

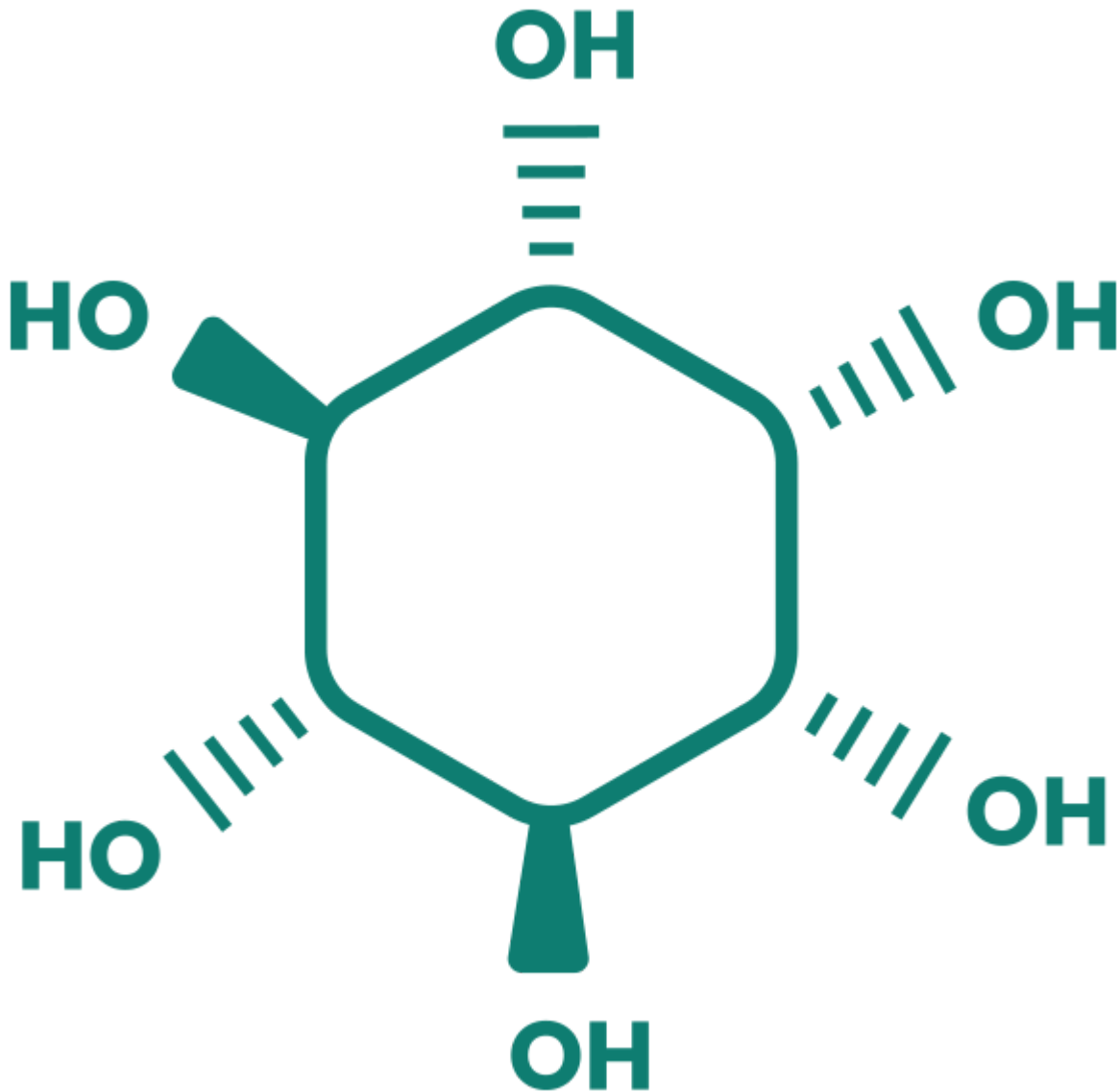
# Inositols: everything you need to know on myo-inositol and d-chiro-inositol

## What is inositol

Inositol is a **natural molecule** that is found in the phospholipids of cell membranes, in the lipoproteins of the plasma and, in the form of inositol-phosphates, in the nucleus of cells.

When we speak of inositol, we are actually talking about a group of **nine different stereoisomers**, so it **would be more correct to use the plural “Inositols”**. Among these, however, **the term inositol is generally used to refer to the most bioavailable type, myo-inositol**.





## Where to find it in nature

Inositol is widespread **in vegetables**: green beans, peas, asparagus and carrots are rich in it.

It is also found inside fruits, like pears, cherries, apples and tomatoes. Inositol is present in **oats, corn and cereals as a component of**

**lecithins.** In **animal tissues**, myo-inositol is mainly present in free form or as phosphatidylinositol (PI). Tissues as brain and muscles, are full of it. Huge amounts of myo-inositol can be present in the sperm, oocyte and embryo during the early stages of embryonic development.

## What are the benefits

Today, **myo-inositol** represent a **safe and effective therapy** applied in several disease and pathologies.

In PCOS, the administration of myo-inositol caused the remission of symptoms and the reduction of male hormone secretion; In case of **male infertility**, inositol has improved, according to reports from various studies, **motility and sperm count**, while **in women it improves the oocyte and embryonic quality**.

Furthermore, myo-inositol produces an increase in the sensitivity of the serotonin receptor, also known as the happy hormone, with **benefits on anxiety disorders**.

The benefits of inositol have also been investigated in relation to **diabetes** and **the prevention and treatment of metabolic syndrome**.



# But what difference is there between **Myo** and **D-chiro- inositol**?

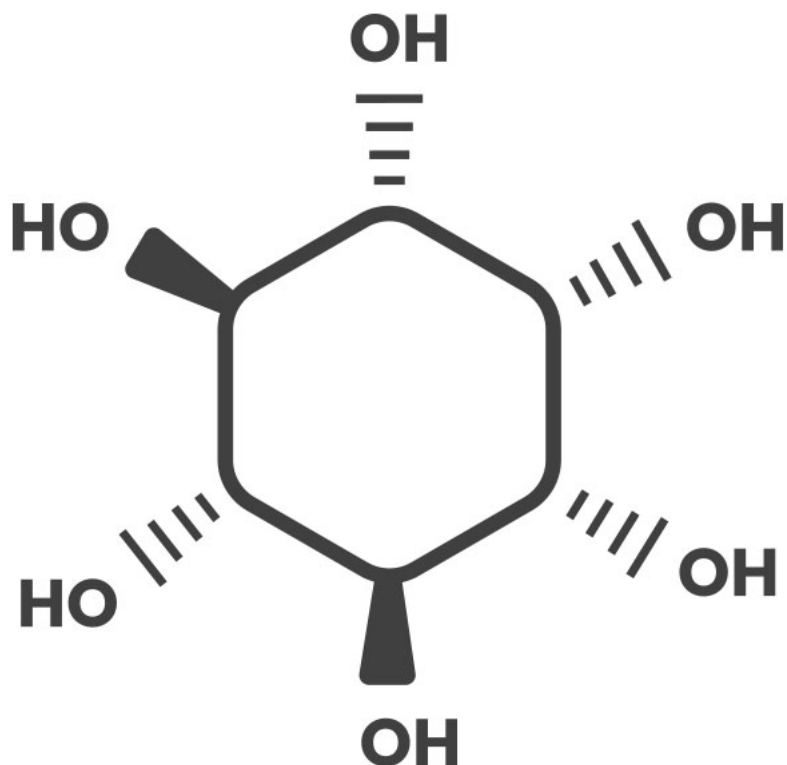
Close to **Myo-inositol** we can also find **D-chiro-inositol**. Both of them, in the form of inositolophosphoglycans, are “second messengers” of the insulin hormone.

However, even if their biological functions are often confused, it should be remembered that **myo** and **d-chiro** have different roles within the body.

## **Myo-inositol**

is involved in the **use of transporters**  
**and in the glucose's cellular absorption**





Myo is synthesized endogenously from glucose 6-phosphate and incorporated into cell membrane as phosphatidylinositol phosphate. In addition, it is converted into D-chiro-inositol by an enzyme, epimerase, which is insulin dependent.

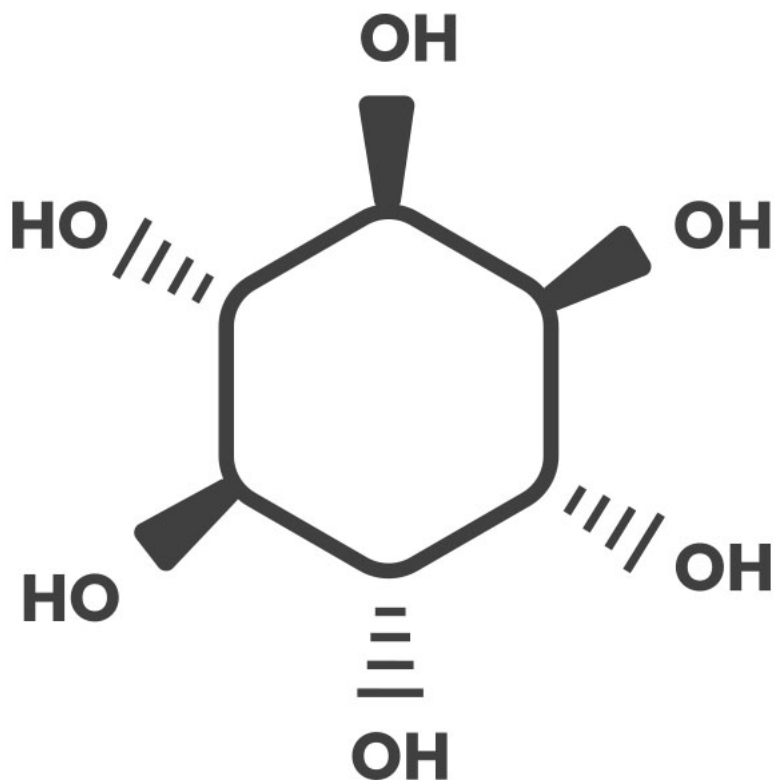
**Myo regulates the activity of several hormones such as insulin, thyroid hormone (TSH) and follicle stimulating hormone (FSH).**

[go to the article](#)

## D-chiro-inositol

it is **involved** in **glucose metabolism** and **storage** in the form of **glycogen**.





Overall, D-chiro-inositol is less abundant in nature than myo-inositol. It can be found in high concentrations into the tissues that store glycogen and who need to conserve energy: Basically adipose tissue and liver!

**D-chiro is involved in the synthesis of insulin-dependent androgens and acts as modulator of aromatase.**

[go to the article](#)

**Myo and D-chiro 40:1**  
**A question of science!**



Among the questions that most affect scientific debate on the inositols certainly there is the one related to: "Myo-inositol, D-chiro-inositol or both for PCOS?". It is necessary that the answer to this question comes from science and clinical evidence.

**Scientific studies have shown the benefits of the combined 40:1 formulation of MYO and DCI su:**

## **PCOS**

[Read the article](#)

## **Metabolism and obesity**

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## **Infertility and oocyte quality**

[Read the article](#)



# Learn More

**Myo-inositol**

**D-chiro-inositol**

**40:1**

**Alpha-lactalbumin**



# PCOS

# Overweight

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