



The Balchem Beat

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Issue 14 September 2023



balchem[®]
HUMAN NUTRITION & HEALTH



Editor's Note

Back to school season is upon us! This is a time of excitement and anticipation for kids as they get ready to start a new year of learning and making new friends. As parents, we want to make sure they get the nutrients they need to grow and develop properly. In this issue, we explore the two essential nutrients for kids' health: choline and iron. Choline is important for brain development and function, while iron is essential for red blood cell production. [Join our webinar to learn more.](#)

Plant-based milk also provides a convenient way to get essential nutrients. Our plant-based powdered blends provide good sources of fat, protein, and fiber. They are also low in sugar, calories, vegan, gluten-free, easy to add to smoothies, yogurt, and other foods.

Science update: the European Food Safety Authority (EFSA) has recently approved a new health claim for choline.

Finally, the current market trend is going toward a more holistic approach to health and wellness. This means that consumers are increasingly looking for solutions that combine over the counter medicines, supplements, and plant-based foods.

We hope you enjoy reading this issue of The Balchem Beat. If you have any questions or would like to learn more about our products or services, please do not hesitate to [contact us](#).

Sincerely,
The Balchem Editorial Team





Attention to all superhero parents! When it comes to fueling your little ones' superpowers it's crucial to ensure they get the right nutrients. Today, we are shining the spotlight on two important nutrients that often fly under the radar: Choline and Iron. Let's dive a little deeper into why these nutrients are essential for your little ones' well-being!

Choline and Iron for Kids' Health: The Superheroes of Nutrition

Choline: The Brain Best Friend

Get ready to unlock the superhero potential of your kids' brains with Choline. It is like a secret agent. Choline is needed to support acetylcholine which is an important neurotransmitter for mood, memory and muscle control⁽¹⁾. You can find choline in super delicious foods like eggs, fish, beef, and beans.⁽¹⁾ By making sure your little ones get enough choline, you are giving their brains the resources they need to help conquer challenges that



of infants aged 6-11 months in the U.S. have inadequate iron intake⁽⁴⁾



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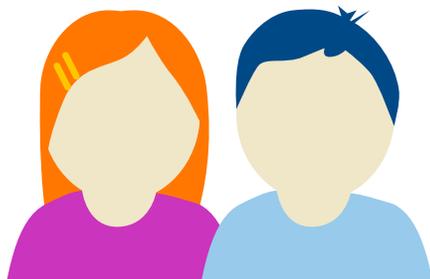
come their way. In the United States, less than 10% of kids aged 9-18y get enough choline in their diets⁽²⁾, so choline rich foods or dietary supplements that contain choline can help your little superhero bridge the gap!

Iron: Powering Super Growth

When it comes to growth and energy, iron takes center stage. Iron is the superhero mineral that helps produce red blood cells and transport oxygen throughout the body⁽³⁾. Approximately 12% of infants aged 6-11 months in the U.S. have inadequate iron intake⁽⁴⁾, and nearly 7% of children aged 1-5y are estimated to be iron deficient – or roughly 1.35 million children in the US⁽⁵⁾. This is more than twice the population of Washington, DC⁽⁶⁾! Iron deficiency can have negative effects on cognitive development among infants and can lead to fatigue and weakened immunity^(4,7). With enough iron, your little ones will have the energy to play, explore and be their superhero selves.

Bridging the Gap

- **Superhero meals:** Create meals that are not only delicious but also packed with choline and iron. Whip up omelets with choline-rich eggs, add spinach to smoothies, and sneak beans into their favorite dishes. Your little heroes won't even know they are getting their nutrient power-ups! You can also let your kids participate in meal preparation, making it a fun and educational experience
- **Encourage exploration:** Introduce new foods to your kids' palates by offering a variety of choline and iron-rich options. Create a sense of adventure and curiosity around trying new flavors and textures
- **Supplement Sidekick:** If you are concerned about nutrient gaps, consider teaming up with a pediatrician or a registered dietitian to find the right supplements for your child.



1.35 million children in the US⁽⁵⁾ are estimated to be **iron deficient**

Don't let nutrient gaps hinder your kids' optimal growth and development. By addressing nutrient gaps in choline and iron, you are giving them more resources to improve their health journey. Remember, it's all about providing nutrient-rich meals, exploring delicious food options, and ensuring they have the energy and power to conquer anything that comes their way. Together, let's nourish our little heroes and watch them soar to greatness.

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The Power of Plant-Based Powdered Blends

In our quest for optimal health and vitality, incorporating nutrient-rich foods into our daily routine is essential. One innovative and convenient way to achieve this is through plant-based powdered blends. These versatile blends offer a wide array of benefits which have the potential to revolutionize our wellness journey.



VitalBlend™

What's VitalBlend™?

VitalBlend™ is Balchem's line of lipid-based powders available with both plant-based and dairy-based proteins. There are a variety of plant-based proteins like pea, chickpea and soy. Each of these forms have different characteristics that can alter the nutritional value, mouth-feel, color, and flavor of the products they are being used in.

Why VitalBlend™?

These powdered blends have a wide range of fat, protein, and carbohydrate sources at varying concentrations and can be fully customized to support your consumers' health and vitality.



To support consumer health and vitality, VitalBlend™ offers multiple benefits:

- **Sourced from coconut, palm or palm kernel oil for a wide range of fats:** Fats are essential to give your body energy, support cell function and aid in the absorption vitamins in the diet. ⁽¹⁾
- **Includes fiber and protein:** VitalBlend™ contains fiber and protein, two essential nutrients that play vital roles in supporting overall health. Fiber aids in digestion, promotes satiety and supports heart health, while protein is crucial for building, and repairing tissues and supports various metabolic functions.⁽¹⁾
- **Simplified ingredients with no added sugars options:** By avoiding added sugars, VitalBlend™ provides a healthier option for consumers who want to minimize their sugar intake. Leverage Balchem's expertise in spray drying and agglomeration technologies to create functional nutritional powders for today's active consumer lifestyle with a variety of choices including organic pea, coconut, avocado, sunflower, and more. VitalBlend™ can be easily added to a variety of beverages and bar mixes.
- **Organic spray dried lipid powder options:** for example, VitalBlend™ Pea Organic 5023 is a vegan palm-oil based pea protein organic creamer. This versatile multifunctional ingredient is perfect for a wide area of applications, including smooth hot plant-based beverages or creamy savory applications, including use as a vegan cheese extender! The fat content is between 47-51 % and the powder provides between 10–11 % protein. This differentiated powder also contains mixed tocopherols and organic rosemary extract which provides highly potent antioxidant properties, thus securing quality and preventing rancidity during storage.

Incorporating plant-based powdered blends into your daily routine can be a powerful strategy to maintain health and vitality. Whether added to smoothies, mixed into yogurt or incorporated into recipes, plant-based powdered blends can provide a simplified, clean-label plant-based ingredients, alternative to support our well-being.

To learn more about VitalBlend™ plant-based lipid powders with protein, and the rest of our product line, click the links to read our 2023 Solutions Guide and contact us today!

[Contact Us | Human Nutrition and Health](#)

[Solutions Guide | Human Nutrition and Health \(balchem.com\)](#)

References

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Also new to the market is our allergen-free plant-based powder, Richmix® 4808, which is a sunflower oil starch-based spray dried lipid powder.

It has a variety of applications and was specifically developed for powdered beverages. Notably, Richmix® 4808 contributes to opaqueness and whitening in various applications and imparts a desirable mouth-feel. It seamlessly dissolves in hot water and exhibits good solubility in cold water (depending on overall beverage composition). This versatile plant-based powder can effectively substitute dairy-based spray dried lipid powders in these beverage applications and resists curdling in acidic environments (as can happen with dairy-based powder). Beyond beverage applications, this starch-based powder can find utility in a multitude of other applications, including soft serve ice cream, bars, and savory like sauces or soups where an allergen free or plant-based lipid powder is wanted.



Meta-analysis confirms ferrous bisglycinate has greater efficacy and lower risk of side effects compared to other iron salts in pregnant women

Greater efficacy, lower risk of side effects



A new systematic review and meta-analysis published in Nutrition Reviews⁽¹⁾ has concluded that ferrous bisglycinate supplementation in pregnant women provides significantly higher efficacy at raising hemoglobin status, and results in a 64% lower rate of gastrointestinal adverse events⁽²⁾ compared to other iron salts.⁽³⁾

Conducted by a team of researchers from the University of British Columbia in Vancouver, Canada, the research sought to evaluate the effects of ferrous bisglycinate supplementation compared to other iron salts* on iron status and gastrointestinal (GI) adverse events. 1 Multiple chelated iron products were used in this research, including Albion® Minerals' Ferrochel®. The findings present supplement manufacturers with an exciting opportunity to innovate with high efficacy iron forms.

Iron deficiency: a global concern

Iron deficiency is a worldwide issue and is estimated to affect over 40% women of childbearing age in certain countries.⁽⁴⁾ However, many consumers are reluctant to take iron supplements during pregnancy as they often cause side-effects to the digestive system, which can pose a significant challenge in patient compliance and decrease efficacy. The data in this latest study compared rates of GI adverse events observed in trials of pregnant women, showing that ferrous bisglycinate supplementation was 64% less likely to result in GI adverse events compared to other iron salts.

“We’re pleased to see that this latest study provides further evidence to show the enhanced efficacy and tolerability that ferrous bisglycinate, such as Ferrochel[®], is commonly associated with. For decades now, we have been investigating the role iron can play in supporting healthy pregnancies and we are confident that additional data will provide additional proof of the superiority of ferrous bisglycinate over other iron salts. We’re excited to delve further into the science with our upcoming clinical trial exploring the impact of Ferrochel[®] in pregnant women.”

Jonathan Bortz, MD, Vice President Nutrition Science at Balchem

The meta-analysis included 17 different randomized controlled trials, focusing on over 1,100 children and pregnant women. The results demonstrated that ferrous bisglycinate supplementation led to greater improvements in haemoglobin status among pregnant women - a commonly measured biomarker of anemia and iron status. The research also reported ferrous bisglycinate supplementation led to greater changes in ferritin, another iron status biomarker, however this difference did not achieve statistical significance. However, this was partially attributed to differences in reporting adjustments between trials. While analysing the available data related to the children group, these differences failed to reach statistical significance, likely due to the relatively small number of clinical trials included and differences in trial design (n=4).

Following this initial study, Balchem has now commissioned a new clinical trial on Ferrochel[®] in pregnant women with the same research team, which aims to begin recruitment in Fall 2023. This research aims to provide further insights into the optimal forms of iron to be used across various ages and stages of life.

Ferrochel[®] is the flagship product within Balchem’s Albion Minerals[®] portfolio, with decades of research supporting its use. A unique, fully chelated iron product formed by binding iron to two organic glycine molecules, its small molecular size allows it to remain intact throughout the GI tract for optimal absorption. This more bioavailable form of iron is essential for gestating mothers and growing children.



For more information about Balchem’s Albion Minerals[®], click here.

References

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4. Stevens GA, et al., Lancet Glob Health 2022; 10: e1590-99.

New EFSA Health Claim Approved For Choline

The European Food Safety Authority (EFSA) recently released an authorized health claim for choline recognizing its role in prenatal and early life nutrition.

Choline has essential roles in liver health, such as its involvement in the structure of cell membranes, cell signaling, and the metabolism and transport of lipids and cholesterol. With this latest health claim, EFSA recognized the importance of choline in normal liver function as it relates to all ages, including developing children and exclusively breastfed infants.

mothers and babies. The health claim application was submitted by Procter & Gamble BV.

Rima Obeid PhD, a choline expert involved in the application said: "I am delighted to be part of the team that collated the scientific evidence for the health claim for choline, focusing on its role in supporting liver function of expecting mothers and their children. The approval of this claim by the EFSA marks an important milestone in recognizing the significance of choline in maternal and infant health. I am excited to continue researching this topic and exploring how choline can positively impact the well-being of expectant and breastfeeding mothers and their little ones."

At Balchem Corporation we take pride in being at the forefront of nutritional advancements, and our VitaCholine® brand has been the choline product of choice used in numerous clinical trials. Always the innovator in prenatal nutrition research, VitaCholine® was recognized as the 2022 Cognitive Function Ingredient of the Year by NutraIngredients USA based on our latest research on maternal choline supplementation. The latest EFSA-approved health claim joins three other EFSA authorized health claims regarding metabolism and liver function.



Interested in learning more about how VitaCholine® can play a part in your next prenatal formulation in the EU? Contact us today!

The newly approved claim "Maternal choline intake during pregnancy and lactation contributes to normal liver function of the foetus and exclusively breastfed infants," highlights the significant role of choline in supporting the health and development of both

INhance™ inclusions



Bring Globally-Inspired Flavors to Bakery: INhance™ Inclusions

The most ethnically diverse generations, Millennials and Gen Z, are also the most adventurous when it comes to trying new cuisines. The increase of consumers eating international cuisine provides opportunity for developing more unique and globally-inspired products. There couldn't be an easier way to add a new twist to an old favorite than by adding INhance™ Inclusions. Our medium and high melt lipid-based inclusions can be easily incorporated into various bakery such as cakes, muffins, cookies, and breads. [Check out our latest TrenDish™ bakery concepts. TrenDish by Balchem | Human Nutrition and Health](#)



Over the Counter (OTC) Medicines and Supplements Increasingly Play Together

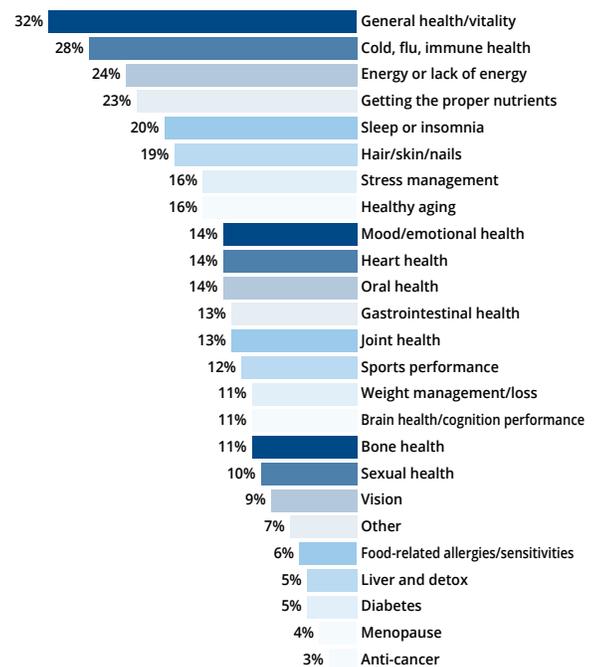
- **According to Nutrition Business Journal (NBJ), OTC medicines and supplements are increasingly playing complementary roles under the broad umbrella of consumer health care products.** The trend of “Big Pharma” companies divesting their OTC divisions has caused the industry to evolve. New power players with origins in the food and beverage or other consumer packaged goods, have moved into the consumer health space.
- The blurring lines between OTC and supplements is evident in closer proximity on store shelves in retailers. In addition, with new product development, legacy OTC brands launching supplement products is happening. Therefore, there is an opportunity to provide solutions that address consumer needs versus directing them to one type of product. **With better science and education, supplements are well positioned to take advantage of this trend.**

What Consumers Seek in OTC Medicines

With the lines blurring, supplements can target the top conditions consumers seek solutions to, especially:

- General health/vitality
- Cold, flu and immune health
- Energy
- Proper nutrition
- Sleep

Top health conditions consumers buy over-the-counter products to help support



Source: NBJ, August 2023 Issue



The Evolving World of Plant-Based Products

- **Plant-based foods have been an area of interest in the food and beverage world for years, especially when it comes to health benefits.**
- In their review of the IFT Conference in July 2023, research firm Innova noted some new twists in the world of plant-based products.
- **“Upcycling” or the practice of using the whole part of the plant has gained traction.** Consumers are attracted to the key benefit of minimizing food waste. Examples include new fiber ingredients from upcycled wheat straw and citrus fruit.
- **Companies are also using plant-based indulgences to address consumer motivators for treating themselves.** New plant-based ice creams and puddings are examples of products that are being developed to meet consumer demand for indulgence products.



Events

SEE YOU THERE

★ **Plant Based World Expo (9/7-8)**
NYC, NY

★ **Ohio Valley IFT (9/14) – Booth 55**
West Chester, OH

★ **Diet and Optimum Health Conference - Linus Pauling Institute[™] at Oregon State University (9/19-20) – Gold Sponsor**
Corvallis, Oregon

★ **7th International Vitamin Conference (9/19-22) – Platinum sponsor**
Copenhagen, Denmark

★ **Vitafoods Asia, (9/20-23)– Booth A54**
Bangkok, Thailand

★ **Natural Products Expo East (9/20-9/23)**
Philadelphia, PA

Coming up: **Diet and Optimum Health Conference**

See you there: **Natural Products Expo East**

★ Schedule a meeting with us, here:

Come visit us:
Biscuit People Conference



Events

SEE YOU THERE

Nutrition Collective: Nurturing Young Brains through Better Nutrition (9/26) – Online

★ **Meat Expo (9/24-9/27)**
Kortrijk, Belgium

★ **Biscuit People - Conference (9/25-28)**
Dubrovnik, Croatia

★ **St Louis IFT (9/27) – Booth 45**
St Charles, MO

