PRODUCT INFORMATION

# I3C®

*Indole-3-carbinol (I3C®) is a phytochemical substance which has great importance as an antioxidant and anticarcinogen.*

## Basic Facts

Breast cancer is one of the most frequently diagnosed carcinomas in women in the Western industrialized countries. In Germany alone, 46,000 new cases of breast cancer are registered each year. It is estimated that one in ten women develops a mamma carcinoma at one point of her life. Although medicine made great progress in the past ten years and the rate of early detection and healing is very high thanks to mammographies, regular gynecologic examinations and new operation techniques, the diagnosis «breast cancer» is still a great challenge for the physicians and a high psychological and physical burden for the women concerned.

Metabolites of the estrogen metabolism play a role in the development of breast cancer. Many tumors are so-called estrogen-dependent carcinomas where estrogen and progesterone receptors can be found in the tumor tissue. These types of cancer react to a therapy with so-called antiestrogens, the best known of which is tamoxifen. Tamoxifen is a synthetic, antisteroidal antiestrogen which inhibits the estrogen receptors in tumor tissue and thereby also cancer growth.

In 1997 it could be proven that also indole-3-carbinol is capable of stopping the growth of breast cancer by positively influencing the estrogen metabolism and, like tamoxifen, interrupting the cell cycle. For a much longer time even, indole-3-carbinol has also had great importance as an antioxidant in orthomolecular medicine.

Indole-3-carbinol became first known as early as in 1960 on account of its effect on carcinomas caused by chemical poisons (dioxin). Indole-3-carbinol controls the estrogen metabolism by the very receptor that makes it possible for dioxin to enter the cell. This receptor can only be activated by some poisons and, among others, also by indole-3-carbinol. The difference is that dioxin, after having attached itself to this receptor, causes cancer while indole-3-carbinol inhibits tumor growth.

## Effects

Indole-3-carbinol (I3C®) is a phytochemical substance (a glucosinolate) contained in vegetable of the family Cruciferae – predominantly in broccoli, white cabbage, Brussels sprouts and cauliflower. Indole-3-carbinol offers protection against hormone-dependent tumors by specifically intervening in the metabolism of the sexual hormone estradiol. In principle, there are two possibilities to break it down: the metabolites can either be either estriol or catechol estrogen. While a high estriol concentration increases the breast cancer risk after menopause, catechol estrogen hardly influences tumor growth. Studies have shown that indole-3-carbinol supports the formation of the more harmless catabolic product.

Several in-vitro and in-vivo studies have shown that indole-3-carbinol inhibits the growth of estrogen-receptor positive tumor cells by up to 90 percent. Even in estrogen-receptor negative mamma carcinomas the administration of indole-3-carbinol inhibited cell growth. Tamoxifen has no effect on this type of tumor. Here, the positive effect of indole-3-carbinol is probably due to its strong antioxidative effect. It could also be shown that indole-3-carbinol inhibits the growth of lung cancer in female smokers.

### At a Glance

**I3C®**

has the following established effects:

- induction of apoptosis (cell death of the cancer cells)
- protection against DNA destruction
- intensification of the effect of tamoxifen
- growth inhibition of the breast cancer cells
- strong antioxidative effect (protection of the immune system, cell protection)

I3C®

## Indications

Apart from its supportive role in the treatment of lung cancer – it being understood that indole-3-carbinol should only be taken after an accurate diagnosis by a doctor has been made – the preparation is also indicated in the following cases due to its strong antioxidative effect:

- irregular and one-sided nutrition
- strong smokers
- persons who are chronically ill and have to permanently take medicines
- before and after operations of malignant tumors
- elderly people with reduced functional capacity of their immune systems

## Composition

One capsule contains 200 mg indole-3-carbinol (I3C®) in pure pharmaceutical quality.

## Dosage

In normal cases take 1 to 2 capsules a day with plenty of fluid.

## Side Effects, Contraindications

Up to now no side effects have been reported after intake of indole-3-carbinol.

## Instructions

It is strictly recommended to consult a doctor before taking indole-3-carbinol. This is particularly applicable in cases of chronic disease, tumor-related diseases or during regular intake of medication. If you experience symptoms during the intake, you should consult a doctor and inform him/her of the intake.

### I3C® Product Groups

I3C® can be found in the following product groups (www.vitabasix.com):

**Immune System,**
**Cell Protection & Antioxidants**

Manufacturer:

VitaBasix®
by LHP Inc.
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**Important information:**

Our products are manufactured in accordance with the GMP (Good Manufacturing Practice) standard. Their quality, purity and concentration are regularly tested in independent test laboratories, in keeping with the FDA (Food and Drug Administration) guidelines.

Our products should be regarded as preventive measures or measures to enhance the individual's general wellbeing. Patients must consult a doctor before using the products for the treatment of diseases.

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