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# FOOD INDUSTRY

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WHAT'S NEW  
IN THE WORLD  
OF BAKERY &  
CONFECTIONERY?

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Picture courtesy of Hines



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Picture courtesy of Nestle

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StamVitamin has developed a wide range of solutions for different age groups and life phases to deliver micronutrients to the human body.



Picture courtesy of StaminVitamin



Micronutrients especially for seniors

## BOOSTING IMMUNITY AND PERFORMANCE WITH MICRONUTRIENTS

**STERNVITAMIN** HAS DEVELOPED A WIDE RANGE OF SOLUTIONS FOR DIFFERENT AGE GROUPS AND LIFE PHASES TO DELIVER MICRONUTRIENTS TO THE HUMAN BODY.

**HEALTH** and balanced nutrition are not mere trends. They are established, ongoing consumer interests, and more and more people are choosing foods that support their physical and mental wellbeing. Consequently, products that offer healthy enjoyment are the strongest growth drivers in the food and beverage category.

Individual concepts—meaning products that are tailored to the personal health profiles of individual consumers—are especially promising. Personalised foods that are both tailored to individual needs and also improve personal performance and wellbeing thus have very good market potential.

### EFFECTIVE RELAXATION FOR STRESS

For some years, vitamin and mineral specialist SternVitamin has been developing micronutrient

premises for different needs and target groups. Its Relax premix is one example. This is intended primarily for professionals and for students during exams, but also has its place in everyday life, especially for people who live in crowded cities and must cope with traffic congestion and air pollution.

The ingredient complex has a positive influence on concentration and stress perception. In hectic situations, it helps people relax without making them tired. On the contrary, they stay wide awake, but are less nervous and stressed. This effect is achieved with vitamins B6, B12 and C, niacin and pantothenic acid, magnesium, zinc and plant extracts.

According to Sabine Hildebrandt, Head of Research & Development at SternVitamin, “B vitamins are considered anti-stress vitamins that are good for the nerves. They perform essential tasks in energy

PRODUCTS THAT OFFER HEALTHY ENJOYMENT ARE THE STRONGEST GROWTH DRIVERS IN THE FOOD AND BEVERAGE CATEGORY.

provision and stimulus transmission. Vitamin B deficiency leads to poor concentration, poor memory, tiredness and exhaustion. Folic acid, vitamins B6, and B12, and pantothenic acid (B5) are especially important, and they are the B vitamins that our Relax premix is formulated around.”

Magnesium also protects the nervous system from stress, and in literature is sometimes called a “salt of inner peace”. Magnesium inhibits a chain reaction that causes stress, including the secretion of adrenaline and noradrenaline. This reduces fatigue due to stress, and counteracts tiredness. Under stress, the body uses more magnesium, which can result in an insufficiency that needs to be compensated.

Classic vitamins, minerals and trace elements

will continue to play the central role in nutritional supplements, but will increasingly be combined with other ingredients like plant extracts, fatty acids, amino acids and other functional ingredients.

“For example, in our Relax premix, we use the positive effects of ginseng (*panax ginseng*) to make the body and mind more resistant to stress and fatigue,” says Dr Hildebrandt. This is in addition to nerve-strengthening B vitamins through secondary plant substances like ginsenosides, along with 25 other substances. For their part, hops and melissa plants contain secondary plant substances that have balancing and calming effects in situations of anxiety and nervousness.

### NEW MENTAL ACUITY

Every day, at work or at school, in learning or on the job, we demand top performance from our brains. As the control centre of the body, the brain also regulates the functions of all organs and systems. To accomplish this, around 100 billion brain cells—called neurons—are in constant contact with each other. They need a continuous supply of oxygen and energy. They also need

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ENQUIRY No 4631

certain micronutrients as construction materials and lubricants, for transport and to deliver energy.

"Taking antioxidant micronutrients early on can counteract age-related loss of mental function," notes Dr Hildebrandt. Other concentration and memory-boosters round out SternVitamin's mental fitness product offering, for a targeted nutritional supplement that can help older people make full use of their potential for as long as possible.

"According to the latest knowledge, plaques of small, misshapen protein molecules called beta-amyloid peptides play a major role in dementia diseases like Alzheimer's," states Dr Hildebrandt. "Free radicals are probably the triggers for the deformation of normally harmless protein molecules." Special antioxidants can help prevent this, including vitamin C, which protects nerves and brain blood vessels from damaging oxidation processes. The trace element zinc also assists in antioxidative defence. Polyphenols, such as those found in grape seeds, green tea and elderberries, are likewise antioxidants. These secondary plant substances contribute to preventing the accumulation of deformed protein molecules in the

brain where they can damage nerve cells. Studies indicate that they can also reduce the

risk of neurodegenerative diseases like Alzheimer's, if taken regularly in sufficient concentration. The B vitamins, especially folic acid, also improve the memory performance of older people.

The coenzyme Q10 plays an important role in mental performance. It is heavily involved in energy metabolism at the cellular level, and can even be said to drive energy generation. Iron is also important for mental fitness. This trace element is responsible for transporting oxygen, without which nothing works in the brain. Typical symptoms of iron deficiency are general fatigue and lack of energy, and mental performance deficits like forgetfulness and lack of concentration.

"Turmeric is very important for special brainpower mixes," says Dr Hildebrandt. "This oriental spice contains secondary plant substances, in particular curcumin, that promote the formation of new nerve cells in the brain. Curcumin is also a powerful antioxidant, as well as being effective in the fight against plaque formation in the brain."

Omega-3 fatty acids and lecithin (phosphatidylcholine) also boost cognitive functions.

#### STRENGTHENING THE IMMUNE SYSTEM AND STAYING FIT

Staying active and full of energy takes not just mental but also physical fitness. Stress as well as environmental influences like high humidity and heat, overcrowded cities, heavy traffic and air pollution are challenges for the immune system.



Vitamin-enriched confections



The Relax micronutrient premix reduces stress and fatigue



Customised micronutrient premixes for beverages like juices, fitness and energy drinks, flavoured water and tea

STERNVITAMIN HAS DEVELOPED A WIDE RANGE OF SOLUTIONS FOR DIFFERENT AGE GROUPS AND LIFE PHASES, FROM COUPLES TRYING FOR CHILDREN TO PREGNANCY, BREASTFEEDING, CHILDHOOD, SCHOOL, UNIVERSITY, PROFESSIONAL LIFE AND SENIOR LIFE.

"The immune system uses highly reactive free radicals to destroy pathogens," explains Dr Hildebrandt. "But the radicals don't just eliminate pathogens, they also cause inflammation and damage to cells in the body. The body needs antioxidants to counteract the formation of excess radicals."

Vitamins A, C, E and carotenoids like beta carotene reduce this oxidative stress. Citrus fruit and green tea supply secondary plant substances like flavonoids and anthocyanins, which are especially effective at strengthening the body's defences against free radicals. Trace elements like selenium, zinc, copper and manganese are involved in this fight, as they are required for antioxidative enzyme systems. The immune cells themselves have a higher metabolic rate when they are in action. This increases the need for micronutrients, especially folic acid, vitamin B12, zinc and iron, as these are important for the formation of immune cells.

#### ADDED VALUE FOR ALL CONCERNED

The targeted combination of different micronutrients results in new ingredient complexes that meet the specific needs of individual target groups. SternVitamin has developed a wide range of solutions for different age groups and life phases, from couples trying for children to pregnancy, breastfeeding, childhood,

school, university, professional life and senior life. Dr Hildebrandt comments: "Personalised foods that address special health aspects have high added value but the market is looking for much stronger differentiation. A single multivitamin tablet for everybody—those days are over. The trend is more and more towards personal food."

Conceivable product examples are yogurt with beauty vitamins for the skin, power drinks with selected minerals for mental performance, or special snacks for older people who have trouble chewing and swallowing. Target group concepts like these bring advantages for all concerned—consumers get products tailored to their expectations, manufacturers can generate additional revenue potential through portfolio diversifications, and ideally healthcare costs can be reduced.

SternVitamin offers customised micronutrient premixes for food and beverage manufacturers. These ingredient complexes can be individually dosed and are suitable for enriching many products, from beverages, teas and dairy products to snacks, cereals, confections and ready meals. **APFI**

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