



LACTULOSE

PREBIOTIC SUPPORT FOR GASTROINTESTINAL
AND VAGINAL MICROBIOMES

EMPOWERING YOUR
INTIMATE WELLBEING

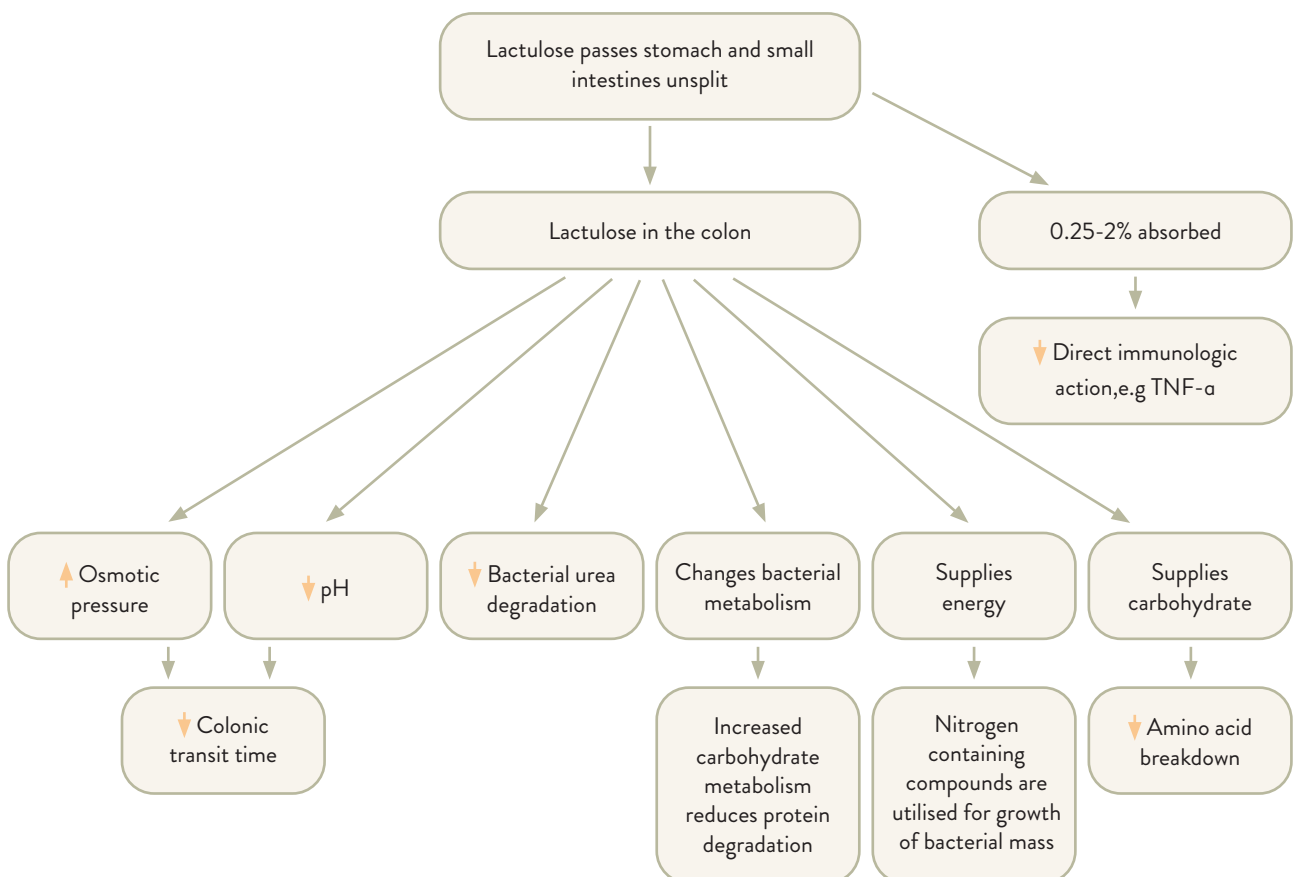
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WHAT IS LACTULOSE?

Lactulose is a non absorbable sugar that has prebiotic applications in both the gastrointestinal and vaginal microbiome. As a prebiotic carbohydrate it can stimulate the growth of health-promoting bacteria in the gastrointestinal tract, such as bifidobacteria and lactobacilli and at the same time inhibit growth of pathogenic bacteria such as Salmonella (1-2). Lactulose can be used in small doses orally and vaginally to impact overall microbial composition (3). When used in larger doses orally lactulose has a laxative effect (1).

Low-dose oral lactulose has also been shown to enhance the absorption of minerals such as calcium and magnesium from the gut, which may aid bone health in peri-menopause and menopause (4-5). Research and clinical use also supports the use of small amounts of lactulose applied intra-vaginally. Lactulose was found to broadly and specifically stimulate vaginal lactobacilli, including the strongly health associated species *L. crispatus*, and importantly, not to stimulate microbes implicated in Bacterial Vaginosis or Vulvovaginal Candidiasis (3).

MECHANISM OF ACTION OF LACTULOSE AND SIGNIFICANCE OF THE BACTERIAL METABOLISM OF LACTULOSE



Mechanism of action of lactulose and significance of the bacterial metabolism of lactulose. Image Source: Schumann, C. (2002). Medical, nutritional and technological properties of lactulose. An update. *European Journal of Nutrition*, 41(1), i17-i25.

LACTULOSE CLINICAL APPLICATION

LACTULOSE AS A VAGINAL PREBIOTIC AND MICROBIOME SUPPORT

LACTULOSE ON A TAMPON

Dip and coat an organic cotton tampon in 4mls of liquid lactulose solution. Insert tampon for 4 hours a day for up to a week.

LACTULOSE WITH PROBIOTIC

Dip and coat a suitable vaginal health probiotic in the liquid lactulose solution. Insert the capsule high into the vaginal canal. The contents will dissolve over 12-24 hours. Apply daily for up to a week.

LACTULOSE AS A CAPSULE

Pure powdered lactulose can be inserted into the vaginal canal in capsule form. The contents will dissolve over 12-24 hours. Can be applied daily for up to a week.

LACTULOSE IN VAGINAL HEALTH COMPOUNDING

Lactulose can be used in the extemporaneous compounding of pessaries for vaginal health and low volume irrigations applied for specific vaginal health conditions.

LACTULOSE FOR GASTROINTESTINAL MICROBIOME MODULATION

Start by taking 0.5ml orally and work up to higher optimal doses of up to 15mls a day as tolerated. In excess lactulose will cause digestive bloating and loose stool.

LACTULOSE AS A LAXATIVE

Taken orally for constipation lactulose can move bowels gently in all age groups. Dosage can be adjusted depending on response.

- Adults: 15ml, taken twice a day as a starting dose
- Children aged 5 to 17 years: 5ml to 20ml, taken twice a day
- Children aged 1 to 4 years: 2.5ml to 10ml, taken twice a day

REFERENCES

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