







# What health benefits can consumers get from probiotic food products?

PRODUCT & DOSAGE (CFU* per serving)		All probiotics support gut health, but some offer additional health benefits...	DOSAGE NEEDED
	1 billion	- decreased flatulence, stomach rumbling, and improved stool consistency <sup>1</sup> <b>In patients with irritable bowel syndrome:</b> decreased abdominal pain/discomfort, bloating, and symptom severity <sup>2</sup>	<b>8-25</b> servings per day
	1 billion	-decreased incidence of fever, cough, runny nose, antibiotic use and sick days from school (in children) <sup>3</sup>	<b>10</b> servings per day
	10 billion	-decreased incidence and/or duration of colds/flu <sup>4-6</sup> -decreased incidence, severity, and/or duration of infectious and antibiotic-associated diarrhea <sup>7-10</sup> <b>In asthmatic children:</b> fewer asthma episodes and runny/stuffy nose <sup>11</sup>	<b>1-3</b> servings per day
		<b>In infants of breastfeeding mothers:</b> decreased upset stomach and less medication use <sup>12</sup>	<b>3</b> servings per day
	1 billion	-decreased cavity causing bacteria <sup>13</sup>	<b>½</b> serving per day
	1 billion	-decreased cavity causing bacteria <sup>14, 15</sup> -decreased antibiotic-associated diarrhea <sup>16</sup>	<b>&lt; ½</b> serving per day
		<b>In diabetics:</b> improved glycemic control, cholesterol levels and antioxidant status <sup>17-20</sup>	<b>½-2</b> servings per day
		<b>In patients with non-alcoholic fatty liver disease:</b> decreased liver damage and improved cholesterol levels <sup>21</sup>	
	1-45 billion	<b>Kefir products</b> (pictured left) had the greatest variety of probiotic strains and often the highest dosages. Studies suggest that strain mixtures are more effective than single strains. <sup>22, 23</sup> However, the mixtures in these products have not been studied; thus, health benefits cannot be deduced at this time.	

Many probiotic products (below) did not disclose strain information. Therefore, specific health benefits could not be deduced:



**References:** 1. Guyonnet D et al, Br J Nutr, 2009. 102(11):1654-62; 2. Agrawal A et al, Aliment Pharmacol Ther, 2009. 29(1):104-14; 3. Leyer GJ et al, Pediatrics, 2009. 124(2):e172-9; 4. Guillemard E et al, J Am Coll Nutr, 2010. 29(5):455-68; 5. Guillemard E et al, Br J Nutr, 2010. 103(1):58-68; 6. Merenstein D et al, Eur J Clin Nutr, 2010. 64(7):669-77; 7. Agarwal KN et al, Eur J Clin Nutr, 2002. 56 Suppl 4:S56-9; 8. Hickson M et al, BMJ, 2007. 335(7610):80; 9. Pedone CA et al, Int J Clin Pract, 2000. 54(9):568-71; 10. Pedone CA et al, Int J Clin Pract, 1999. 53(3):179-84; 11. Giovannini M et al, Pediatr Res, 2007. 62(2):215-20; 12. Ortiz-Andrellucchi A et al, Br J Nutr, 2008. 100(4):834-45; 13. Caglar E et al, Acta Odontol Scand, 2008. 66(3):154-8; 14. Ashwin D et al, J Clin Diagn Res, 2015. 9(2):ZC06-9; 15. Singh RP et al, Acta Odontol Scand, 2011. 69(6):389-94; 16. de Vrese M et al, J Dairy Res, 2011. 78(4):396-403; 17. Ejtahed HS et al, Nutrition, 2012. 28(5):539-43; 18. Mohamadshahi M et al, J Res Med Sci, 2014. 19(6):531-6; 19. Ejtahed HS et al, J Dairy Sci, 2011. 94(7):3288-94; 20. Tonucci LB et al, Clin Nutr, 2015; 21. Nabavi S et al, J Dairy Sci, 2014. 97(12):7386-93; 22. Chapman CM et al, Eur J Nutr, 2011. 50(1):1-17; 23. Timmerman HM et al, Int J Food Microbiol, 2004. 96(3):219-33. \*CFU=colony forming units

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