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# **„RMS BIOFRID“ – a new BIOFRID Product**

## **The Importance of Dextrorotatory Lactic Acid for Metabolism**

**by Dr. med. vet. Anita Kracke, Naturopath**



Scientists such as Dr. Dr. Seeger and Prof. Wagner have carried out intensive research into the importance of dextrorotatory lactic acid for the human organism.

## **Lactic Acids**

Lactic acid belongs to the short-chain organic acids. It has three carbon atoms, three oxygen atoms and six hydrogen atoms. We distinguish between two isomers which, on account of the differing figuration of their OH group in relation to the C2 atom, rotate polarised light differently. Thus there is a dextrorotatory L(+)- lactic acid and a laevorotatory D(-)- lactic acid. As well as these there is also the racemic form, which is a mixture of laevo- and dextrorotatory lactic acids and does not trigger any action in the body.

Lactic acid has its origin in metabolic processes in the form of lactate (i.e. a salt), particularly when sugars are broken down. Micro-organisms produce lactic acid during so-called lactic acid fermentation, which is a decomposition of sugar-containing organic products. Human beings made use of this fact quite early on in the preservation of food stuffs.

Thus the manufacture of e.g. yoghurt, cheese or sauerkraut ultimately depends on these fermentation processes, as does the production of vinegar and wine. Agriculture makes use of this fact to produce silage for feeding animals. In every case the metabolic products of the sugar-fermenting bacteria (mostly related to the lactobacilli) lower the pH level of

the products to the point at which the milieu becomes intolerable for other microbes. In such natural fermentations a mixture of dextrorotatory and laevorotatory lactic acid (racemate) is always produced.

Nowadays lactic acid is produced on the large scale by means of culturing certain bacteria. In this way foods continue to be acidified (E 270) to preserve them. Moreover lactic acid is employed in the removal of lime, or in general on account of its disinfectant action. Lactic acid-producing bacteria play a major role in human health, especially in the large intestine, because they acidify the stool, thus repelling the anaerobic flora which is responsible for putrefaction.

## **Physiological Importance of Lactic Acids in Metabolism**

Both forms of lactic acid can be produced in the body. In healthy cells with appropriate cell respiration dextrorotatory lactic acid (L(+)-lactic acid) is produced. This occurs particularly in the muscle cells during moderate work or movement. Therefore it is also referred to as sarcolactic acid (*Acidum sarcolacticum*). From there it finds its way into the bodily fluids. Dextrorotatory lactic acid is capable of altering the pH level of the blood, thus combating alkalosis.

L(+)-lactic acid inhibits elevated protein synthesis and proliferation of cells. It supports the regeneration of cells, because it can increase cell respiration by up to 35% by activating the mitochondria.

Laevorotatory D(-)-lactic acid is formed in the cells whenever the cell metabolism is disturbed and sugar is fermented. That is always the case when the cell is overloaded with sugars and/or simultaneously there is a prevalence of enzyme- and oxygen deficiency. The laevorotatory lactic acid thus formed is cytotoxic and is either stored in the tissues as lactate or is excreted via the kidneys as racemate.

## **The Relationship between Stress, Chronic Disease and Dextrorotatory Lactic Acid**

### **Adrenaline and Noradrenaline**

In stress situations the stress hormones adrenaline and noradrenaline in particular are excreted; these are formed from the amino-acid L-tyrosine and L-phenylalanine. Whereas adrenaline has a short half-life and is rapidly broken down again, the level of noradrenaline persists for longer.

In the case of long-term stress eventually the supply of adrenaline dries up: it is formed from the adrenal glands, which are exhausted. However, Noradrenaline is also produced in other tissues, such as intestinal and connective tissues and is thus able to maintain an elevated level for longer. Noradrenaline has no influence on the supply of sugar and causes long-term stenosis of the vessels, which can result in oxygen deficiency for the tissues and generally raises the blood pressure.



Adrenaline is responsible for the supply of glucose from the body's own stores through the breaking down of glycogen. It promotes lipolysis and, when successful flight or resistance of an attack is required, the expansion (of medium and large vessels) or contraction (of small vessels). This is also the case in resistance of infections. Adrenaline causes muscular trembling or even a shivering fit, in order to produce dextrorotatory lactic acid, which in turn stimulates the chromaffine tissue of the adrenal glands. This brings with it a secretion of adrenaline. The adrenaline is then responsible for fever developing.

### **Insulin**

„As already mentioned, the hormone insulin is an important antagonist of adrenaline (and glucagon)“ (Fryda, W.: „Diagnose Krebs“ (Diagnosis of Cancer) pg. 43)

When a high-calorie diet is consumed, a large amount of sugar is transported to the cells, and the glucose which cannot be admitted is stored as fat in the fat cells.

People who are exposed to chronic stress which they cannot offset by physical movement, suffer a sharp fall in adrenaline production by the adrenals. As a result no glucose can be summoned from the interior of the cells, and fat is not broken down to provide a supply of energy. The concentration of glucose in the blood increases and, as a consequence the insulin supply is adjusted upwards by the body,

to transport sugar into the interior of the cells – sugar, which has a toxic action on the cell membranes. If this is unsuccessful, this is referred to as „insulin resistance“. The reason for the failure of the insulin lies in the cell's protection mechanisms, which are meant to avoid an excess of sugar, so that the mitochondria are not damaged.

These mechanisms play an important role in the disease known as diabetes mellitus. The body attempts to regulate the blood-sugar level with insulin, until the pancreas is exhausted. Initially the rapid flood of short-chain carbohydrates, sugars, is therapeutically paused in the gut with oral medication; then, on the part of the medics, insulin is injected, to avoid the occurrence of hyperglycaemia.

Were these developments to be stopped in their tracks in time by means of sensible dietary changes and increased but moderate movement, as well as stress reduction, the development to the point of diabetes mellitus could be prevented.

### **Fermentative Metabolism**

If the body's cell is permanently over-supplied with glucose then, because of the damage to the mitochondria, it may happen that the cell attempts to rid itself of the excess glucose by means of fermentation. Through this archaic means of energy generation a great deal of sugar can be broken down with only a low energy yield. Taking this metabolic step results in a powerful change in the cell's behaviour. In the fermentative

process a metabolic product is formed: toxic laevorotatory lactic acid. This D(-)-lactic acid increases the mitotic index by a factor of six. Thus a tumour cell may be created.

This cell develops a mechanism which helps it to expel this toxic substance, which then surrounds it like a protective wall of acid. Immune cells have little chance of overcoming this barrier. Incidentally, adrenaline is unable to function in an acidic milieu, in order to remove the sugar from the cell, because its action is pH-dependent.

The only possible way of breaking down this protective wall is by giving dextrorotatory lactic acid. By the creation of a racemate, the laevorotatory lactic acid can be rendered inactive.

### **Dextrorotatory Lactic Acid in Prophylaxis and Treatment**

As it generally takes c. 15-20 years for ongoing stress to result in exhaustion of the adrenal glands and consequent adrenaline deficiency to occur, dextrorotatory lactic acid can be very successfully used to militate against such a thing happening.

Nowadays chronic disease is the most frequent cause of death in so-called civilised society. A lack of movement, a very high-calorie diet, a deficiency of essential dietary elements, of clean air and pure water, plus an insufficient supply of oxygen resulting from a low level of ventilation in the lungs – all these can stretch the body's cells to the limits of their



biological capabilities. Stress is yet one more factor in the exhaustion of the reserves required for adaptation.

Dextrorotatory lactic acid is a metabolic product of our own bodies, which has been well researched by Dr. Dr. Seeger, Dr. Reckeweg and Dr. Fryda, who has exposed the connections between adrenaline deficiency and cellular degeneration in a very special way. In order to regulate the body's internal milieu, to improve cell respiration, to re-activate the chromaffin system of the adrenals and to improve the basic regulation in general, administering dextrorotatory lactic acid is an excellent option.

### **RMS BIOFRID**

For many decades already, the SANUM-Kehlbeck Company has been offering their SANUVIS® product. Dextrorotatory lactic acid belongs to the Mucor cyclogeny, as described by Prof. Günter Enderlein. Up to now, however, it has only been available in homoeopathic potency. In view of the great changes that have taken place in human lifestyle, with the occurrence of stress steadily on the increase, it seemed to make particularly good sense to offer **pure** dextrorotatory lactic acid as well, as a food supplement, adding it to the palette of the sister company BIOFRID.

**RMS BIOFRID** is a 25% dilution of dextrorotatory lactic acid, which is available in the form of drops. The lactic acid is obtained from bacterial cultures, which are not genetically

modified. For oral use the drops should be diluted with water and in doing so, it is advisable to add the whole day's requirement at once to a bottle of water, and then to take repeated sips of this, spread out over the course of the day, so as to achieve a good level in the body. The size of the pack is 100ml. The dosage for prophylactic use is three doses of 20 drops daily; in the event of illness thirty drops should be taken three times a day (as recommended by Dr. Fryda).

### **Areas of Use**

In the light of experience, dextrorotatory lactic acid is particularly effective in the following:

- Painful conditions affecting the muscles and tendons.
- Rheumatic pain, aggravated by movement.
- General chilliness on account of the body generating too little energy.
- Chronic inflammation owing to weakness of the body's defences against infection.
- Disorders of the digestive tract (especially when caused by anaerobic organisms).
- Burns – as an undiluted compress applied to the wound.

### **Conclusion**

**RMS BIOFRID** is a logical addition to the existing homoeopathic preparation of dextrorotatory lactic acid produced by the SANUM Company:

SANUVIS®; now, as well as the pre-existing immaterial support for a disordered metabolism, we have the possibility of a material support. This takes into account the rise in chronic diseases, which is increasingly making its presence felt.

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