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Supplementation with a unique mixture of pre- & probiotics restores gut microbiota balance in c-section born infants

Dysbiosis in C-section born infants and long-term health outcome

Cesarean section (C-section) affects the gut microbiome development and microbial colonization inducing gut dysbiosis (disruption).[1]

The gastrointestinal (GI) microbiome of a C-section delivered baby differs from a vaginally delivered baby.[1]

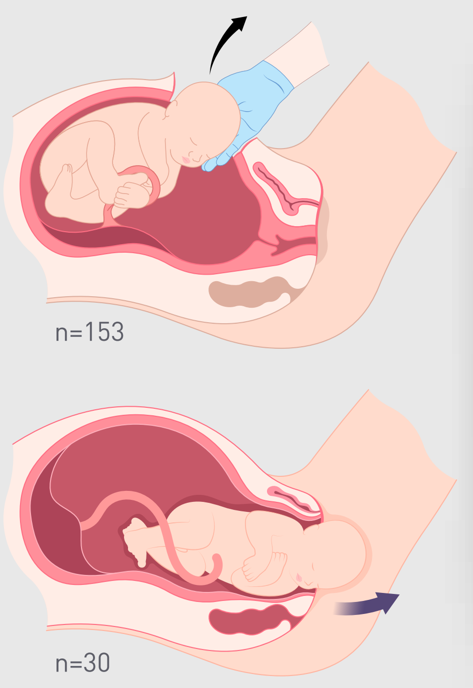
Antibiotics used during C-section deliveries affect the gut microbiome development.[1]

C-section has been associated with long-term effects:[1]

- Higher risk of infections and **higher incidence of respiratory infections in early life.**[2,3]
- **Higher risk of allergies (three times increased risk** of developing **asthma** by age 6).[4,5]

JULIUS STUDY OVERVIEW[6]

Randomized, double-blind, controlled study



Infants delivered by C-section

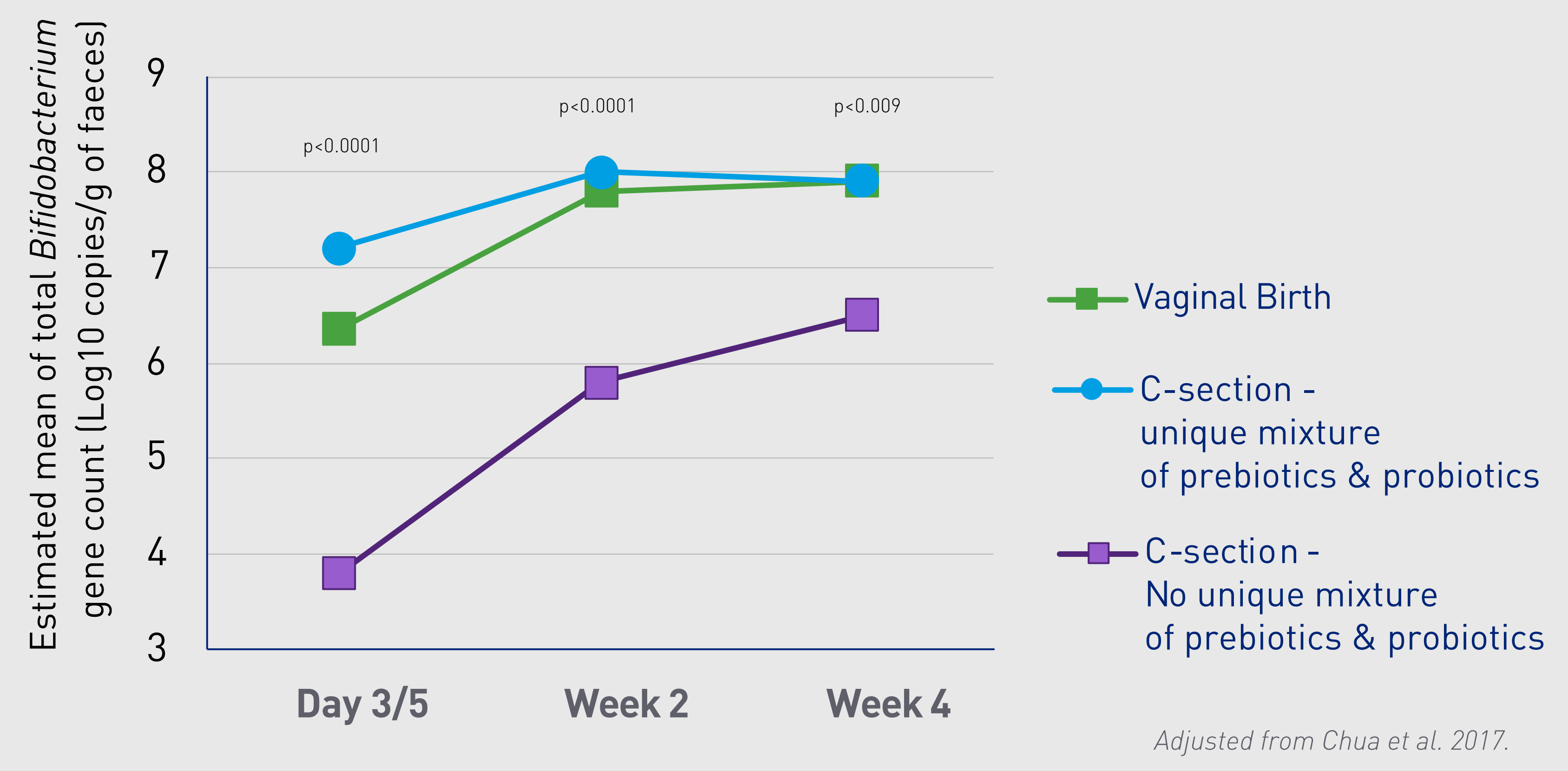
- Unique mixture of prebiotics & probiotics formula: 0.8 g/100 mL scGOS/lcFOS and *B. breve* M-16V $7.5x10^8$ CFU/100 ml (n=52)
- Prebiotic formula: 0.8 g/100 mL scGOS/lcFOS (n=51)
- Control formula: Standard formula with no scGOS/lcFOS cow's milk–based formula

Vaginally-delivered non-randomized infants
(reference group)

Intervention period

Julius study proves unique blend of prebiotics and probiotics can restore delayed colonization in C-section born babies

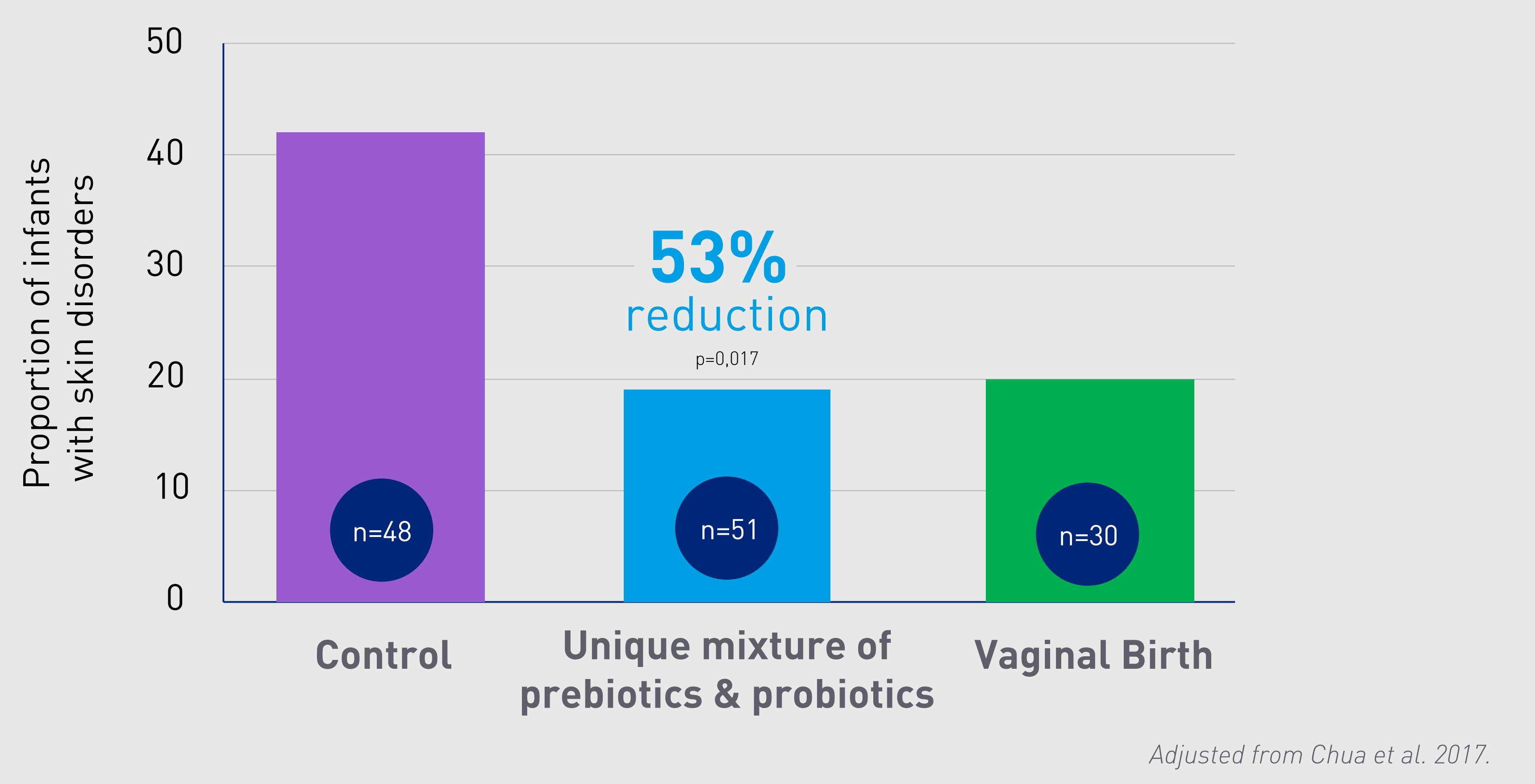
Effect of unique mixture of prebiotics & probiotics [scGOS/lcFOS (9:1)] + *B. breve* M-16V on bifidobacteria colonization[6]



Adjusted from Chua et al. 2017.

- Unique mixture of prebiotics & probiotics restores the delayed colonization of bifidobacteria in infants born by C-section.[6]

Incidence of skin disorders during 16 weeks of intervention (reported AEs)[6]



Adjusted from Chua et al. 2017.

- Unique mixture of prebiotics & probiotics reduces skin disorders at 16 weeks.[6]

- The **early supplementation** with a unique blend of scGOS/lcFOS and *B. breve* M16-V in C-section–born infants allows a fast colonization by bifidobacteria from the **first days of life**.[6]
- The rapid settlement of this keystone infant type species contributes to mimic the physiological conditions observed in the gut of vaginally delivered infants, such as the production of acetate and the acidic gut environment.[6]

Conclusions

Cesarean birth has been associated with increased risk of immune diseases later in life, likely due to the altered gut microbiota.[6]

Supplementation with scGOS/lcFOS and *B. breve* M-16V compensates the delayed Bifidobacterium colonization in C-section–delivered infants, and modulates the production of acetate and the acidification of the gut similar to that observed in vaginally born infants.[6]

Supplementation with scGOS/lcFOS and *B. breve* M-16V reduces skin symptoms in infants.[6]

References

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