

# LcS Topic: Infectious diarrhoea

*Lactobacillus casei* Shirota (LcS) is the unique probiotic strain in Yakult

For further information visit our website: [www.yakult.co.uk/hcp](http://www.yakult.co.uk/hcp)  
 Contact the UK science team on [science@yakult.co.uk](mailto:science@yakult.co.uk) or 0208 8427 600.  
 Contact the Irish science team on [science@yakult.ie](mailto:science@yakult.ie) or 01 804 7695

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## Antibiotic-associated diarrhoea and *Clostridium difficile*

**A *Lactobacillus casei* Shirota probiotic drink reduces antibiotic-associated diarrhoea in patients with spinal cord injuries: a randomized controlled trial.**

Wong SS, Jamous A, O'Driscoll JO *et al* (2014) *British Journal of Nutrition* **111(4)**:672-678.

[Reprint available on request] [PubMed]

**Probiotic treatment for the prevention of antibiotic-associated diarrhoea in geriatric patients: A multicentre randomised controlled pilot study.**

Wright K, Wright H, Murray M (2014) *Australasian Journal Ageing* [Epub Jan 24]

[PubMed]

**Prevention of relapse following *Clostridium difficile* infection using probiotic *Lactobacillus casei* Shirota.**

Lee LYW, Golmohamad R, MacFaul G (2013) *International Journal of Probiotics & Prebiotics* **8(4)**:145-148.

[Reprint available on request]

**Effects of antibiotic therapy on the gastrointestinal microbiota and the influence of *Lactobacillus casei*.**

Pirker A, Stockenhuber A, Remely M *et al* (2013) *Food & Agricultural Immunology* **24(3)**:315-330.

[Reprint available on request] [Abstract]

**The effect of *Lactobacillus casei* and *Bifidobacterium breve* on antibiotic-associated diarrhoea treatment: randomized double-blind clinical trial.**

Souza DNP & Jorge MT (2012) *Revista da Sociedade Brasileira de Medicina Tropical* **45(1)**:112-116.

[PubMed]

**The potential of probiotic fermented milk products in reducing risk of antibiotic-associated diarrhoea and *Clostridium difficile* disease.** [Contains description of Weir UK hospital study]

Lewis JN, Thomas LV & Weir W (2009) *International Journal of Dairy Technology* **62 (4)**: 461-471.

[Free paper] [Abstract]

**Prevention of *C difficile* Related Disease with Prophylactic Probiotic.**

Weir W. (Oral presentation). Topics in Infection XXXV (Barts & the London), 30<sup>th</sup> January 2009.

**Preventing diarrhoea associated with antibiotics using a probiotic *Lactobacillus casei* preparation.**

Stockenhuber A, Kamhuber C, Leeb G *et al* (2008) *Gut* **57(Suppl II)**: A20 (2008). [Described in Pirker *et al*]

***Lactobacillus casei* Shirota prevention approach for healthy children with mild acute infection treated with antibiotics.**

Martinez CO, Paz VS & O'Donnell A (2003) *Pediatric Research* **4(2) S**: 174A-174A.

## Diarrhoea: other aetiology

**Protective effect of *Lactobacillus casei* strain Shirota against lethal infection with multi-drug resistant *Salmonella enterica* serovar Typhimurium DT104 in mice.**

Asahara T, Shimizu K, Takada T *et al* (2011) *Journal of Applied Microbiology* **110(1)**:163-173

[PubMed]

**Effects of the continuous intake of *Lactobacillus casei* strain Shirota-fermented milk on risk management of long-term inpatients at health service facilities for the elderly.**

Bian L, Nagata S, Asahara T *et al* (2011) *International Journal of Probiotics and Prebiotics* **6(2)**:123-132.

[Abstract]

**Effect of the continuous intake of probiotic-fermented milk containing *Lactobacillus casei* strain Shirota on fever in a mass outbreak of norovirus gastroenteritis and the faecal microflora in a health service facility for the aged.**

Nagata S, Asahara T, Ohta T *et al* (2011) *British Journal of Nutrition* **106(4)**:549-56

[PubMed]

**Role of probiotic in preventing acute diarrhoea in children: a community-based, randomized, double-blind placebo-controlled field trial in an urban slum.**

Sur D, Manna B, Niyogi SK, Ramamurthy T *et al* (2010) *Epidemiology and Infection*

doi:10.1017/S0950268810001780

[PubMed]

**Effects of probiotic in prevention of radiation-induced diarrhea.**

Castro MG, Sanchez PPXS, Glasberg JJG *et al* (2009) ESPEN Congress Vienna (presentation) August 2009

**Resolution of cryptosporidiosis with probiotic treatment.**

Pickerd N & Tuthill D (2004) *Postgraduate Medical Journal* **80**:112-113.

[Free paper] [PubMed]

**Clinical effect of biolactis powder, a *Lactobacillus casei* preparation, on rotavirus-induced pediatric enteritis.**

Sugita T & Togawa M (1994) *Japanese Journal of Pediatrics* **47**: 2755-2762.

***In vivo* studies on the use of *Lactobacillus casei* (Yakult strain) as biological agent for the prevention and control of diarrhea.**

Jacalne AV, Jacalne RR, Hirano H *et al* (1990) *Acta Medica Philippina* **26**: 116-122.

**Investigation of the clinical significance and pathophysiology of bacterial preparations: I. Clinical effectiveness of a lactic acid bacteria preparation (YS-01) in the treatment of diarrhea.**

Shimoyama T, Ono T, Hosomi M *et al* (1981) *Examination & New Drugs* **13**: 617-626.

**Studies on the clinical significance and pathological physiology of a preparation of bacteria: I. clinical effect of a preparation of lactic acid bacteria (YS-01) on diarrhea.**

Shimoyama T, Ohno T, Hosono M *et al* (1981) *Medical Consultation and New Remedies* **18(3)**: 617-626.

## Mechanistic Studies

Anti-infective activities of *Lactobacillus* strains in the human intestinal microbiota: from probiotics to gastrointestinal anti-infectious agents. Lievin-Le Moal V, Servin AL (2014) *Clinical Microbiology Reviews* **27(2)**:167.

[PubMed]

**Compounds secreted by *Lactobacillus casei* strain Shirota YIT9029 irreversibly and reversibly impair the swimming motility of *Helicobacter pylori* and *Salmonella enterica* serovar Typhimurium, respectively.**

Liévin-Le Moal V, Fayol-Messaoudi D, Servin AL (2013) *Microbiology* Jul 19 [Epub ahead of print].

[PubMed]

**Inhibitory activity of fermented milk with *Lactobacillus casei* strain Shirota against common multidrug-resistant bacteria causing hospital acquired infections.**

Tiengrim S & Thamlikitkul V (2012) *Journal of the Medical Association of Thailand* **95 (Suppl 2)**: S1-5.

[PubMed]

**Lactic acid bacteria efficiently protect human and animal intestinal epithelial and immune cells from enteric virus infection.**

Maragkoudakis PA, Chingwaru W, Gradisnik L *et al* (2010) *International Journal of Food Microbiology* 141 (Suppl 1): S91-97

[PubMed]

**Gut health promoting activity of new putative probiotic/protective *Lactobacillus* spp. strains: A functional study in the small intestinal cell model.**

Nissen L, Chingwaru W, Sgorbati B, Biavati B, Cencic A (2009) *International Journal of Food Microbiology* 135 (3): 288-294

[PubMed]

**Adherence of probiotic bacteria to human intestinal mucus in healthy infants and during rotavirus infection.**

Juntunen M, Kirjavainen PV, Ouwehand AC *et al* (2001) *Clinical and Diagnostic Laboratory Immunology* **8(2)**:293-296.

[Free paper] [PubMed]