**DUOLIFE** 

# D3 in Nigella Oil

Food supplement

**DUOLIFE D3 in Nigella Oil** is a food supplement **from the Pure Formula line** containing vitamin D3 suspended in Nigella oil in a concentrated dose, enclosed in the form of vegan "softgel" tapioca capsules.

Vitamin D helps maintain healthy bones and teeth and supports the proper functioning of the immune system. Vitamin D contributes to normal absorption/use of calcium and phosphorus. Vitamin D contributes to the maintenance of normal muscle function. The presence of the Nigella oil in the product, which is characterised by high content of unsaturated fatty acids, mainly from the omega-6 and omega-9 group, fosters optimal absorption of vitamin D3 from the capsule. Nigella oil comprises therefore a "biological background" for the active ingredient - vitamin D3.



Simple, targeted composition



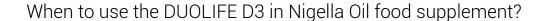
Product with comprehensible purpose



Convenient form of use



Naturally sourced ingredients



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## The DUOLIFE D3 in Nigella Oil food supplement is intented for use as a product supporting optimal body functioning in the case of:

- people wishing to support proper functioning of the immune system;
- those wishing to maintain normal function of the locomotor system;
- those wishing to support the optimal health of bones and teeth;
- those wishing to support the optimal functioning of muscles;
- people wishing to support proper blood coagulation processes;
- people wishing to support maintaining correct calcium and phosphorus levels in the body;
- people recovering from bone fractures or long-term immobilisation;
- active people that participate in sports;
- people who want to maintain a normal body weight;
- elderly people;
- people with inadequate sun exposure.

How does vitamin D3 found in the DUOLIFE D3 in Nigella oil food supplement work?

**DUOLIFE D3 in Nigella Oil** is a food supplement based on vitamin D3 suspended in Nigella oil. The presence of Nigella oil in the product promotes optimal absorption of vitamin D3 from the capsule. Nigella oil comprises

therefore a "biological background" for the active ingredient - vitamin D3.

#### Vitamin D3 found in **DUOLIFE D3 in Nigella Oil** supports:

- immune system functions;
- locomotor system functions, including muscles and bones;
- teeth, bones, joints and cartilage health;
- normal blood coagulation;
- optimal level of calcium and phosphorus in the body;
- calcium absorption;
- antioxidative processes;
- skin well-being;
- body weight reduction.
  - Instructions for use: Adults and children over 12 years of age: 1-2 capsules a day, with a meal. Children from 6 to 12 years of age: the use of the product is permitted after prior consultation with a physician. It is recommended to take 1 capsule a day, with a meal. Do not exceed the recommended daily dose. Food supplements should not be a substitute for a varied diet. A balanced diet and healthy lifestyle are essential for the proper functioning of the body.
  - It is beneficial to combine the DUOLIFE D3 in Nigella Oil food supplement with:

    DUOLIFE Vita C, DUOLIFE Vita C Powder, DUOLIFE Collagen, DUOLIFE Collagen Powder, ProSelect®, ProStik®, BorelissPro®, ProRelaxin®, ProImmuno®, ProBactilardii®, DUOLIFE RegenOil Liquid Gold®, FIZZY EASY Ca +D3 Complex, other products from the DUOLIFE Pure Formula line.

#### Precautions

- ▶ Do not use if you are hypersensitive to any of the ingredients of the product.
- ▶ Do not use the product in children under 6 years of age.
- ▶ Do not use in pregnant or breastfeeding women.
- ▶ If you have a chronic condition or are taking medication, consult your doctor before using the product.
  - Ingredients Contents per capsule: Cold pressed *Nigella sativa* seed oil 500 mg, Vitamin D3 (chole-calciferol) 25 μg (500% NRV\*). Coating ingredients: tapioca starch, humectant: glycerol; water.
    - \* NRV Nutrient Reference Value for an average adult.

## Discover the ingredients of the DUOLIFE D3 in Nigella Oil food supplement

#### Vitamin D3

**Vitamin D3 (cholecalciferol)**, also known as **"the sunshine vitamin"** is a compound belonging to fat-soluble vitamins. Unlike other vitamins, it can be synthesised by the body, albeit in limited amounts. Hence, this process depends on the time of exposure to solar radiation and occurs mainly in the skin, so vitamin D3 level in the body may depend on the lifestyle and the geographical residence, air pollution, season of the year, time of the day or skin complexion. Regular exposure to sunlight is necessary to ensure the appropriate level of vitamin D3 in the body. When access to solar radiation is limited, it is recommended to supplement the vitamin in a diet. Vitamin D3 shows a wide range of effects on the human body.

The basic function of vitamin D3 in the body is the **maintenance of appropriate absorption and use of calcium and phosphorus in the body**. The proper concentration of cholecalciferol boosts calcium absorption in bones and teeth. Vitamin D3 deficiency may lead to **bone demineralisation** which might decrease their strength and density, thus leading to increased frequency of fractures<sup>1-3</sup>. Muscle weakening can also be linked to vitamin D3 deficiency. There is evidence that supplementing vitamin D3 **may boost protein synthesis and increase the growth and size of muscle fibres**<sup>3,4</sup>.

Multiple studies have proven that vitamin D3 helps in normal functioning of the immune system. Due to the

presence of vitamin D3 receptors in the T cells - the immune cells, vitamin D3 plays a significant role in the body's innate immune response, thus minimising inflammatory processes which helps protect tissues against damage. Vitamin D3 also stimulates monocyte differentiation and their transformation into mature macrophages that participate in the liquidation of pathogens<sup>5,6</sup>.

A link between vitamin D3 levels and disrupted functioning of the **cardiovascular system** was also shown. It has been reported that vitamin D deficiency increases the risk of disorders affecting the cardiovascular system and may have an impact on maintaining optimal blood pressure<sup>7</sup>.

It has also been proven that low D3 concentration usually occurs in people with high adipose tissue content and higher Body Mass Index. Research states that **increasing the concentration of vitamin D3 in the body fosters the reduction of adipose tissue**<sup>8-10</sup>. Vitamin D3 deficiency may also lead to impaired insulin synthesis and secretion, thus leading to disordered glucose metabolism<sup>11</sup>.

Vitamin D3 also plays a significant role in the functioning of the nervous system, **fosters the protection of neu-rons and other brain cells**. Its deficiency may contribute to decreased cognitive function and lowered mood in the elderly<sup>12,13</sup>.

The DUOLIFE D3 in Nigella Oil food supplement also contains oil from seeds of nigella sativa, which synergistically supports the action of the active ingredient – vitamin D3. The presence of the Nigella oil is a particularly important distinguishing feature, as the oil itself comprises a key ingredient with properties that support body functioning. It is one of the most valuable vegetable oils.

### Nigella oil

**Nigella oil** is obtained from the seeds of nigella (*Nigella sativa*) seeds, which is native mainly to Eastern Europe and the western part of Asia. The properties of the Nigella oil have been known since the ancient Egypt, where it's been called the **"Pharaoh's gold"**.

The composition of the Nigella oil includes mainly essential unsaturated fatty acids (EFA). Among them, we can distinguish around 60% content of linoleic acid (omega-6) and about 25% of oleic acid (omega-9) and about 1% of alpha-linolenic acid (omega-3). Moreover, we can distinguish vitamin E, biotin, beta-carotene, mineral salts: iron, calcium, potassium, phosphorus, copper, antioxidants, sterols, and active compounds, namely thymoquinone, thymohydroquinone, p-Cymene, carvacrol, thymol<sup>14</sup>.

Nigella oil shows numerous valuable properties proven in multiple scientific reports. It has been proven that Nigella oil **supports antioxidative processes in the body**, by slowing the emergence of oxygen free radicals and **fostering cell protection** against their harmful impact<sup>15</sup>. In consequence, it may favour optimal functioning of the cardiovascular system, help maintain correct blood pressure, regulate blood cholesterol and glucose levels<sup>16</sup>. It has been proven that oil contributes also to support the proper function of the nervous system and the protection of neurons against the destructive effects of oxidative stress<sup>17</sup>.

Nigella oil has **immunomodulatory properties and contributes to the minimisation of inflammations in the body**. It supports the functioning of the immune system and helps ease allergy symptoms<sup>18,19</sup>.

Nigella oil also contributes to the optimal functioning of the digestive tract, **supports liver function, and has protective properties on the gastric and duodenal mucosa**<sup>20</sup>.

## What makes the DUOLIFE D3 in Nigella Oil so special?

- Simple, targeted composition based on the main active ingredient with known properties and concentrated dose.
- Additional important ingredient an extraordinarily valuable black seed oil as the "biological background" for vitamin D3.
- ▶ **Product with comprehensible purpose** featuring health statements on the label, which makes it easier to recommend the product.
- ▶ **Guarantee** of the declared active ingredients content.
- Naturally sourced ingredients.
- No artificial fillers, preservatives or unnecessary additives.
- Innovative formulation of a "softgel" capsule; the capsule contains tapioca starch, which makes it both naturally sourced and vegan.
- ▶ **Convenient form of use** a soft capsule containing vitamin D3 suspended in nigella oil that ensures optimal vitamin D3 absorption.

- ▶ Uniformity of the PURE FORMULA line easy recommendation 1 packaging contains 60 capsules for 1 month of use (1-2 capsules a day).
- The supplement can be easily adjusted to the individual needs of the body.
- ▶ The product is **LACTOSE-FREE** and **GMO-free**.
- ▶ The product is **GLUTEN-FREE** suitable for people with gluten intolerance.
- ► The product is suitable for vegans and vegetarians thanks to the vegan ingredients used both vitamin D3 and the capsule shell made of tapioca starch.
- Multilingual label.
- 1 Reference list for DUOLIFE D3 in Nigella oil formulation can be found in the separate sheet of the binder.

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#### References

- 1. Lips P. (2001). Vitamin D deficiency and secondary hyperparathyroidism in the elderly: consequences for bone loss and fractures and therapeutic implications. *Endocrine reviews*, 22(4), 477–501.
- 2. Holick M. F. (2004). Sunlight and vitamin D for bone health and prevention of autoimmune diseases, cancers, and cardiovascular disease. *The American journal of clinical nutrition*, 80(6 Suppl), 1678S–88S.
- 3. Laird, E., Ward, M., McSorley, E., Strain, J. J., & Wallace, J. (2010). Vitamin D and bone health: potential mechanisms. *Nutrients*, *2*(7), 693–724.
- 4. Bischoff-Ferrari, H. A., Dietrich, T., Orav, E. J., Hu, F. B., Zhang, Y., Karlson, E. W., & Dawson-Hughes, B. (2004). Higher 25-hydroxyvitamin D concentrations are associated with better lower-extremity function in both active and inactive persons aged > or =60 y. *The American journal of clinical nutrition, 80*(3), 752–758.
- 5. Baeke, F., Takiishi, T., Korf, H., Gysemans, C., & Mathieu, C. (2010). Vitamin D: modulator of the immune system. *Current opinion in pharmacology, 10*(4), 482–496.
- 6. Aranow C. (2011). Vitamin D and the immune system. *Journal of investigative medicine*: the official publication of the American Federation for Clinical Research, 59(6), 881–886.
- 7. Judd, S., & Tangpricha, V. (2008). Vitamin D deficiency and risk for cardiovascular disease. Circulation, 117(4), 50.
- 8. Saliba, W., Barnett-Griness, O., & Rennert, G. (2013). The relationship between obesity and the increase in serum 25(OH) D levels in response to vitamin D supplementation. Osteoporosis international: a journal established as result of cooperation between the European Foundation for Osteoporosis and the National Osteoporosis Foundation of the USA, 24(4), 1447–1454.
- 9. Majorczyk, M., Baran, M., Jaworek, J., Rola witaminy D w rozwoju i przebiegu otyłości, *Pielęgniarstwo Polskie, NR 1 (59)* 2016, s. 91-97.
- 10. Salehpour, A., Hosseinpanah, F., Shidfar, F., Vafa, M., Razaghi, M., Dehghani, S., Hoshiarrad, A., & Gohari, M. (2012). A 12-week double-blind randomized clinical trial of vitamin D supplementation on body fat mass in healthy overweight and obese women. *Nutrition journal*, 11, 78.
- 11. Mathieu, C., Gysemans, C., Giulietti, A., & Bouillon, R. (2005). Vitamin D and diabetes. Diabetologia, 48(7), 1247-1257.
- 12. Annweiler, C., Dursun, E., Féron, F., Gezen-Ak, D., Kalueff, A. V., Littlejohns, T., Llewellyn, D. J., Millet, P., Scott, T., Tucker, K. L., Yilmazer, S., & Beauchet, O. (2015). ,Vitamin D and cognition in older adults': updated international recommendations. *Journal of internal medicine*, 277(1), 45–57.
- 13. Barnard, K., & Colón-Emeric, C. (2010). Extraskeletal effects of vitamin D in older adults: cardiovascular disease, mortality, mood, and cognition. *The American journal of geriatric pharmacotherapy*, 8(1), 4–33.
- 14. Magdalena Borusiewicz, Zbigniew Janeczko. Nigella sativa L. roślinny surowiec o właściwościach plejotropowych. Post Fitoter 2015; (16)4: 223-236.
- 15. Burits, M., & Bucar, F. (2000). Antioxidant activity of Nigella sativa essential oil. *Phytotherapy research*: *PTR*, 14(5), 323–328.
- 16. Shafiq, H., Ahmad, A., Masud, T., & Kaleem, M. (2014). Cardio-protective and anti-cancer therapeutic potential of Nigella sativa. *Iranian journal of basic medical sciences*, *17*(12), 967–979.
- 17. Samarghandian, S., Farkhondeh, T., & Samini, F. (2018). A Review on Possible Therapeutic Effect of Nigella sativa and Thymoquinone in Neurodegenerative Diseases. CNS & neurological disorders drug targets, 17(6), 412–420.
- 18. Majdalawieh, A. F., & Fayyad, M. W. (2015). Immunomodulatory and anti-inflammatory action of Nigella sativa and thymoquinone: A comprehensive review. *International immunopharmacology, 28*(1), 295–304.
- 19. Shaterzadeh-Yazdi, H., Noorbakhsh, M. F., Hayati, F., Samarghandian, S., & Farkhondeh, T. (2018). Immunomodulatory and Anti-inflammatory Effects of Thymoquinone. *Cardiovascular & hematological disorders drug targets*, *18*(1), 52–60.
- 20. Magdy, M. A., Hanan, el-A., & Nabila, el-M. (2012). Thymoquinone: Novel gastroprotective mechanisms. *European journal of pharmacology*, 697(1-3), 126–131.