



# CHOLINE

## THE (FORGOTTEN) ESSENTIAL MICRONUTRIENT

### WHAT IS CHOLINE?

Choline plays a fundamental role in human health across the life cycle.<sup>1,2</sup>



### ESSENTIAL IN PREGNANCY

Higher maternal choline intake reduces:

- Risk factors for preeclampsia<sup>3</sup>
- Risk of neural tube defects<sup>4,5</sup>
- The production of cortisol, which may in turn reduce the incidence of stress-related diseases (hypertension, obesity, diabetes and depression) later in life.<sup>6</sup>

### ESSENTIAL FOR HEALTHY GROWTH AND DEVELOPMENT

Higher maternal choline intake improves:

- Foetal growth<sup>7</sup>
- Brain development and information processing speeds – learning, memory and attention<sup>8</sup>
- Lasting effects on health – supporting cell membrane structure and integrity, hormones, muscle function and neurotransmission.<sup>7</sup>



### EGGS AND CHOLINE

- US clinical studies indicate that for the majority of the population, choline consumption is far below current dietary recommendations.<sup>9</sup> Vegetarians and vegans in particular, may be at risk of low intake.<sup>1</sup>
- Eggs not only provide the most readily absorbable form of choline<sup>10</sup>, but also provide more choline per kilojoule when compared to most other food sources.<sup>9</sup>
- A single egg will provide about 20-25% of an individual's daily requirement of choline.<sup>9,11,12</sup>
- To get the same amount of choline found in a single egg (125mg / 301 kilojoules), one would need to consume 3 ¼ cups of skim milk (1130 kilojoules) or 99g of wheat germ (1532 kilojoules).<sup>9</sup>

