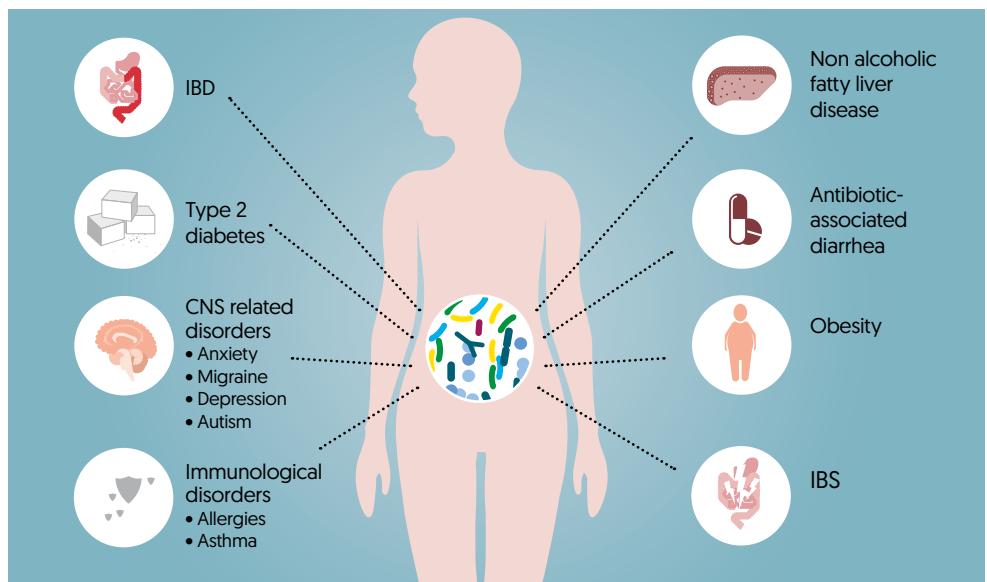


Improving intestinal health of adults

The human gastro-intestinal (GI) tract harbors several thousands of different microorganisms, the so called gut microbiota. The bacterial cells of this microbiota outnumber human cells by a factor ten.¹ It has become clear that the gut microbiota plays a key role in human health and disease.

The intestinal microbiota influences metabolic, nutritional, physiological and immunological processes in the human body. In addition, the gut microbiota provides the host with a physical barrier against pathogens and allergens. This gut epithelium forms the largest interface between the human body and the outside world. Furthermore, during our lifetime the microbiota co-develops with our immune system resulting in a properly functioning immune system. In a healthy situation the intestinal microbiota is well balanced. However, factors such as stress, an erratic lifestyle, travelling or consumption of spoiled food can disturb the intestinal microbiota. A total of over

Figure 1: Diseases linked to an imbalance of the gut microbiota.



25 diseases, syndromes or other aberrations have now been associated with disruptions of the intestinal microbiota.² These include; allergies, inflammatory bowel disease (IBD), irritable bowel syndrome (IBS), cardiovascular diseases and obesity. In these diseases a less abundant and less diverse microbiota is seen,

compared with a healthy state.

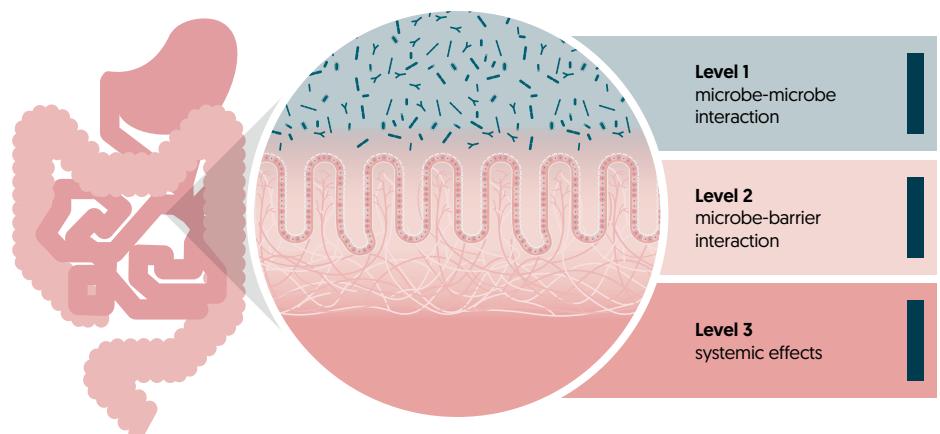
Probiotics are able to prevent and restore disturbances in the microbiota. Multispecies probiotics have shown to be more effective compared to monostrain probiotics, since multispecies probiotics are able to act at all three levels of the GI-tract.³

Strain selection

Winclove Adult is a broad-spectrum, multi-species probiotic formulation developed for managing and maintaining the intestinal balance of adults. The formulation contains 8 specially selected probiotic strains. Probiotic strains can exert health effects at different levels in the gut (see figure 2). The probiotic strains of Winclove Adult are active on all three levels. The strains have been screened for their capacity to:

- inhibit various pathogens such as *C. difficile*, *E. coli*, *E. faecalis* and *B. subtilis*.
- improve the barrier function
- influence the immune system.

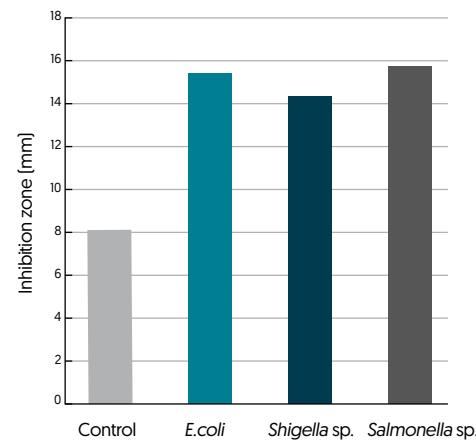
Figure 2: Probiotic strains can be active on three levels in the gut. The strains in Winclove Adult have been proven active at all three levels.



Clinical and *in vitro* evidence

It has been shown *in vitro* that the **strains in Winclove Adult are able to inhibit different pathogenic species** such as; *E. coli*, *E. faecalis* and *B. subtilis*. The strains have also shown to inhibit *Clostridium difficile*, the pathogen which often causes diarrhea after the use of antibiotics. In addition, the complete formulation was tested on its ability to inhibit *E. coli* and *Salmonella* and *Shigella* species [figure 3].

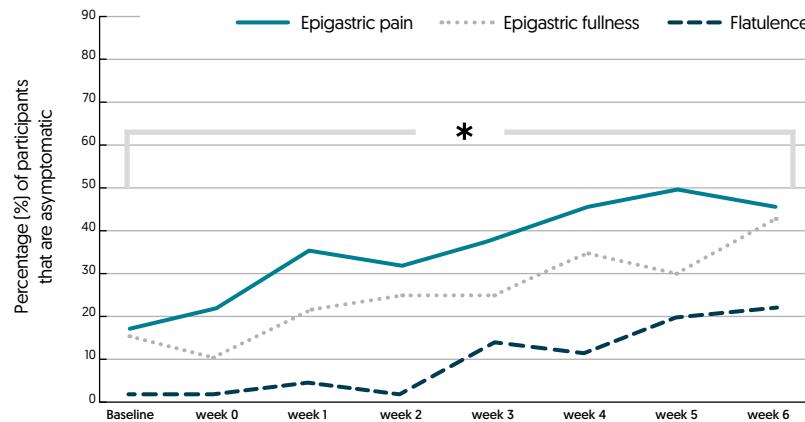
Figure 3: Inhibition of *E.coli*, *Salmonella* and *Shigella* by Winclove Adult, tested in an *in vitro* well diffusion test³. The larger the inhibition zone, the better the inhibition.



The effect of Winclove Adult on gut health and quality of life (QoL) was tested in an observational study. 40 adults with GI-complaints (but otherwise healthy) were supplemented for a 6-week period with Winclove Adult. **The results show a significant reduction in the total GI-symptom score** from 10 at baseline to 6 at the end of the intervention ($p<0.05$).⁴ The percentage of participants which were fully resolved of a particular symptom significantly

increased with 27.5% ($p<0.02$) for gastrointestinal pain, 25% ($p<0.03$) for epigastric fullness/bloating and 20% ($p<0.02$) for flatulence [see figure 4]. There was an up-going trend in these scores, suggesting that **further improvement could be expected on prolonged use of Winclove Adult**. At the start of the study participants already reported a high quality of life; a slight improvement after 6 weeks of supplementation was seen.

Figure 4: Percentage of participants that were asymptomatic for epigastric pain, epigastric fullness and flatulence after 6 weeks supplementation with Winclove Adult. * Significant increase ($p<0.05$).



Formulation details

Indication	Broad-spectrum probiotic for improving the intestinal health of adults.			
Colony forming units [CFU]	1 x 10 ⁹ CFU/gram.			
Bacterial strains	<i>B. lactis</i> W51 <i>B. lactis</i> W52	<i>E. faecium</i> W54 <i>L. acidophilus</i> W22	<i>L. paracasei</i> W20 <i>L. plantarum</i> W21	<i>L. salivarius</i> W24 <i>Lc. lactis</i> W19
PROBIOACT® Technology	Protective and nutritional ingredients that improve the stability of the formulation, GI survival and metabolic activity of the bacteria.			
Recommended daily dosage	Variable.			
Treatment period	For as long as desired/needed.			
Storage and stability	2 years stable at room temperature, no refrigeration needed.			
Available dosage forms	Dry powder which can be supplied as bulk or sachets, fully packed [with your design].			
Safety and Quality Profile			All probiotic strains have the Qualified Presumption of Safety (QPS) status or an extensive safety file. ⁵ Winclove is a NSF International Certified GMP Facility for manufacturing dietary supplements and is ISO 22000:2005 certified for the development and production of pre- and probiotics.	
Marketing	Private label.			

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This information is intended for business professionals only, not for consumers. The formulations contained herein are concepts, not commercially available and not intended to diagnose, cure or prevent any diseases.

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