The clinical benefits of Elevit throughout preconception, pregnancy and lactation

Based on: *Clinical Benefits and Safety of Multiple Micronutrient Supplementation During Preconception, Pregnancy, and Lactation: A Review.*

By **Liu et al, *Nutrition Review* 2025**

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Elevit: The most clinically studied prenatal MMS brand providing comprehensive nutrition throughout the pregnancy journey

Introduction

The first 1000 days of life, encompassing preconception, pregnancy and early childhood, are critical for setting the foundation for lifelong health. During this period, maternal nutrition is paramount, and the evidence supporting the benefits of multiple micronutrient supplementation (MMS) is compelling.

Throughout pregnancy, a woman's nutritional needs change significantly to support fetal development and maternal health. Despite this, many women struggle to meet these increased nutritional demands, even in industrialised countries. This gap in nutrition can have profound effects on both the mother and the developing child, underscoring the importance of comprehensive supplementation.

Despite the known importance of micronutrients for fetal and maternal health, current guidelines primarily recommend folic acid and iron, often only until the end of the first trimester. The recent study, *Clinical benefits and safety of multiple micronutrient supplementation during preconception, pregnancy and lactation: a review*, evaluated the clinical benefits and safety of Elevit throughout preconception, pregnancy and lactation. This study consolidated data from the Elevit clinical studies and publications to provide a comprehensive overview of its benefits.

With 22 clinical studies over 30 years from 1992 to 2023, conducted in many countries worldwide and supported by 30 publications, Elevit is the most studied prenatal MMS brand.

The formulations of Elevit Pre-conception, Elevit Pregnancy and Elevit Breastfeeding vary across different countries to meet local regulations and healthcare guidelines.

Abbreviations: MMS, multiple micronutrient supplement.

References: Liu J *et al.* Clinical benefits and safety of multiple micronutrient supplementation during preconception, pregnancy and lactation: a review. *Nutr Rev* 2025.

Micronutrient inadequacies are common among women of reproductive age, even in high-income countries

69% of women of reproductive age worldwide have deficient levels of iron, zinc and/or folate[1]

Women following vegetarian or vegan diets are at increased risk of deficiencies in key micronutrients[2,3]

Toxic chemicals may be ingested through, for example, air pollution, alcohol and from smoking, and impair the absorption and metabolism of micronutrients[4]

Vitamin D deficiency is common in women of reproductive age, especially those with darker skin, limited sun exposure and high sunscreen use[5]

Micronutrient	Deficiency impact
Vitamin A	Can cause blindness in baby (if deficient in breastmilk)[6]
Folate (B9)	Increased levels of homocysteine, higher risk of NTDs, miscarriage, pre-eclampsia, preterm birth and poor fetal growth[7-9]
Vitamin B12	Increased risk of anaemia[10]
Vitamin C	Decreased protection from oxidative damage that can contribute to first-trimester miscarriage[11]
Vitamin D	Can cause rickets in baby (if deficient in breastmilk)[6]
Vitamin E	Decreased protection from oxidative damage that can contribute to first-trimester miscarriage[11]
Iron	Increased risk of anaemia[10]
Omega-3 fatty acids	Adversely affects mental processing and can lead to postnatal depression[12]
Zinc	Impaired ovulation and function, reduced regulation of oxidative stress[13]

References: 1. Stevens GA *et al. Lancet Glob Health* 2022;10(11):e1590–e1599. **2.** Salvaleda-Mateu M *et al. Nutrients* 2024;16:1726. **3.** Sebastiani G *et al. Nutrients* 2019;11:557. **4.** Arun M *et al. Best Pract Res Clin Obstetr Gynaecol* 2023;89:102351. **5.** El-Mallah C *et al. Nutrients* 2025;17:804. **6.** Savarino G *et al. Ital J Pediatr* 2021;47:109. **7.** Forges T *et al. Hum Reprod Update* 2007;13:225–238. **8.** Thakur P *et al. Cureus* 2023;15:e35244. **9.** Balashova OA *et al. Dev Neurobiol* 2018;78:391–402. **10.** Garzon S *et al. Oman Med J* 2020;35:e166. **11.** Joó JG *et al. Curr Issues Mol Biol* 2023;45:8091–8111. **12.** Zielińska M *et al. Nutrients* 2023;15:2433. **13.** Grzeszczak K *et al. Biomolecules* 2020;10:1176.

Preconception

Elevit delivers science-backed benefits throughout the preconception period to support a healthy pregnancy

Preconception

KEY BENEFITS FOR MOTHER

- **Supports fertility**[1]
  - Increases chance of conception[2] and shortens time to conception[2]
  - Reduces incidence of miscarriage[3]
- **Improves IVF outcomes**
  - Increases oocyte quality[4] and reduces incidence of miscarriage[5]
- **Helps meet the enhanced nutritional needs of pregnancy**

KEY BENEFITS FOR BABY

- **Supports a healthier environment for conception**
  - Creates optimal conditions for embryo development from the very start
- **Reduces risk of NTDs – up to 92%**[6,7]

Elevit achieves these benefits by:

Rapidly achieving protective levels of folate (>906 nmol/L) within 4 weeks[8,9]

MMS containing 800 µg folic acid is more effective than supplementing with 400 µg folic acid alone

Reducing homocysteine levels

Hyper-homocysteinaemia is associated with increased placental complications, recurrent miscarriage, preterm birth and pre-eclampsia. Reducing homocysteine levels also supports better oocyte quality and reduces inflammation, improving fertilisation outcomes[9-13]

Optimising micronutrient status (folate, vitamins B2, B6, B12 and D, and minerals Fe, Cu, Zn, Se and Mn) and correcting any nutritional gaps[10,14-23]

Normalising levels of trace elements in blood and follicular fluid[21,22,24]

Reducing oxidative stress and enhancing antioxidant status (vitamins A, C, E and glutathione)[4,21,22,24]

Improving the follicular environment[4,10,16-20,24]

The formulation of Elevit Pre-conception varies across different countries to meet local regulations and healthcare guidelines.

References: 1. Schaefer E, Nock D. *Clin Med Insights: Women's Health* 2019;12:1-6. **2.** Czeizel A *et al. Int J Vitam Nutr Res* 1996;66:55-58. **3.** Pasman NM *et al. Gynaecology* 2005;15:3730. **4.** Luddi A *et al. Reprod Biol Endocrinol* 2016;14:57. **5.** Ogawa S *et al. Nutrients* 2023;15:3730 **6.** Czeizel AE. *Int J Med Sci* 2004;1(1):50-61. **7.** Czeizel AE. *Acta Paediatr Hung* 1994;34:19–44. **8.** Obeid R *et al. Mol Nutr Food Res* 2018;62(4). **9.** Wang Y *et al. J Reprod Med* 2017;26(12). **10.** Forges T *et al. Hum Reprod Update* 2007;13:225-238. **11.** Kuroda K *et al. Nutrients* 2021;13:1381. **12.** Schaefer E. *J Nutr Disorders Ther* 2016;06:199. **13.** Brämswig S *et al. Int J Vitam Nutr Res* 2009;79:61-70. **14.** EFSA. Dietary Reference Values for the EU: DRV Finder. 2019.Available at: https://www.efsa.europa.eu/en/interactive-pages/drvs. Last accessed Aug 2024. **15.** Institute of Medicine. Dietary reference intakes for calcium and vitamin D. 2011. **16.** Berry S *et al. J Reprod Immunol* 2022;151:103633. **17.** Kapper C *et al. Nutrients* 2024;16(7):1008. **18.** Grzeszczak K *et al. Biomolecules* 2020;10(8). **19.** Meng X *et al. Reprod Biol Endocrinol* 2023;21(1):17. **20.** Fleming TP *et al. Lancet* 2018;391(10132):1842-1852. **21.** Özkaya MO *et al. Biol Trace Elem Res* 2011;139(1):1-9. **22.** Sun N-X *et al. J Development Med* 2013;1(2):74-77. **23.** Pilz S *et al. Nutrients* 2017;9:Pii:E30. **24.** Özkaya MO, Nazıroğlu M. *Fertil Steril* 2010;94:2465-2466.

Early pregnancy/ first trimester

Elevit delivers science-backed benefits during early pregnancy

Early pregnancy (first trimester)

elevit

KEY BENEFITS FOR MOTHER

- **Supports maternal wellbeing**
  - Elevit helps alleviate nausea and vomiting, likely due to the combined effect of essential micronutrients[1,2]
- **Reduces risk of anaemia**[3-8]
  - Which is associated with fatigue and increased pregnancy risks
- **Lowers risk of miscarriages, preterm births and pre-eclampsia**[3,9]
  - Has been shown to increase term birth and preterm birth in women with a history of miscarriage

KEY BENEFITS FOR BABY

- **Supports early organ development**[10-15]
- **Reduces risk of NTDs**
  - Offering superior protection compared to folic acid alone[16-19]
- **Reduces risk of multiple birth defects**
  - Including urinary and cardiovascular congenital abnormalities, congenital pyloric stenosis[6,16,18]

Elevit achieves these benefits by:

- **Maintaining sufficient micronutrient levels**[20-25]
- **Increasing antioxidant levels and reducing homocysteine levels**[9]
- **Rapidly achieving protective levels of folate (>906 nmol/L) within 4 weeks**[26]

The formulation of Elevit Pre-conception varies across different countries to meet local regulations and healthcare guidelines.

References: 1. Linus Pauling Institute. Micronutrient Needs During Pregnancy and Lactation. 2024. Available at: https://lpi.oregonstate.edu/mic/life-stages/pregnancy-lactation. Last accessed 5 Aug 2024. **2.** Czeizel AE *et al. Arch Gynecol Obstet* 1992;251(4):181-185. **3.** Mozgovaya E *et al. Obstet Gynecol (Moscow)* 2011;4:89-94. **4.** Garzon S *et al. Oman Med J* 2020;35(5):e166. **5.** Khodova SI *et al. Consilium Medicum* 2006;6:20-23. **6.** Pasman NM *et al. Gynaecology* 2005;15:3730. **7.** Lin S *et al. Chinese J Pract Gynaecol Obstet* 2020;36:177-181. **8.** Kurmacheva NA *et al. Gynecology* 2018;20:19-25. **9.** Thakur P, Bhalerao A. *Cureus* 2023;15(2):e35244. **10.** Forges T *et al. Hum Reprod Update* 2007;13:225-238. **11.** Berry S *et al. J Reprod Immunol* 2022;151:103633. **12.** Kapper C *et al. Nutrients* 2024;16(7):1008. **13.** Grzeszczak K *et al. Biomolecules* 2020;10(8). **14.** Meng X *et al. Reprod Biol Endocrinol* 2023;21(1):17. **15.** Fleming TP *et al. Lancet* 2018;391(10132):1842-1852. **16.** Czeizel AE. *Acta Paediatr Hung* 1994;34(1-4):19-44. **17.** Czeizel AE *et al. Birth Defects Res A Clin Mol Teratol* 2004;70:853-861. **18.** Czeizel AE. *Int J Med Sci* 2004;1(1):50-61. **19.** Sun Y *et al. Matern Child Health Care China* 2013;28:1199-1203. **20.** EFSA. Dietary Reference Values for the EU: DRV Finder. 2019.Available at: https://www.efsa.europa.eu/en/interactive-pages/drvs. Last accessed Aug 2024. **21.** Institute of Medicine. Dietary reference intakes for calcium and vitamin D. 2011. **22.** Medicine FWGoGCPiMF. *Int J Gynecol Obstet* 2019;144:317-321. **23.** Abraha I *et al. J Evid Based Med* 2019;12(2):155-166. **24.** Good clinical practice advice: Iron deficiency anemia in pregnancy. *Int J Gynaecol Obstet* 2019;144:322-324. **25.** Schaefer E. *J Nutr Disorders Ther* 2016;6(4):199. **26.** Wang Y *et al. J Reprod Med* 2017;26:1196-1206.

Second & third trimesters

Elevit delivers science-backed benefits during the later stages of pregnancy

Second and third trimesters

elevit

KEY BENEFITS FOR MOTHER

- **Comprehensive support reduces the risk of maternal complications**
  - Helps ensure the pregnancy progresses safely[1]
  - Reduces the risk of anaemia, pre-eclampsia and placental insufficiency[2-7]
  - Reduces risk of preterm deliveries[1,5,8,9]

KEY BENEFITS FOR BABY

- **Supports normal fetal growth and brain development**
  - Provides essential nutrients that are critical for the baby's brain development, cognitive function and healthy bone formation[10-12]
- **Increases likelihood of full-term birth**[1,7,8,13]
  - Reaching full term is critical for organ development, immune function and long-term health

Elevit achieves these benefits by:

- **Maintaining good levels of micronutrients** (folic acid, vitamins A, C, D, E, B1, B2, Ca, Cu, Fe, Mg and Zn) **to continue to meet the increased micronutrient needs during pregnancy**[7,12,14]
- **Maintaining optimal levels of omega-3 fatty acids and vitamin D in maternal blood** needed for healthy fetal brain development[10-12]

The formulation of Elevit Pregnancy varies across different countries to meet local regulations and healthcare guidelines.

References: 1. Arzhanova ON *et al. Gynecol J* 2009;5:53–55. **2.** Garzon S *et al. Oman Med J* 2020;35(5):e166. **3.** Mozgovaya E *et al. Obstet Gynecol (Moscow)* 2011;4:89–94. **4.** Vanderlelie J *et al. Matern Child Nutr* 2016;12(2):339–348. **5.** Lin S *et al. Chinese J Pract Gynaecol Obstet* 2020;36(02):177–181. **6.** Wardinger JE, Ambati S. Placental Insufficiency. *StatPearls [Internet].* Treasure Island (FL): StatPearls Publishing; 2024. **7.** Kurmacheva NA *et al. Gynecology* 2018;20:19–25. **8.** Best KP *et al. Prostaglandins Leukot Essent Fatty Acids* 2022;186:102495. **9.** Mozgovaya E *et al. Obstet Gynecol (Moscow)* 2011;4:89–94. **10.** Rees A *et al. PLoS One* 2019;14(2):e0210984. **11.** Darnell D, Gilbert SF. *Wiley Interdiscip Rev Dev Biol* 2017;6(1). **12.** Massari M *et al. Nutrients* 2020;12(8). **13.** Cetin I *et al. Am J Obstet Gynecol MFM* 2024;6(2):101251. **14.** Khodova SI *et al. Consilium Medicum* 2006;6:20–23.

Lactation

Elevit supports maternal wellbeing and baby's developmental outcomes during lactation

Lactation

KEY BENEFITS FOR MOTHER

- **Supports the mother's nutritional requirements while meeting the enhanced nutritional demands associated with breastfeeding**[1]
  - Exclusive breastfeeding is the recommended feeding method for the first 6 months of an infant's life. The increased need for micronutrients continues into the lactation period
- **Supports emotional wellbeing and reduces postpartum depression**[2-6]
  - Insufficient levels of micronutrients, particularly the B vitamins, vitamin D and some trace minerals, are implicated in the aetiology of postpartum depression

KEY BENEFITS FOR BABY

- **Enhances breastmilk quality**
  - Good quality breastmilk provides the infant with the nutrients needed for healthy growth and neurodevelopment during this crucial early life stage
- **Supports neonatal growth and brain development**
  - DHA continues to accumulate in the infant brain for up to 2 years, so a constant maternal intake is essential for infant's brain development and cognitive function[1,7]

Elevit achieves these benefits by:

- **Normalising maternal micronutrient levels, particularly the B vitamins, vitamin D and some trace minerals**
- **Increasing levels of omega-3 fatty acids, vitamins and minerals in breastmilk**
- **Increasing levels of lutein, a carotenoid that preferentially accumulates in the infant brain and supports retinal function**

The formulation of Elevit Breastfeeding varies across different countries to meet local regulations and healthcare guidelines.

References: 1. Schaefer E *et al. Nutrients* 2020;12(12). **2.** Ellsworth-Bowers ER, Corwin EJ. *Nutr Res Rev* 2012;25(1):180-192. **3.** Roddy Mitchell A *et al. JAMA Psychiatry* 2023;80:425-431. **4.** Robinson M *et al. Arch Womens Ment Health* 2014;17:213-219. **5.** Kang SY *et al. J Psychiatr Res* 2020;122:88-96. **6.** Paoletti AM *et al. Gynecol Endocrinol* 2013;29(8):779-783. **7.** Massari M *et al. Nutrients* 2020;12(8).

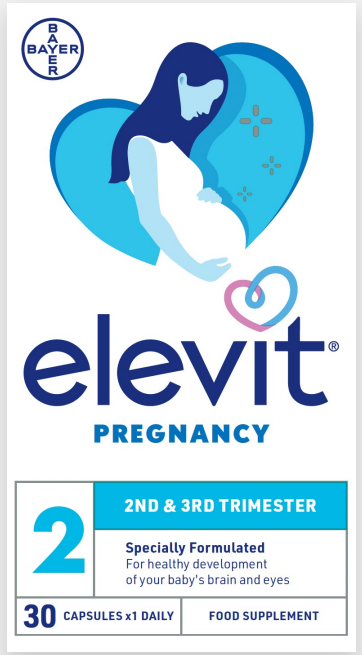
Safety

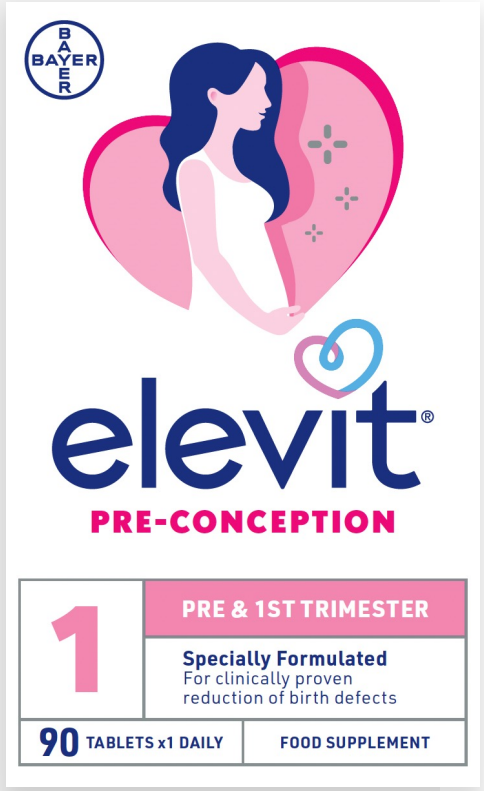
Elevit has a good safety and tolerability profile

Safety and tolerability

This review included 10 studies that reported on adverse outcomes:

- Among women included in these studies (n=1263), Elevit during preconception and throughout pregnancy was found to be well tolerated, with no significant differences in adverse events compared with no supplementation,[1] placebo,[2-5] or supplementation with lower dose of folic acid (400 ug)[6,7]
- No significant differences between infants after maternal Elevit or placebo were found in the short term in terms of mortality, overall rates of serious or chronic disorders, somatic development (body weight and length, head circumference), mental and behavioural development, and social skill quotient.[8] There were higher rates of atopic dermatitis, asthma, and wheezy bronchitis in children whose mothers took Elevit, although this included children with a family history of such conditions – further investigation into the allergenic potential may be required[8,9]





The formulations of Elevit Pre-conception, Elevit Pregnancy and Elevit Breastfeeding vary across different countries to meet local regulations and healthcare guidelines.

1. Massari M *et al. Nutrients* 2020;12(8). **2.** Brämswig S *et al. Int J Vitam Nutr Res* 2009;79:61-70.064. **3.** Schaefer E *et al. Vitam Miner* 2016;05:134. **4.** Czeizel AE *et al. Arch Gynecol Obstet* 1992;251:181-185. **5.** Schaefer E *et al. Nutrients*. 2020;12:3849. **6.** Obeid R *et al. Mol Nutr Food Res* 2018;62:1700537. **7.** Pilz S *et al. Nutrients*. 2017;9: Pii:E30. **8.** Czeizel AE, Dobó M. *Arch Dis Childhood* 1994;70:229-233. **9.** Dobó M, Czeizel AE. *Eur J Pediatr* 1998;157:719–723.

Elevit has been used by millions of women worldwide, throughout preconception, pregnancy and lactation, and has always been associated with a good safety and tolerability profile, with no long-lasting or serious adverse effects on mother or baby health when taken as labelled.

Elevit provides continued support throughout the pregnancy journey, from preconception to pregnancy and breastfeeding

- Supports fertility and prepares the body for the increased nutritional demands of pregnancy
- Reduces risk of neural tube defects and congenital abnormalities in baby and promotes healthy development
- Reduces pregnancy complications and improves maternal wellbeing in the postpartum period
- Addresses the increased nutritional needs of breastfeeding

The formulations of Elevit Pre-conception, Elevit Pregnancy and Elevit Breastfeeding vary across different countries to meet local regulations and healthcare guidelines.

Using Elevit throughout the entire pregnancy journey, from preconception to pregnancy and breastfeeding, supports maternal nutritional needs and the healthy development of the child

Micronutrient inadequacies are common among women of reproductive age, even in high-income countries. Multiple micronutrient supplementation (MMS) can play an important role throughout the pregnancy journey, from preconception to breastfeeding, supporting the health of both mother and baby.

With 22 clinical studies supported by 30 publications, **Elevit is the most studied prenatal MMS brand.**

Throughout the entire pregnancy journey, Elevit provides scientifically-backed comprehensive nutritional support that benefits both maternal and child health. It is well tolerated and has a favourable safety profile in mothers and infants.

By addressing the increased micronutrient needs at each stage, Elevit helps optimise pregnancy outcomes and supports the long-term health of mothers and their children.

This study supports the need for updated guidelines to include MMS as a standard recommendation for pregnant women, beyond just folic acid and iron.

SO Elevit® Pre-Conception Film Coated Tablets. Category D: Multiple substance formulation. Each tablet contains vitamin A (retinyl palmitate) 2566 IU; vitamin D (cholecalciferol) 200 IU; vitamin E (dl-alpha-tocopheryl) 10 mg; vitamin B1 (thiamine mononitrate) 1,4 mg; Vitamin B2 (riboflavin 5'-phosphate) 1,4 mg; niacin (nicotinamide) 18 mg; vitamin B5 (calcium pantothenate) 6 mg; vitamin B6 (pyridoxine hydrochloride) 1,9 mg; folic acid (calcium-L-methylfolate) 400 µg; vitamin B12 (cyanocobalamin) 2,6 µg; vitamin C (ascorbic acid) 85 mg; biotin (D-biotin) 30 µg; calcium (calcium carbonate, calcium D-pantothenate & calcium-L-methylfolate) 125 mg; Copper (cupric sulfate) 1 mg; iodine (potassium iodide) 150 µg; iron (ferrous fumarate) 14 mg; magnesium (magnesium oxide) 100 mg; manganese (manganese sulfate monohydrate) 2 mg; selenium (sodium selenite) 60 µg; and Zinc (zinc citrate) 11 mg. Always use as directed on the label. This unregistered medicine has not been evaluated by the SAHPRA for its quality, safety or intended use.
SO Elevit® Pregnancy Soft Gelatine Capsule. Category D: Multiple substance formulation. Each capsule contains vitamin A (beta-carotene) 771 µg; vitamin D (cholecalciferol) 5 µg; vitamin E (dl-alpha-tocopheryl acetate) 15 IU; vitamin B1 (thiamine mononitrate) 1,4 mg; vitamin B2 (riboflavin) 1,4 mg; niacin (nicotinamide) 18 mg; vitamin B5 (calcium pantothenate) 6 mg; vitamin B6 (pyridoxine hydrochloride) 1,9 mg; folic acid (pteroylmonoglutamic acid & calcium l-methylfolate) 400 µg; vitamin B12 (cyanocobalamin) 2,6 µg; biotin (d-biotin) 30 µg; vitamin C (calcium ascorbate) 85 mg; DHA (docosahexaenoic acid omega 3) 200 mg; EPA (eicosapentaenoic acid omega 3) 80 mg; iodine (potassium iodate) 150 µg; iron (ferrous fumarate) 14 mg; magnesium (magnesium oxide) 57 mg; selenium (sodium selenite) 60 µg; copper (cupric sulfate) 1 mg; and zinc (zinc oxide) 10 mg. Always use as directed on the label. This unregistered medicine has not been evaluated by the SAHPRA for its quality, safety or intended use.
SO Elevit® Breastfeeding Soft Gelatine Capsules. Category D: Multiple substance formulation. Each capsule contains vitamin A (Beta-carotene) 2400 IU; vitamin D (cholecalciferol) 200 IU; vitamin E (DL-a-Tocopheryl acetate) 7,5 IU; vitamin C (ascorbic acid) 60 mg; vitamin B1 (thiamine mononitrate) 1,4 mg; vitamin B2 (riboflavin) 1,6 mg; Vitamin B3 (Niacin) 17 mg; vitamin B5 (calcium pantothenate) 7 mg; vitamin B6 (pyridoxine hydrochloride) 2 mg; biotin 35 µg; folic acid (pteroylmonoglutamic acid) 200 µg; vitamin B12 (cyanocobalamin) 2 µg; calcium (calcium phosphate) 120 mg; iron (ferrous fumarate) 9 mg; zinc (zinc oxide) 5 mg; selenium (sodium selenite) 35 µg; iodine (potassium iodate) 150 µg; DHA (Docosahexaenoic acid) 200 mg and Lutein 250 µg. Always use as directed on the label. This unregistered medicine has not been evaluated by the SAHPRA for its quality, safety or intended use.
Bayer (Pty) Ltd. Collaboration Hub, 1st Floor, Waterfall Circle 9 Country Estate Drive Waterfall City, Midrand, Gauteng 2090, South Africa. Tel: +27 11 921 5000.
CH-20250925-103 * Formulations may vary between regions/countries in order to comply with local regulatory requirements. Please check the formulation available for your country.