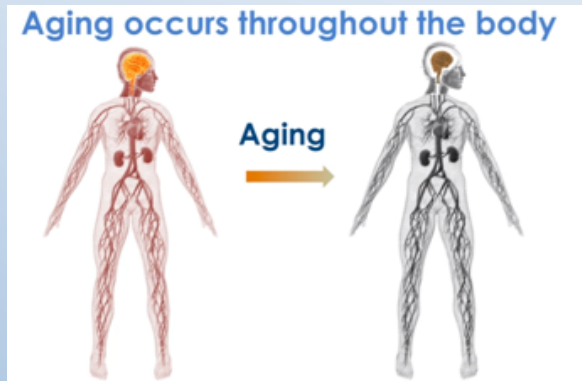
Reversing Muscle Loss

Beneficial effects are not limited to the brain and the operative factors can be identified, as one study reports that growth differentiation factor (GDF-11) empowers young blood to bestow regenerative oomph to old muscle.

In Revival of Parabiosis, Young Blood Rejuvenates Aging Microglia, Cognition ALZFORUM, May 5, 2014.

Tony Wyss-Coray of Stanford University

Has had over 1.2-million views of his [Ted Talk](#) on the benefits of plasma in Reverse Ageing!



The results of his team's plasma injections studies

Effects : "rejuvenation"

- more neural stem cells
- higher activity of synapses
- higher levels of genes involved in memory
- less inflammation in the brain
- improved memory

Is hUCBP better than “Young Blood”?



Current studies/clinical trials using “young” blood plasma have not provided any significant findings to date.

The “young” blood plasma that has been used in these studies is between 18 and 25-30 years old.

This plasma is effectively being collected from adults!

- Hormone imbalances due to puberty may have unwelcomed effects.
- Vaccinations also produce factors in the blood from donors that may not be beneficial in an aged recipient.

Cord blood plasma is a better source due to its uniformity, low immunogenicity, and known beneficial effects of promoting cell renewal and survival.

Advantages of hUCBP

hUCBP contains a wide series of growth factors, thanks to which is capable to mediate tissue repair at injured sites in physio-pathological conditions. These potent factors involved in recruiting tissue stem/progenitor cells to the site of injury and interacting with them, thus stimulating differentiation and angiogenesis, which are critical for tissue therapeutic healing.

It is well known that fetal or newborn serum additives are more efficacious in supporting proliferation of cells because it contains higher concentrations of growth and differentiation factors as compared to those in adult sera.

hUCBP is an important alternative to support the growth, proliferation, and differentiation of resident stem cell populations.

hUCBP showed exponential cell growth in vitro (cell doubling at 24 h) as compared to those grown in fetal calf serum (FCS), cell doubling at 40 h. hUCBP are involved in cell proliferation, differentiation and migration. Also, some of these factors, like the Neuronal Growth Factor (NGF), regulate the apoptosis and are associated development, extends throughout adult life and aging, and involves a surprising variety of neurons, glia, and non neural cells.

- All of these features make hUCBP an attractive source for regenerative medicine.
- **Availability:** there are more than 4 million births per year in the USA, so there is ample opportunity to collect hUCBP units for regenerative purposes which can be cryopreserved for decades for future use
- **Safety Profile:** hUCBP can be collected non-invasively without risk to the mother or infant especially compared to bone marrow stem cells: also they are less likely to transmit infections than bone marrow stem cells
- **Noncontroversial:** historically, was discarded as medical waste

Closing

Preliminary reports in the Quality of Life protocol have indicated improvement in the emotional health/wellbeing and social functioning of individuals, with a reduction in inflammation markers in a majority of participants. Additional observations have shown an anti-aging effect, such as an increase in body weight in many of the subjects, which is mainly attributable to an increase in skeletal muscle mass. Participants have also reported beneficial changes in their sleep patterns with both an increases in both length and overall quality of sleep. Furthermore, the studies are also reporting that there have not been any adverse side effects in any of the participants receiving cord blood plasma, and is essentially regarded as safe for the clinic.

Investigations into the potential therapeutic and anti-aging effects of cord blood plasma are ongoing and expanding; with hopes of not only reducing the age-associated declines in both physical and cognitive function but also improving the overall quality of life for the individual. There are a number of current studies underway using cord blood and cord blood plasma as a therapeutic to stop Alzheimer's and ALS. The preliminary results are promising for both studies.

There are limited opportunities for enrollment of new participants in this self-funded protocol.

The Procedure

Your day begins with Dr. Petersen reviewing your current state health. You will answer health questionnaire, you will have an "in-body" assessment performed, blood draw for routine lab testing. This portion of your procedure will last 30 to 45 minutes.

The none evasive infusion of hUCMCP lasts approximately 1 hour. You are then required to relax for 30 minutes during which your vital signs will be monitored as a standard safety percussion.

