



Clinical Applications of Bioavailable Silicon













ORGONO® SILICA Table of contents

Packground

Silicon in the body

Bioavailability

Sources of silicon. Are they always the same?

Research

Clinical applications and research outcomes

Clinical cases

Stories shared during 10 years of experience





ORGONO® SILICA Background

Extracellular matrix Connective tissue Joints Cartilage • Bone Silicon Blood vessels Skin(and attachments) is a trace element It is transported in the blood as Silicic Acid **Humans** have 1 gram of silicon in the body

The EFSA Journal 2016.

The EFSA Journal 2009.

Van Dyck K, et al, Biological Trace Element Research 2000.

Berlyne GM, et al, Nephron 1986.

Adler AJ, et al, Am. J. Physiology-Endocrinology & Metabolism 1986.

- Carlisle EM, New York: Plenum Press 1984.
- Dobbie JW, et al, Ciba Foundation Symposium 121, 1982.

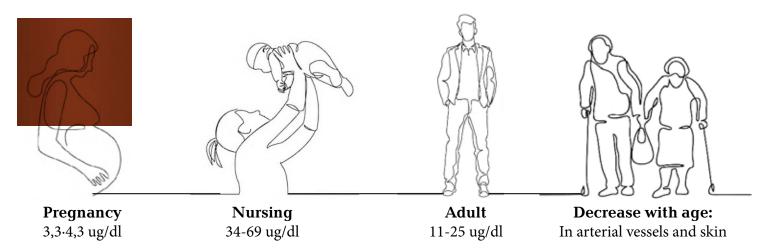
Tissues rich in silicon:

- Schwarz K, Proc. Nat. Acad. Sci. USA 1973.
- Schwarz K, New York: Plenum Press 1978.
- Leslie JG, et al, Proc. Soc. Exp. Biol. Med. 1962

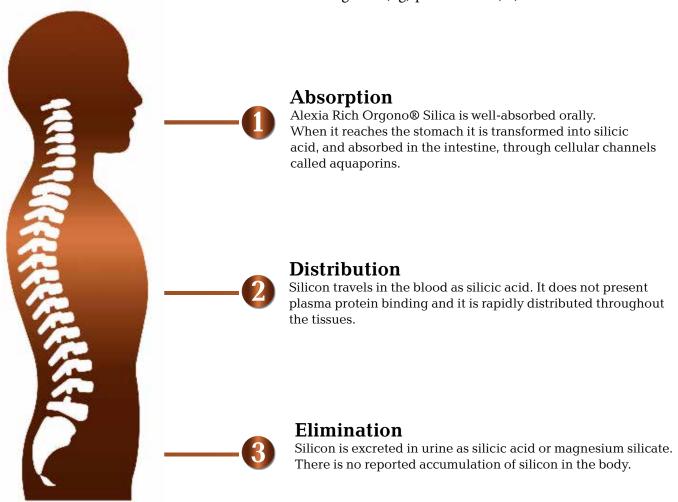


ORGONO® SILICA Bioavailability

The silicon concentration in the blood changes according to the stages of life



Silicon concentration is shown in micrograms (ug) per decilitre (dl) of blood serum.



Boqué N, et al, Centre Tecnológic de Nutrició i Salut, 2015. European Commission, EFSA Journal 2009.

Van Dyck K, et al, Biological Trace Element Research 2000. Berlyne GM, et al, Nephron 1986.

Calomme et al, Metal Ions in Biology and Medicine, 1998.

- Berlyne GM, et al, Nephron 1986.
- Carlisle EM, New York: Plenum Press 1984.
- Dobbie JW, et al, Ciba Foundation Symposium 121, 1982.
- Schwarz K, New York: Plenum Press 1978.

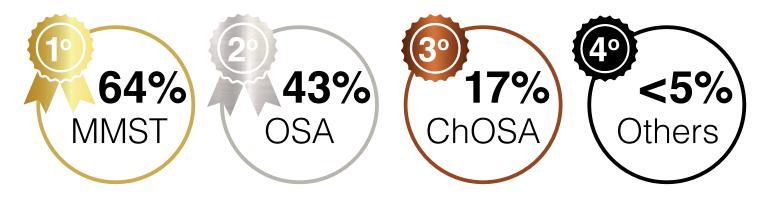


ORGONO® SILICA Sources of Silicon

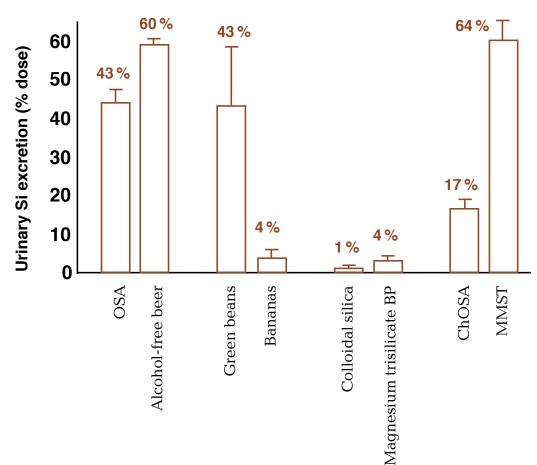
Are they always equal?

A clinical study

Silicon in the form of monomethylsilanetriol (MMST) and silicic acid (OSA) show the highest bioavailability. Alexia Rich (Pty) Ltd only utilise MMST in their silica supplements.



The comparative absortion of silicon from different foods and food supplements Sripanyakorn S, et al, Br J Nutr, 2009



In 2009 significant differences were reported in the bioavailability of silicon, when comparing foods and silicon-rich food supplements. They found that monomethylsilanetrlol (64%) and silicic acid (43%) were the sources of silicon with greater bioavailability.



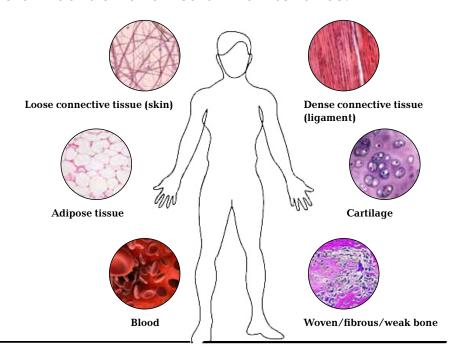
ORGONO® SILICA Research

Clinical applications

Preclinical and clinical investigations have focused on evaluating the effect of silicon on cellular nutrition and health maintenance.

Enhances the synthesis of collagen

Silicon enhances the synthesis of collagen in: connective tissue, skin, joints, bones and the vascular system.



Skin

- Wrinkle reduction
- UV spots control
- Increases moisture retention
- Improves the appearance

Collagen, the most abundant protein in the

Bones

- Increases calcification
- Promotes re-mineralisation
- Improves mineral density

Connective tissue

serves as support for the cells and assists the transport of nutrients

Joints

- Promotes regeneration
- Strengthens the tissue
 - Reduces pain

Vascular

• Increases the flexibility of the blood vessels

Anderson OF, et al, Universidade federal de Juiz de Fora, 2018. - Schmidt K, VitaMinSpur 1998.

Jugdaohsingh R, et al, Osteoporos Int 2015.

- Adler AJ, et al, Am. J. Physiology-Endocrinology & Metabolism 1986.

Rodella LF, et al, J Nutr Health Aging 2014.

- Schwarz K, New York: Plenum Press 1978.

Jugdaohsingh R, et al, Journal of bone and mineral research 2004. - Schwarz K, Proc. Nat. Acad. Sci. USA 1973.



ORGONO® SILICA Research

Clinical applications

Studies have reported that Silicon, together with aluminium, has the ability to form aluminosilicate complexes and this contributes to ease its elimination from the body.

Aluminium is excreted in urine as aluminosilicate and it has been observed that the concentration of aluminium decreases in the body and increases in urine after the administration of food supplements with silicon.

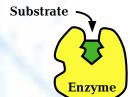
Silicon has been proposed as an alternative for the prevention and control of neurodegenerative diseases associated with the accumulation of aluminium in the nervous system.

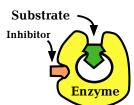




The toxicity mechanisms of aluminium include:

- Inhibition of enzymatic activity
- Inhibition of protein synthesis
- Oxidative stress due to biometal imbalance
- Alterations in the function of nucleic acids
- Changes in the permeability of the cell membrane





Aluminium has been associated with:

Chronic Fatigue Syndrome
Osteodystrophy (defective mineralization)
Macrophagic myofasciitis associated with vaccines
Heterogeneous symptoms of autistic spectrum disorders
Negative effects on hematopoiesis (related to iron)
Oxidative stress in nervous tissue
(Alzheimer's, Parkinson's, Multiple Sclerosis)



HO_{m,,}|

Li, et al, Metal Ions and Alzheimer's Disease 2017. . Jones, K, EBioMedicineet 2017. Beardmore J, et al, Scientific Reports 2016. Noremberg, et al, Biol Trace Elem Res 2016. Maya S, et al, Biomedicine & Pharmocotherapy 2016.

- Van Duyn, et al, J. Neurochem 2013.
- Wu, et al, Neurobiol Aging 2012.
- Gonzalez M, et al, Food and Chemical Toxicology 2008
- Schwarz K, Proc. Nat. Acad. Sci. USA 1973.
- Strepkopytov S, et al, Polyhedron 2006.

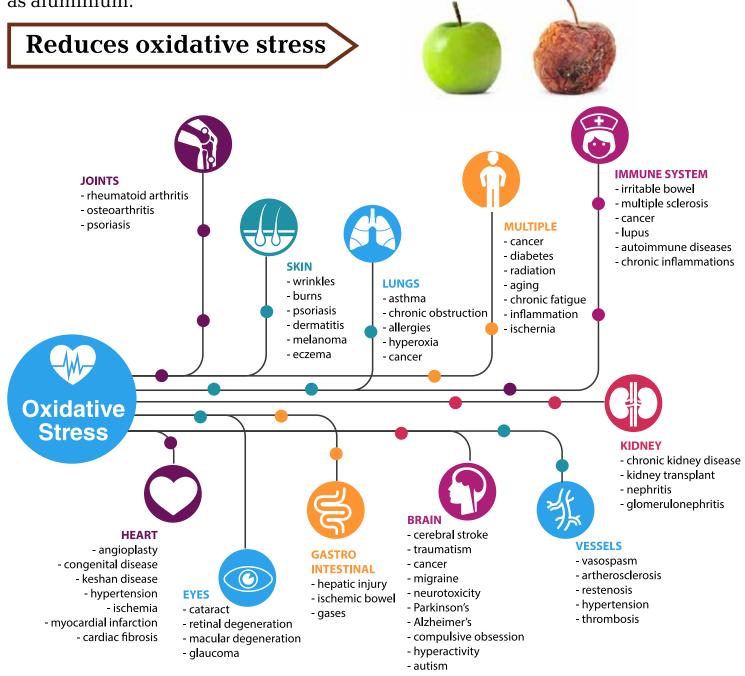


ORGONO® SILICA Research

Clinical applications

The administration of exogenous silicon reduces oxidative stress. The reduction of cellular oxidation, less synthesis of free radicals and a reduction of inflammation have been observed as a result of it.

Silicon helps maintain the balance of biometals such as iron, copper, zinc, manganese, magnesium and calcium, and helps to eliminate toxic metals such as aluminium.



Li, et al, Metal Ions and Alzheimer's Disease 2017. Gonzalez M, et al, Food and Chemical Toxicology 2008. Najda J, et al, Biological Trace Element Research 1993.



ORGONO® SILICA Outcomes of the research

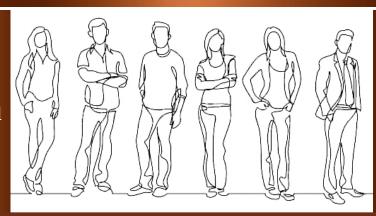
Evaluation of Alexia Rich Orgono® on health parameters

Increased collagen synthesis and calcium deposition

Alexia Rich Orgono® products favour the synthesis of collagen in fibroblast cells and calcium deposition during osteoclast differentiation.

Dermological effects of Alexia Rich Orgono ® products

Double-blind, randomized, placebo-controlled clinical trial in healthy women



5 mgs of silicon were administered during 150 days, to evaluate the dermatological effect

Transonychial evaluation of water in nails: Increased hydration in hands 24-28% and in feet 26·32%



Evaluation of multispectral images of the skin: 46-75% improvement in wrinkles, 40% less UV spots, 50•54% increase in eyelash length



ORGONO® SILICA Clinical studies

Evaluation of Silicium in Joints and removal of Aluminium

Recovery of joint pains

The combination was evaluated on two $Orgono^{\otimes}$ silica products — silicon was administered orally, and topically in the form of gel.

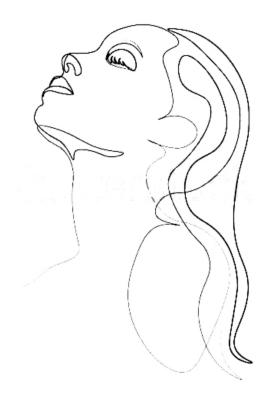
100% of subjects recovered the ability to perform daily activities	77% of subjects had decreased joint pain
87% Greater ease in the movement of joints	33-57% of discomfort in the joints disappeared
83% Better quality of life	Significantly improves sleep quality < 0.05

Removal of Aluminium in the hair

5mg /12 h silicon effect in Aluminium removal (150 days of treatment)

Evaluation minerals of hair by ICP-OES

Silicon increased 6.4% while Aluminium decreased 4-7%





ORGONO® SILICA Clinical cases

Stories shared in 10 years of experience

Imperfect osteogenesis

- · Diagnosed from birth
- · Multiple fractures in childhood
- Starts with 10mg of Silicon per day
- After 12 months of consuming Silicon, recovers bone density
- For 15 years, he has maintained the intake of silicon, leads a normal life, has not undergone fractures and has normal bone density

Rheumatoid arthritis

- Woman, 65 years, typical symptoms
- Failed treatment: cortisone AR
- Oral silicon 10 ml/8h, three months
- · Application of silicon gel topically
- · Complete remission of pain
- Recovery of emotional, physical and emotional stability
- · She stopped using cortisone

Multiple sclerosis

- 29 year old woman
- Early diagnosis, presented crisis every 2-3 months
- The doctor indicates the administration of silicon to reduce the crisis
- After the intake of silicon the crises are reduced to zero for 2 years

Crohn's disease

- Disease for more than 10 years
- Treatment: cortisone in high doses
- In 1999 he decided to try silicon
- 6 months later he had no symptoms
- · Continues with maintenance silicon
- In 2012 the colonoscopy shows the total disappearance of the disease
- To date, continues without relapses and with silicon intake

Thyroid nodule

- Prognosis: uncertain
- Proposed treatment: lobectomy
- Symptoms: fatigue, irritability, insomnia
- Choose as an alternative to treat with silicon orally and topically
- One month after the silicon intake the nodule disappeared
- Continues with silicon and has had no relapses

You can consult THE WEBSITE to find more clinical reports shared directly

These clinical cases were obtained from the website: www.benefitsofsilica.com



Distributed by: Something Natural info@somethingnatural.co.za www.orgonosilica.co.za 064 531 0121