







FOLLISTATIN-344 PLASMID THERAPY

Follistatin (FST) is the premier first-line longevity gene therapy. It is extensively-researched, well-tolerated, and successful in achieving its intended results. In our recent human clinical trial, FST increased lean mass, decreased fat, decreased inflammation, lengthened telomeres, and dramatically reversed epigenetic age acceleration. Frailty, obesity, and excessive inflammation are hallmarks of aging which follistatin plasmid therapy directly addresses.

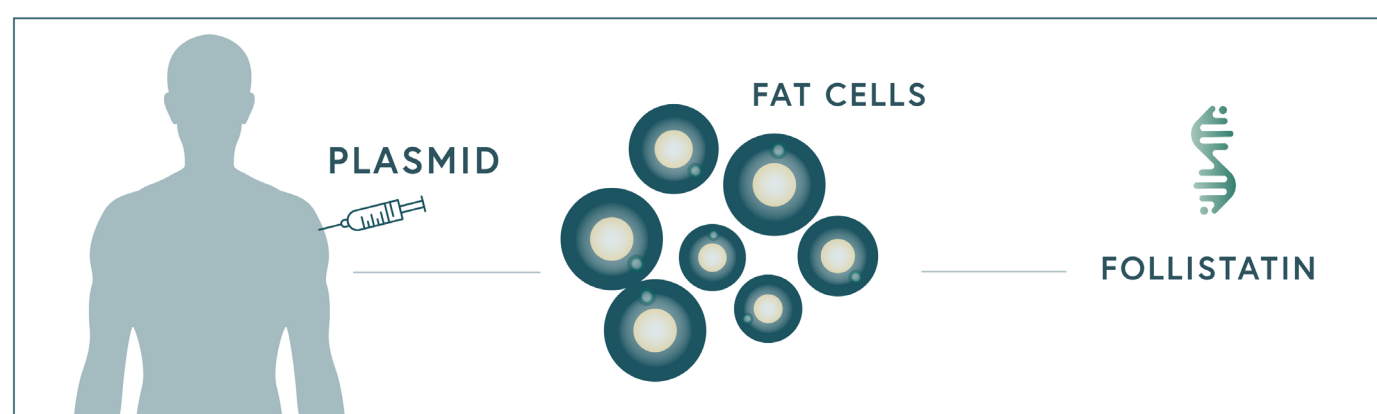
FST plasmid therapy has shown promising results in extending lifespan. A recent study (Jaiyan, 2021) found that FST therapy increased mouse lifespan by 32.5%. The potential of FST overexpression was first established in mice in 2001, and studies in monkeys suggest similar benefits in higher mammals. Ongoing research continues to support FST therapy's impact on lifespan, making it an exciting area for further exploration.

EFFECTS OF FOLLISTATIN GENE THERAPY:

-  Decreased Body Fat
-  Increased Telomere Length
-  Increased Muscle Mass
-  Decreased Epigenetic Age
-  Improved Quality of Life
-  Increased Bone Density

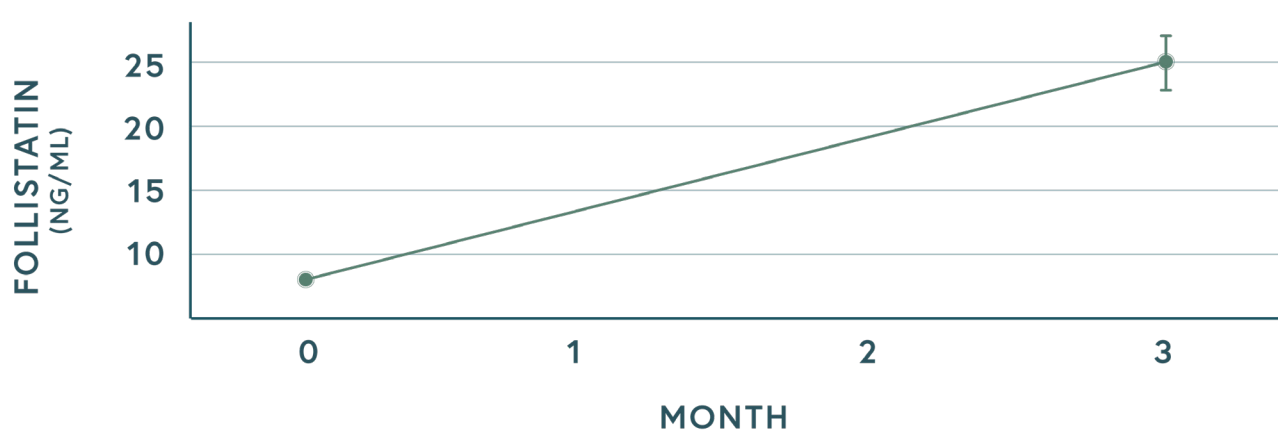
HOW DOES FOLLISTATIN WORK?

Follistatin binds to and inactivates two proteins in your blood: myostatin and activin a. Myostatin is a protein in your blood which decreases your muscle mass and bone density. Follistatin's ability to improve body composition is dependent on both myostatin and activin inactivation (Gilson, et al., 2009). Follistatin's ability to decrease inflammation is dependent on inactivation of activin (Hedger, et al., 2011).



HOW LONG DOES IT LAST?

Minicircle's follistatin plasmid is designed to be administered via a subcutaneous fat injection having a continuous expression duration of approximately 12-18 months. The plasmid injection is non-inflammatory and contains a formulation of 50 ug of plasmid DNA dissolved in buffered saline and complexed with a transformation polymer that helps the eDNA efficiently get into the fat cells. Using our method, only cells at the site of injection are transformed, and the plasmid DNA does not edit or integrate into your original chromosome.



SAFETY PROFILE

Approximately one-third of patients experienced an 8 ng/dL increase in LDL. However, this increase was small—about 10% of a normal level—and our physicians have determined it is unlikely to be clinically significant.

There are multiple forms of follistatin, and this therapy uses Follistatin-344. Follistatin-288 causes infertility by binding to and inhibiting activin, thereby decreasing FSH production by the pituitary gland. Follistatin-344 has 10x lower binding affinity and has not been shown in the pilot study to cause a significant decrease in FSH level.

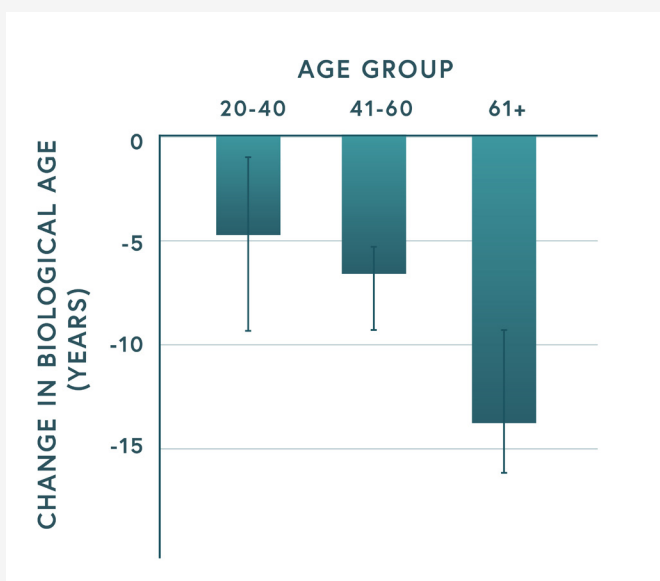
Monkey studies, and male and female human experiments have not shown any effect on fertility hormones or sperm. A scientific literature review published in 2015 noted "Of note in both non-human primate studies and in our subsequent clinical trial we found no effect of FS344 (FS315) gene therapy on any pituitary secreted hormone" (Al-Zaidy).

NOTE: LESS THAN 500 PEOPLE IN THE WORLD ARE ESTIMATED TO HAVE RECEIVED FOLLISTATIN GENE THERAPY (AS OF JAN 2025).

RESULTS

FOLLISTATIN-344 PLASMID THERAPY OUTCOMES AT 3 MONTHS

- 100%** PATIENT SATISFACTION
- 2 LBS** FAT FREE MASS INCREASE
- 0.8%** BODYFAT % CHANGE
- 12 YRS** EPIGENETIC CLOCK REDUCTION IN AGED PATIENTS



REFERENCES

Al-Zaidy, SA et al. (2015) Follistatin Gene Therapy Improves Ambulation in Becker Muscular Dystrophy. *Journal of Neuromuscular Diseases* 1185-192 DOI 10.3233/JND-150083

Gilson H, et al. (2009). Follistatin induces muscle hypertrophy through satellite cell proliferation and inhibition of both myostatin and activin. *Am J Physiol - Endocrinol Metab.* doi:10.1152/ajpendo.00193.2009

Hedger MP, Winnall WR, Phillips DJ, de Kretser DM. (2011). The Regulation and Functions of Activin and Follistatin in Inflammation and Immunity. Vol 85. 1st ed. Elsevier Inc.. doi:10.1016/B978-0-12-385961-7.00013-5

Jaiyan, D.K. et al. (2021) New intranasal and injectable gene therapy for healthy life extension. *bioRxiv Preprint.* doi: 10.1101/2021.06.26.449305

Kota, J et al. (2009). Follistatin gene delivery enhances muscle growth and strength in nonhuman primates. *Science Translational Medicine.* 1(6):6ra15 doi:10.1126/scitranslmed. 3000112

Mendell, J et al. (2012). Gene therapy for muscular dystrophy: lessons learned and path forward. *Neuroscience Letters.* 527(2):90-9 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC22609847/>