

低麸质饮食诱导肠道菌群发生变化

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论文标题：A low-gluten diet induces changes in the intestinal microbiome of healthy Danish adults

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低麸质饮食诱导肠道菌群发生变化。根据《自然-通讯》发表的一篇论文A low-gluten diet induces changes in the intestinal microbiome of healthy Danish adults，低麸质饮食诱导60名健康人的肠道菌群和生理发生了一定的变化。作者提出，大多数这些影响可能源于富含麸质的食物减少后膳食纤维发生质变。



图1：四个蛙类化石标本Electrorana。图源：Xing等

麸质是小麦、黑麦和大麦的主要成分，由部分耐消化的蛋白质组成。它可能对患有乳糜泻等特定疾病的人群有害。然而，减少麸质摄入对健康人群的影响仍不清楚。

丹麦哥本哈根大学的Oluf Pedersen及其同事开展了一项随机对照交叉试验，试验对象为60名没有已知疾病的丹麦中年人。该试验包括两次为期八周的干预，以对比低麸质饮食(每天2克麸质)和高麸质饮食(每天18克麸质)的效果，两次干预之间的间隔至少为六周，间隔期间采用习惯性饮食(每天12g麸质)。作者发现，低麸质饮食诱导了肠道微生物群轻微变化(包括双歧杆菌的丰度降低)和某些尿液代谢物轻微变化，且被试自我报告称腹胀有所改善。

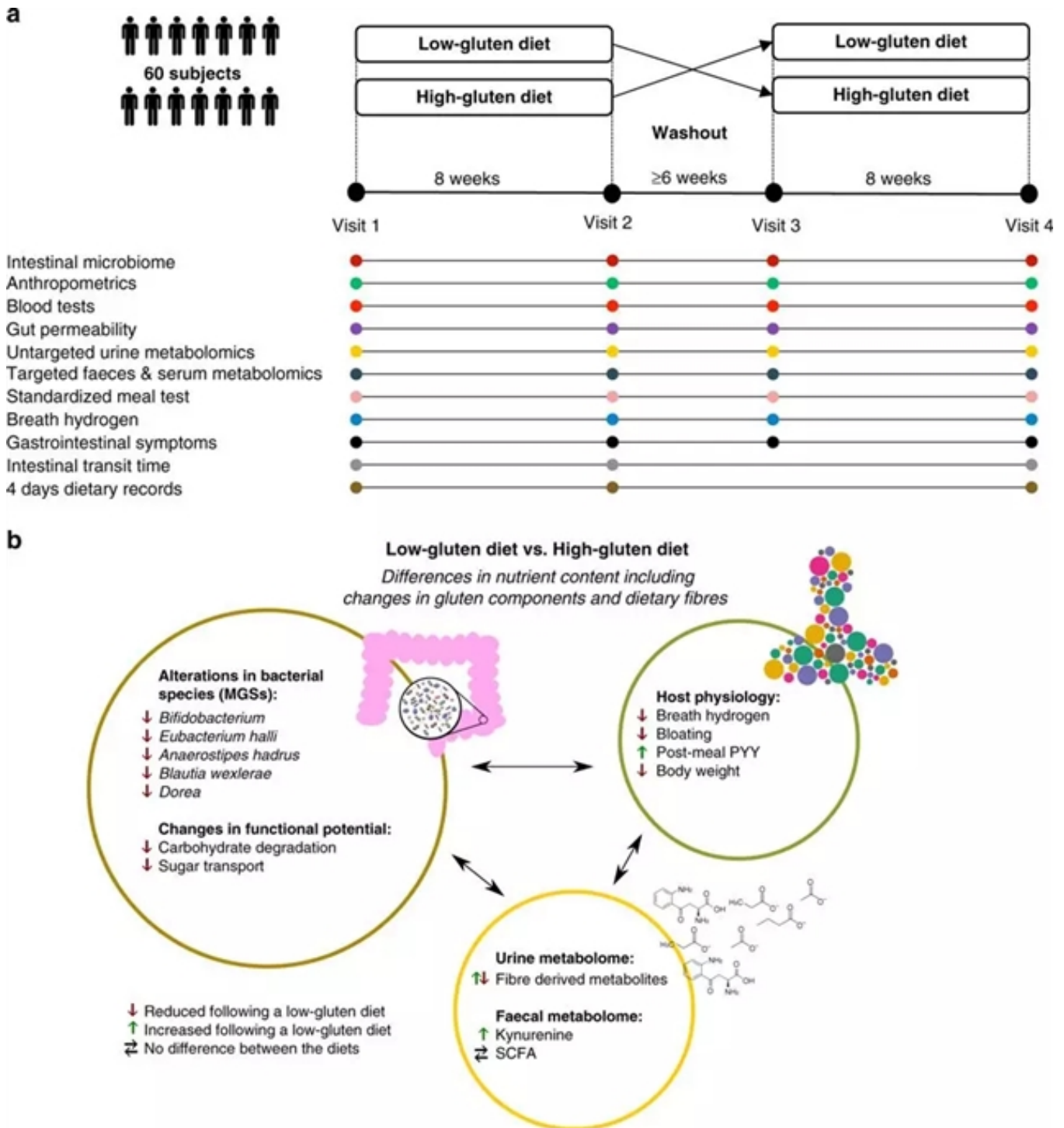


图2：微型CT扫描下的Electroranalimoae正模标本视觉图。图源：Xing 等

这两种饮食不仅在麸质含量方面不同，而且在膳食纤维的组成方面也不同。因此，作者观察到的效果可能是因为富含麸质的食物减少后膳食纤维发生了变化，而不是因为麸质摄入量本身有所减少。作者总结表示，目前尚不清楚这些研究结果如何能够推广到不同年龄、种族背景或生活方式的其他人群。

摘要：Adherence to a low-gluten diet has become increasingly common in parts of the general population. However, the effects of reducing gluten-rich food items including wheat, barley and rye cereals in healthy

adults are unclear. Here, we undertook a randomised, controlled, cross-over trial involving 60 middle-aged Danish adults without known disorders with two 8-week interventions comparing a low-gluten diet (2 g gluten per day) and a high-gluten diet (18 g gluten per day), separated by a washout period of at least six weeks with habitual diet (12 g gluten per day). We find that, in comparison with a high-gluten diet, a low-gluten diet induces moderate changes in the intestinal microbiome, reduces fasting and postprandial hydrogen exhalation, and leads to improvements in self-reported bloating. These observations suggest that most of the effects of a low-gluten diet in non-coeliac adults may be driven by qualitative changes in dietary fibres.

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