



## Each stage of being a mother is different

From preconception through to the first years of life, the nutritional needs of mothers and babies are constantly changing. But what are the challenges moms face at each stage, and what role do maternal nutrition solutions containing DHA play in meeting these needs?



#### **Preconception**

Women trying to conceive should ensure adequate intake of vitamins, minerals and nutritional lipids to help prepare the body for conception and a healthy pregnancy. Important steps in infant development take place during the first few weeks of pregnancy – such as closure of the neural tube – when most women do not yet know they are pregnant. DHA has been shown to play an essential role in these early developmental stages.<sup>5</sup> Results from recent a time-to-conceive cohort study also showed that women taking omega-3 supplements were 1.5 times more likely to conceive than women not taking omega-3s.<sup>6</sup> Other studies have shown that women with low DHA status in early pregnancy are at increased risk of giving birth preterm.<sup>7,8,9</sup> It is therefore recommended that women trying to conceive prepare their bodies with prenatal supplements featuring at least 200mg DHA.



#### **Pregnancy**

Good nutrition can help reduce the risk of pregnancy complications and adverse birth outcomes. Eating a diet rich in colorful fruits and vegetables, protein, healthy fats, vitamins, minerals and other phytonutrients can help, but as DHA is mainly found in seafood even a nutrient-dense diet does not always ensure an adequate nutritional intake. In fact, 96% of the global population fall below the optimal range, even with adequate knowledge of the health benefits and food sources of omega-3s.<sup>10</sup> Prenatal supplements can therefore help to fill these nutrient gaps. Supplementation with DHA specifically may reduce the risk of premature birth, especially among women with low omega 3 fatty acid status.<sup>11</sup>



#### **Babies and nursing**

Maternal nutrition is just as critical during nursing as it is throughout the pregnancy. Breast milk is the healthiest option for both mothers and babies, as it contains antibodies that protect infants against disease as well as encouraging better post-delivery healing for the mother. Because food intake has to meet the needs of both the mother and baby, dietary requirements for many micro- and macronutrients are increased. Although it is important to be eating enough nutrient-rich foods to promote healthy recovery and optimal infant growth, supplements can help mothers meet these elevated nutritional goals during their nursing journey. The mother's diet can also impact the nutrient levels of her breastmilk. Supplementation with DHA can address this by improving the DHA content of breastmilk.

# Tailoring nutritional solutions to meet maternal nutrition needs

Pregnancy and motherhood is an exciting, life-changing journey, but there are a number of considerations for moms looking to give their babies the best start in life. Algal-sourced omega-3s − like DSM's life'sDHA® ingredient and life's™OMEGA portfolio − offer a number of clinically-supported benefits that can help give moms peace of mind and shape a healthy future for their babies.



#### Reducing risk of preterm birth

More than 1 million children globally die each year due to problems associated with prematurity, making preterm birth the leading cause of death in children under five.<sup>12</sup> Preventing premature birth can help babies lead longer, healthier lives, and DHA has an important role to play in making this a reality. **Taking at least 500mg DHA daily during pregnancy has been shown to reduce the risk of preterm birth by up to 42%.**<sup>13,14</sup> DHA supplementation during pregnancy also reduces the likelihood of a baby having a low birthweight by 10%, demonstrating the exciting potential DHA can offer expectant mothers and their babies.<sup>15</sup>

#### Supporting infant cognitive development

**DHA is the main omega-3 fatty acid in the brain, representing 97% of total omega-3 fats present.**<sup>16</sup> Studies suggest that DHA has a positive impact on a child's brain development, including mental adaptability and problem solving, as well as attention and information processing.<sup>17,18,19,20</sup> It is also recognized as an important nutrient for overall brain health throughout life, supporting almost every area of brain function as a child grows.





#### Optimizing maternal mental health

Increasing evidence suggests that **lower levels of omega-3 in the plasma is linked to poorer mental health**, including those related to mood.<sup>21</sup> This theory is further supported by research showing that omega-3 supplementation helped women maintain a healthy mood after giving birth.<sup>22</sup> Additionally, supplementation with omega-3s has also been shown in some instances to help support and maintain a healthy, balanced mood during pregnancy.<sup>23</sup>

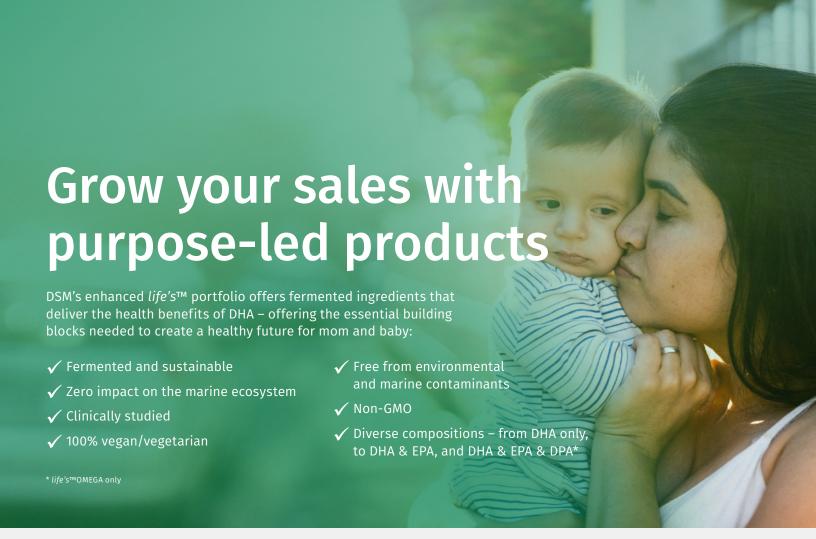
## Dive into sustainable omega-3 innovation

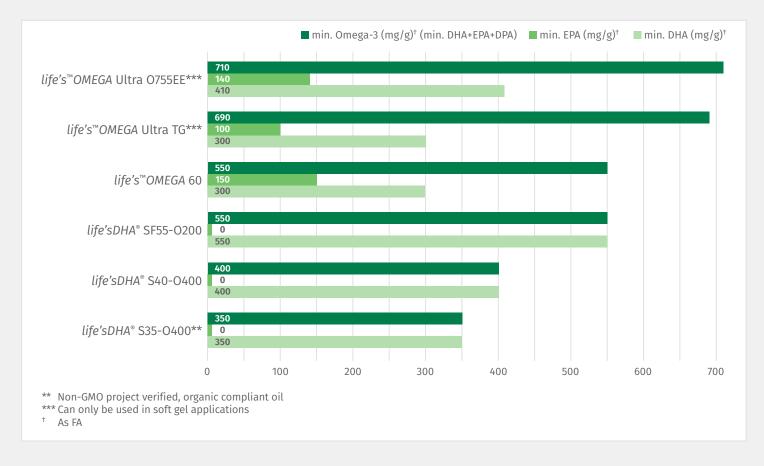
One third of ocean fisheries are currently overfished, and two thirds are fished to their maximum sustainable yield.

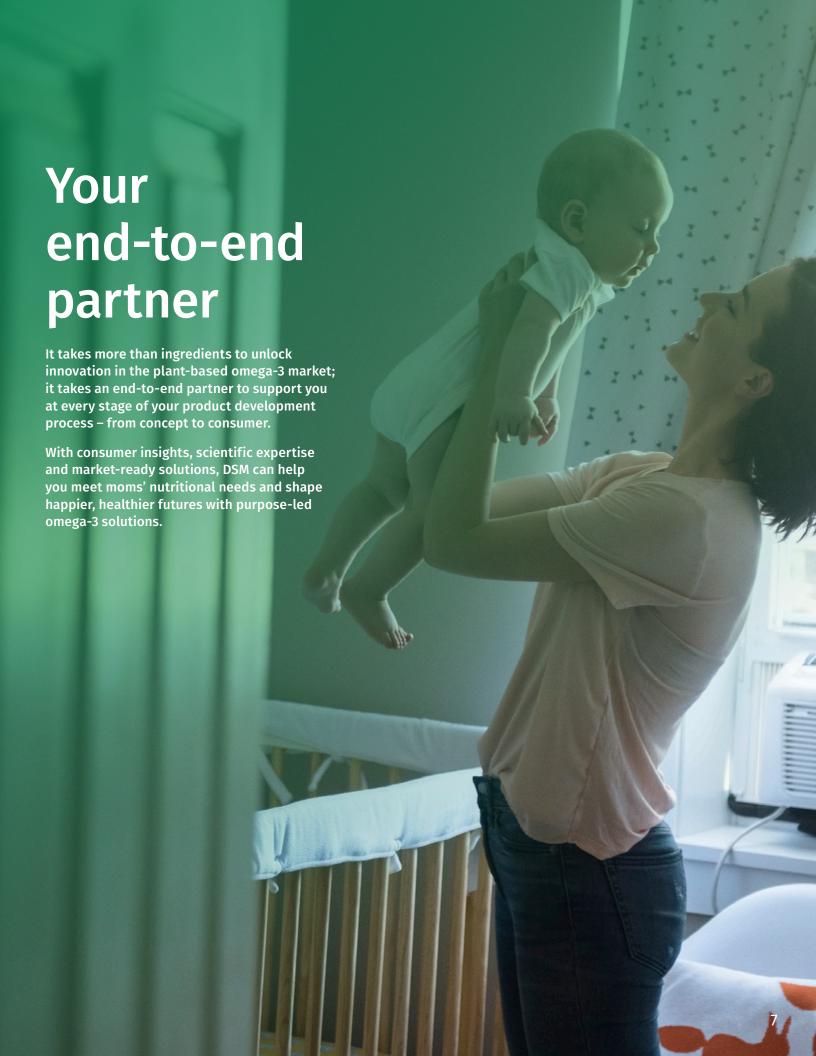
A rapidly growing global population, in combination with climate change and environmental shifts, is putting immense strain on our wild fisheries. Alternative omega-3 sources, such as algal oils, are subsequently a top priority for brands looking to innovate sustainably and help increasingly environmentally-conscious moms enjoy the diverse health benefits of omega-3s, without impacting the marine ecosystem.

#### Sustainably cultivated for a growing world

As the demand for omega-3 fatty acids grows, so too will the demand for sustainable sources. DSM's enhanced *life's™* portfolio, including *life'sDHA®* and *life's™OMEGA*, is sourced with scalability in mind, fulfilling moms' nutritional needs while positively impacting the global environment. Other algae products are often grown in ponds located on arid land, exposing the algae to potential contaminants in the open air, water and ground. But *life'sDHA®* and *life's™OMEGA* are fermented from natural, non-GMO algae in a proprietary indoor process – 100% independent of the delicate marine environment.







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At DSM, we pride ourselves on collaborating with customers who want to innovate the best products on the market, **because where others** see products, we see purpose.

### Partner with DSM to develop sustainable, science-backed maternal nutrition products.

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