VALENS®

VALENS PROBIOTICS

Dietary supplements with selected probiotic bacteria for babies, children and adults.

VALENS SuperBiotic

- **Dietary supplement in the form of capsules for balanced intestinal flora and a healthy gut.**
- Suitable for kids from the age of **2** and **adults.**
- Helps restore the natural balance of bacteria in the gut:
  - Supports digestion, healthy gut, helps with gastroenteritis …
- **20 billions CFU*** and **12 specific bacterial strains** per capsule.
- **Aktiv-Vial™** packaging, featuring an Activ-Polymer™ liner that surround the product to scavenge moisture.

*CFU – Colony Forming Units – number of viable microorganisms, able to multiply to form a colony.

INGREDIENTS

- **12 specific bacterial strains:**

	CFU/capsule	Mg/capsule
Lactobacillus rhamnosus DSM 32550 LactoGG®	1 x 10^{10}	44,000
Bifidobacterium lactis DSM 32269	8,57 x 10^{9}	25,000
Bifidobacterium longum DSM 32946	1,43 x 10^{8}	1,667
Bifidobacterium bifidum DSM 32403	1,43 x 10^{8}	1,250
Lactobacillus acidophilus DSM 32418	1,43 x 10^{8}	1,000
Lactococcus lactis SD5584	1,43 x 10^{8}	0,833
Lactobacillus casei NCIMB 30356	1,43 x 10^{8}	0,714
Bifidobacterium breve SD5206	1,43 x 10^{8}	0,625
Streptococcus thermophilus DSM 32319	1,43 x 10^{8}	0,625
Lactobacillus plantarum SD5209	1,43 x 10^{8}	0,500
Lactobacillus paracasei NCIMB 30470	1,43 x 10^{8}	0,500
Lactobacillus salivarius SD5208	1,43 x 10^{8}	0,500

- **Prebiotics – fructooligosaccharides Actilight® and hydrolyzed corn dextrin Nutriose®**

DOSAGE AND STORAGE

- Recommended daily dose:
  - Children from the age of 2 and adults: **1 capsule per day.**
  - Best if consumed once per day, **during a meal** or **2 hours** prior to or after oral administration of **antibiotics.**
  - Capsules can be opened and only its content can be consumed (for children).

- To be refrigerated and used within **2 months after opening.**

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ADVANTAGES AT A GLANCE

- Mixture of **12 specific bacterial strains → 20 billion CFU**
- Includes **LactoGG®**, registered form of *Lactobacillus rhamnosus* GG strain, the most researched probiotic in the world.
- Contains **prebiotics – fructooligosaccharides Actilight®** and hydrolyzed corn dextrin **Nutriose®.**
- **Activ-Vial™** packaging**,** proven to reduce water activity and prolong viability of the bacteria.
- Due to the patented **cryo-protection production technology,** the bacteria have a much longer shelf life, higher survival rate, are resistant to stomach acid and can survive the stomach's harsh environment.
- Analyzes confirm viability of microorganisms and stability of the product.
- Made in **GMP Certified facility** in **EU.**

VALENS BibaBiotic drops

- **100% natural dietary supplement for newborns at 2 weeks old, babies and children.**

- Aims to build a **strong gut microbiome**:
  - aids bacterial colonization of the baby‘s gut,
  - restores microflora when it has been disrupted,
  - helps with indigestion (**cramps, colic**, diarrhea or constipation, crying and restlessness)
  - when consuming **antibiotics,**
  - reduces risk of **diarrhea** (taken prior to traveling, in times of increased risk of infections etc.).

INGREDIENTS

- **Multi-strain product, containing two specific lactic acid bacteria strain:**
  - ***Lactobacillus rhamnosus* 19070-2** (one of the most researched probiotics in children)
  - ***Lactobacillus reuteri* DSM 12246**
  - Strain combination has been selected based on several clinical studies, proving efficacy in improving gut flora in babies and children:
    - Reduces duration of acute diarrhea[1,]
    - Beneficial in management of atopic dermatitis[2,]
    - Reduces frequency of gastrointestinal symptoms as well as mean cry and fuss time[3].
- **Prebiotics – fructooligosaccharides**
- **Natural vitamin D3 (400 IU)**

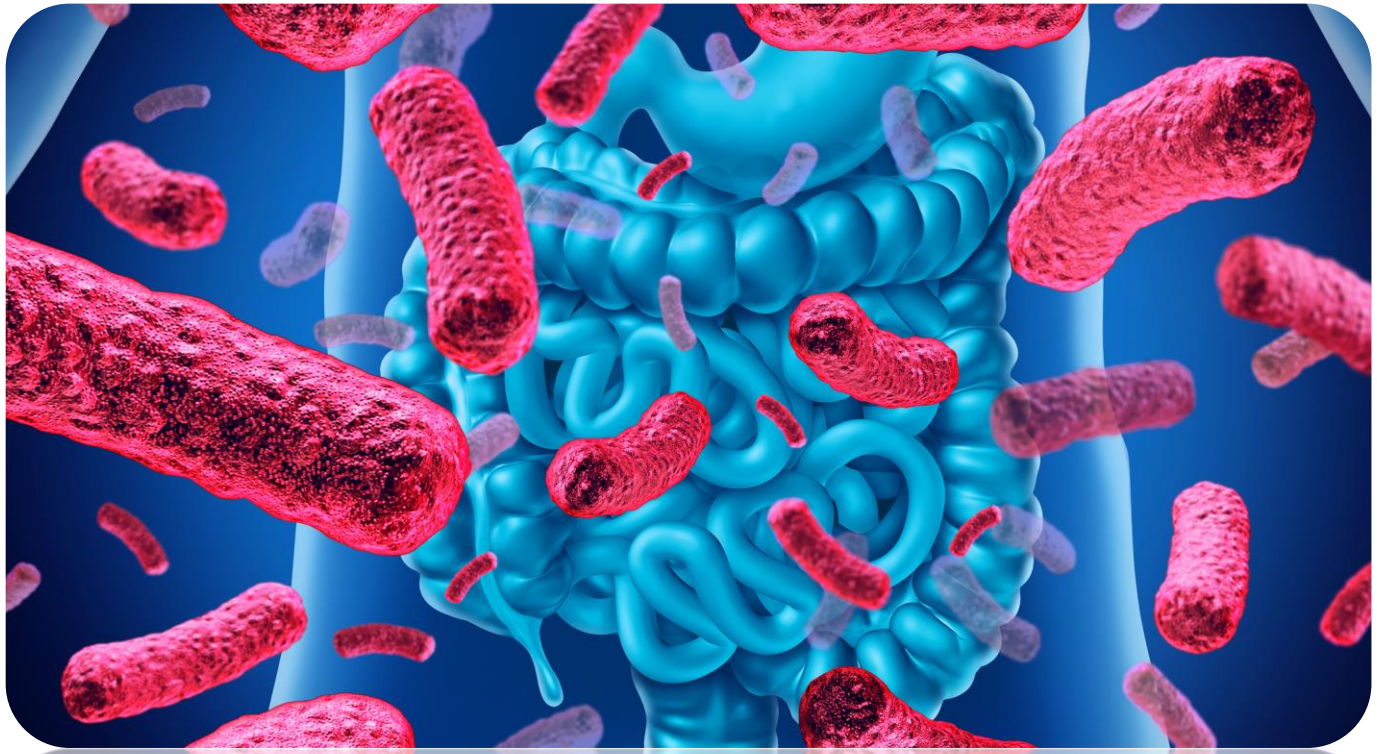
DOSAGE AND STORAGE

- Recommended daily dose:
  - Newborns (at 2 weeks old): **5 drops**
  - Children from the age of 4: **10 drops**
  - Best if consumed once per day, during **a meal** or **2 hours** prior to or after oral administration of **antibiotics.**
  - May be given directly by spoon, mixed into breast milk or formula, or applied directly to breast during feeding. Do not add to hot formula or hot foods as this may damage the live bacteria.
- To be refrigerated and used within **2 months after opening.**

ADVANTAGES AT A GLANCE

- **Two clinically-studied, specific bacterial strains.**
- Contains **prebiotics fructooligosaccharides** and **vitamin D3** in dosage, recommended for infants.
- **100% natural product;** without preservatives, flavors and colors; allergen-free.
- Suitable for newborns at 2 weeks of age.
- Shelf life after opening: **2 months.**
- Analyzes and tests confirm the stability of **microbiological cultures** and the product itself.
- Probiotics are produced with a patented **cryo-protection technology**, which ensures much longer shelf-life of bacteria and makes it resistant to environment during passage of stomach and intestine.
- Made in **GMP Certified facility** in **EU.**

VALENS®



MORE INFORMATION

MICROBIOTA (= microflora / flora / microbiome)

- Collection of all **microbes,** such as bacteria, fungi and viruses, that naturally live on or inside the human body.
- Important contribution to **human health and wellness** → they help control digestion, benefit the immune system, produce some important nutrients, improve nutrient absorption etc.
- There are more bacteria than human cells, most of them exist in the **gut (digestive system)** and on the skin.
- Microbiota is dependent on dietary diversity, lifestyle, illnesses etc. of every individual.

GUT MICROBIOTA

- Billions of microbes, mostly bacteria, that live in digestive tracts of all humans.
- It affects the body from birth throughout life → **very important role in the human health.**
- Either **commensal, symbiotic or pathogenic bacteria.**
- Different types of bacteria; most benefit the health → **balance/homeostasis, unique to each individual.**
- Role of the good bacteria*:
  - **Digestion of food, especially fiber,**
  - **Manufacture and absorption of important nutrients,**
  - **Promotion of normal functioning of the immune system,**
  - **Protection of the intestine against exogenous pathogens,**

Microbiota also controls other organs and their function (brain, memory, concentration, memory …).

DEVELOPING MICROBIOTA

- The uterus is **sterile** and infant gut is colonized rapidly after birth (mothers vaginal microflora, skin on skin etc.).
- Microbiota diversity increases with age, until it becomes stable and unique→ **adult microbiota.**
- Initial colonization is crucial for:
  - stable adult microbiota,
  - immunity,
  - gastrointestinal development.
- Colonization of the gut, imbalance of the bacteria and development of the intestine may cause **colic** and **cramps.**

DYSBIOSIS

- **Disruption to the microbiota homeostasis:**
  - Imbalance in bacterial composition,
  - Reduction in the number of all bacteria,
  - Reduction in the number of bacterial species,
  - Increased number of pathogens.
- Causes: **stress**, **antibiotics**, **illness, dietary changes, physical activity, age …**

*Recent data suggest gut microbiota dysbiosis may be a contributing factor in neurodegenerative diseases.

First symptoms of dysbiosis - **digestive problems, such as:**

- Cramps,
- Bloating and gas,
- Nausea,
- diarrhea,
- Constipation,
- **Cramps and colic in infants.**

Also affects other organs and overall health and wellbeing.

ANTIBIOTICS

- Used to treat or prevent some types of **bacterial infections**. They work by killing bacteria or prevent them from spreading.
- They can have several negative effects on the gut microbiota, killing beneficial bacteria also → causing **dysbiosis.**

- **Probiotics may be taken orally to restore homeostasis in the gut → probiotic food (yogurts) or dietary supplements:**
  - Reduces the risk of antibiotic-associated diarrhea,
  - Reduce the duration of antibiotic-associated diarrhea.

PROBIOTICS

- Live, non pathogenic microorganisms (mostly bacteria) that provide **health benefits** when consumed.
- Found in **probiotic foods** (yogurt, sauerkraut, fermented food) and dietary supplements for:
  - **Boosting the immune system,**
  - **Restoring the natural balance of bacteria in the gut,**
  - **Preventing and treating diarrhea and other indigestions,**
  - **Improving and preventing allergy and allergy-induced eczema,**
  - **Improving symptoms of infant colic.**

- The most studied and used strains of probiotics are **Lactobacillus** and **Bifidobacterium.**

SPECIFIC STRAINS

- Every bacterial species has several subtypes, called **strains** → a genetic variant of microorganisms with common characteristics and same effect on the host.
- Some strains are identified, researched (in clinical trials) and numbered (*Lactobacillus reuteri* **DSM 12246).**
- Specific strains of probiotics have a well known and researched effect on the human body → it is important for probiotic products to contain the same, specific strain that has been used in clinical trials → Valens probiotics contain specific, numbered strains, selected of their well documented properties.
- Number of the strain ensures consistency, safety and efficacy of each product.

LACTIC ACID BACTERIA

- Among the most significant group of probiotic organisms, commonly used in fermented dairy products and products to be taken alongside **antibiotics.**
- LAB colonize the gastrointestinal tract of every healthy person and seal it against the attack of pathogenic microorganisms.
- They produce **lactic acid** as the major metabolic end product of carbohydrate fermentation. Lactic acid itself is associated with several health benefits (like increased nutrient absorption).
- A review of clinical trials suggests several beneficial effects of Lactobacillus strains:
  - Prevention and reduction of the duration of acute diarrhea[4],
  - Irritable bowel syndrome management[5],
  - Prevention and reduction of allergy and atopic dermatitis[6],
  - Normal function of the immune system[7].

LactoGG®

- ***Lactobacillus rhamnosus GG* DSM 32550 –** patented strain of LAB.
- World‘s most documented and researched bacterial strain – over **1000 researches** and over **300 clinical studies.**
- **Clinically proven, *Lactobacillus rhamnosus* GG*:***
  - Has a positive impact on antibiotic therapy related side effects[8],
  - Prevents and reduces duration of acute diarrhea[9,10],
  - Stimulates immune system[11],
  - Is beneficial in management of atopic dermatitis[12,]
  - Etc.

BIFIDOBACTERIA

- Good bacteria that live in the intestine (cca 10% of adult microbiota) → common in probiotic foods and dietary supplements.
- Role and clinical use:
  - Helps break down food and absorb nutrients,
  - Regulation of intestinal homeostasis,
  - Helps with irritable bowel syndrome patients[13],
  - Immune system support.
- The most common bacteria in the **infant gut microbiota:**
  - First to colonize the gut,
  - Present in breast milk, which is also rich in prebiotics,
  - Dominating the infant gut microbiota.

PREBIOTICS

- Plant compounds, mostly **fiber,** that our body cannot digest by itself → it is a source of food for the gut's healthy bacteria → **they induce their growth and activity.**
- **Fructooligosaccharides (FOS)** – low-calorie carbohydrates with prebiotic effect.
- Furthermore, they have other important beneficial physiological effect, such as improved **mineral absorption** and **decreased levels of serum cholesterol**[14].
- Consumption increases frequency of depositions and **reduces constripation**[15].

VITAMIN D3 – INFANTS

- **Vitamin D is essential for the human health.**
  - It is produced in the **skin**, when it is exposed to direct sunlight.
  - Infants and children have immature, sensitive skin, than can easily be damaged and shouldn‘t be exposed to the sun.
- **Breast milk alone and other dietary sources do not provide adequate amount of vitamin D → supplementation is needed.**

Vitamin D is essential for maintenance of strong bones and teeth and normal function of the immune system. Low vitamin D at birth is associated with increased odds of acute respiratory infections[16]. Infants should be given 400 IU vitamin D daily for at least 12 months.

ACTIV-VIAL™

- Environmental factors can impact the integrity of probiotics – exposure to heat and moisture over time degrades product potency, affecting its performance, particularly at the end of shelf life.
- **Activ-Vial™** = vial, featuring and **Activ-Polymer™ liner,** that completely surrounds the product to scavenge moisture.
- Engineered to create the microclimate needed to ensure probiotic potency → **proven to protect probiotic stability.**
- Compared to other packing technologies (blister pack, bottles), products using Activ-Vial™ have:
  - **Decreased water activity over the first 1 month, remaining lower throughout its entire shelf life,**
  - **Improved probiotic stability.**

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VALENS®

YOUT GUT HEALTH AFFECTS YOUR WHOLE BODY. TAKE CARE OF IT!

Thank you for your attention!