

Actazin® & Green Kiwifruit Clinical Science Summary

Summary of clinical science conducted on Actazin®, other kiwifruit powders and whole green kiwifruit.

Product	Daily dose	Intervention period	RCT	Population			n	Clinical Endpoint Key Results			Ref
				Healthy - no constipation	Healthy - mild constipation	IBS-C/FC		Stool Form	Stool frequency	Symptoms / Ease / Comfort	
Actazin®	600 mg	4 weeks	✓	✓			19	⊖	●	⊖	[1]
	600 mg	4 weeks	✓			✓	9	⊖	●	⊖	
	2,400 mg	4 weeks	✓	✓			19	⊖	●	⊖	
Actazin®	600 mg	4 weeks	✓		✓		43	●	●	●	[2]
Kiwifruit extract	1,000 mg	3 weeks	✓		✓		32	⊖	●	●	[3]
Kiwifruit powder	2,160 mg	1 week	✓		✓		28	●	●	●	[4]
Kiwifruit powder	6 capsules	4 weeks	✗		✓		41	●	●	●	[5]
Kiwifruit powder	3,000 mg	6 weeks	✓		✓		11	⊖	⊖	●	[6]
Kiwifruit powder	5,500 mg	4 weeks	✓		✓		39	●	●	●	[7]
Whole kiwifruit	2 fruit	2 weeks	✓	✓			11	●	●	⊖	[8]
Whole kiwifruit	2 fruit	4 weeks	✓			✓	121	●	●	●	[9,10,11,12,16]
Whole kiwifruit	2 fruit	4 weeks	✗			✓	79	●	●	●	[13]
Whole kiwifruit	2-3 fruit	6 weeks	✗	✓			48	●	●	●	[14]
Whole kiwifruit	2-3 fruit	3 weeks	✗	✓			38	●	●	●	[14]
Whole kiwifruit	4 fruit	3 days	✓	✓			14	●	●	⊖	[15]

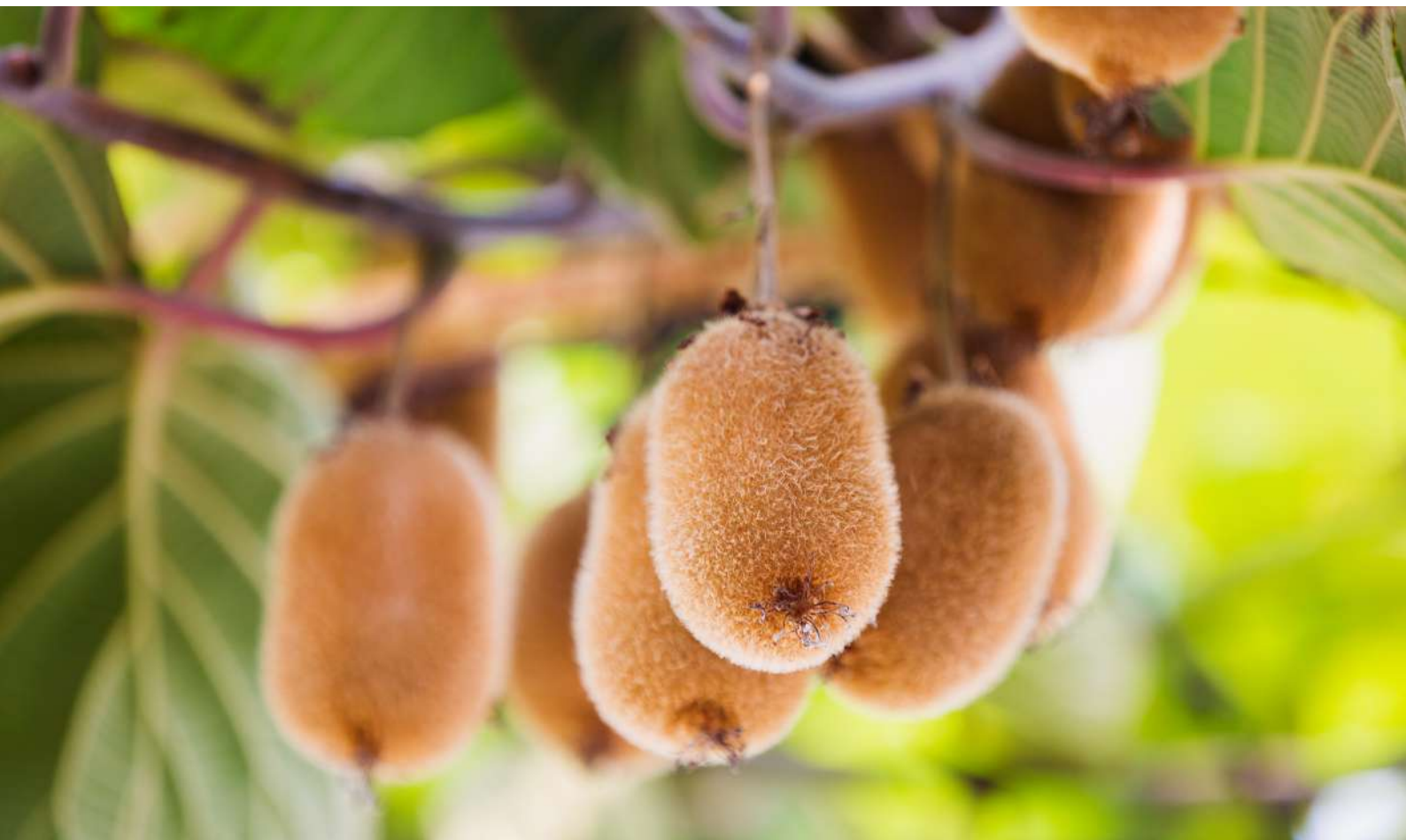
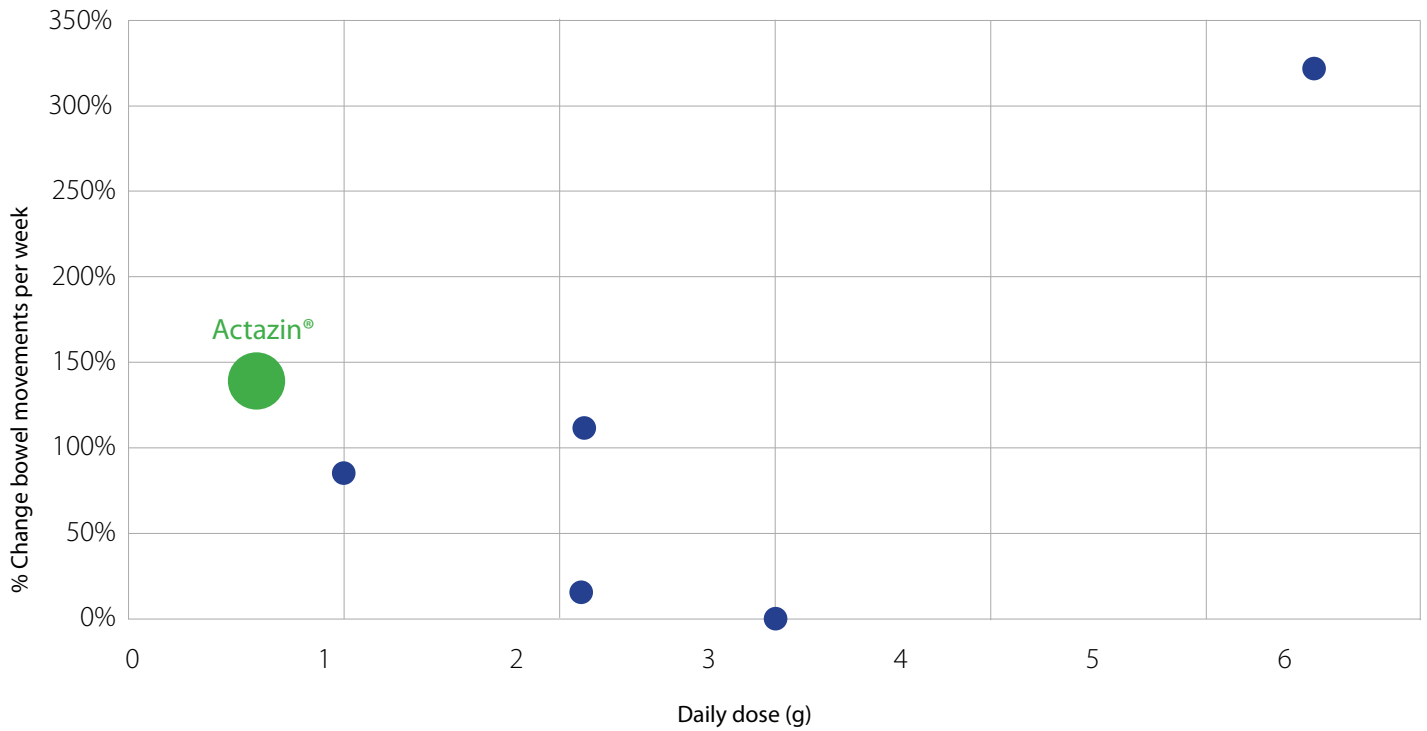
● = significant improvement
 ● = non-significant improvement
 ⊖ = no change, positive result
 ⊖ = no change
 RCT = randomised controlled trial



Actazin® at a low dose of 600 mg significantly increases the number of bowel movements per week in constipated individuals with superior effects compared to other kiwifruit powders at higher doses.

A 600 mg dose of Actazin provides the same benefits to bowel regularity as 2 or more whole green kiwifruit.

Increase in stool frequency following consumption of kiwifruit powders



Clinical studies details

Product	Dose and Intervention period	Study design, population	Clinical Endpoint Key Results			Ref
			Stool Form (Bristol Stool Scale (BSS))	BM number/ frequency	Symptoms / Ease / Comfort	
Actazin®	600mg or 2,400 mg/day; 4 weeks each, 2-week washout	Randomised, double-blind, placebo-controlled, crossover (RCT)	No significant changes - did not induce looser stools in already healthy people	2,400 mg Significant increase in weekly BM + 0.77 in whole group (p = 0.014 vs washout) + 1.47 in responders (p < 0.001 vs washout)	No significant changes*, already healthy	[1]
		Healthy (no constipation), n = 19		600 mg Near-significant increase in weekly BM for whole group +0.56 (p = 0.06 vs washout) Significant increase in weekly BM in responders +1.19 (p = 0.005 vs washout)		
		Functionally constipated, n = 9 (*NB: not sufficiently powered due to recruitment issues)	No significant changes*	Non-significant increase with 600 mg in responders: weekly change = +1.82 (p = 0.087)	No significant changes*	
Actazin®	600 mg/day; 4 weeks each	Multi-centered, randomized, double-blind, placebo-controlled, parallel study (RCT) Healthy with constipation, n = 43	Significantly softer stools, BSS +0.38 (day 14, p < 0.05 vs placebo and baseline)	Significant increase in weekly CSBM +1.44 (at endpoint, p < 0.001 vs baseline)	Significant improvements in abdominal, rectal and stool symptoms and quality of life scores (p < 0.01 vs baseline)	[2]
Kiwifruit powder (water extract)	Freeze-dried water extract of green kiwifruit skin and flesh (Digesten), 1,000 mg/day; 3-weeks, 3-9 week washout	Randomised, double-blind, placebo-controlled, crossover (RCT) Healthy, constipated, n = 32	No significant changes in BSS	Significant increase in weekly BM +2.12 (p < 0.05 vs pre-trial frequency)	Significant improvement in gastrointestinal symptoms score	[3]
Kiwifruit powder (freeze-dried)	Freeze-dried green kiwifruit powder (Zyactinase), 2,160 mg / day 1-week	Randomised, double-blind, placebo-controlled, parallel (RCT) Healthy, constipated, n = 28	Significantly softer stools (no BSS numbers available)	Significant increase in weekly BM +2.6 (p < 0.01 vs baseline and placebo)	Significant improvements in abdominal discomfort	[4]
Kiwifruit powder (freeze-dried)	Freeze-dried green kiwifruit powder (Zyactinase), 2 capsules x 3/ day; No dose info reported. 4-weeks	Open-label, non-randomised, uncontrolled (Experimental study) Elderly, constipated, n = 41	Significantly softer stools (no BSS numbers available)	Significant increase in weekly BM +1.4 (day 21, p < 0.05 vs baseline)	Significant improvement in feeling of abdominal lightness	[5]
Kiwifruit powder (freeze-dried)	Freeze-dried green kiwifruit with skins (Actiphen / Phenactiv), 3,000 mg / day; 6-weeks	Randomised, double-blind, placebo-controlled, parallel (RCT) Healthy, gastrointestinal symptoms, n = 11	No significant changes in BSS	No significant changes in the number of bowel movements	Significant improvement in gastrointestinal symptoms score	[6]
Kiwifruit powder (freeze-dried)	Freeze-dried green kiwifruit powder (Kivia/ Zyactinase), 5.5 g / day; 4-weeks	Randomised, double-blind, placebo-controlled, parallel (RCT) Healthy, constipated, n = 39	Changes in stool form with increases in types 3,4 and 5 reported (no averages available)	Significant increase in weekly BM +2.24 (p = 0.000 vs baseline)	Significant improvements in bloating and abdominal discomfort	[7]
Whole green kiwifruit	Low-flatulogenic diet plus 2 x whole fresh green kiwifruit / day; 2-weeks	Near-significant improvement in BSS +0.5 (p = 0.072 vs no kiwifruit)	Significantly higher BM frequency compared to control group (+2.1 BM/ week, p = 0.001)	Significantly higher BM frequency compared to control group (+2.1 BM/ week, p = 0.001)	No significant difference in abdominal symptom scores or abdominal distension	[8]
Whole green kiwifruit	2 x whole fresh green kiwifruit / day; 4-weeks, 4-week washout Psyllium as positive control	Multi-centred, randomised, single-blind, crossover (RCT) Functionally constipated, n = 60 IBS-C, n = 61 Healthy, n = 63	Significantly softer stools, BSS +0.6 (FC + IBS-C, p < 0.0001 vs baseline)	Significant increase in weekly BM: +1.69 (IBS-C+FC, P < 0.0001) Significant increase +1.19 BM/week in healthy controls (p = 0.0022) +0.9/week for psyllium (IBS-C+FC groups, p = 0.0007)	Significant improvement in gastrointestinal symptoms scores; significant reduction in straining and abdominal pain	[9-12, 16]
Whole green kiwifruit	2 x whole fresh green kiwifruit / day; 4-weeks Compared to psyllium and prunes	Parallel, partially randomized, exploratory trial Functionally constipated and IBS-C, n = 79	Significantly softer stools, BSS +0.4 (p = 0.01 vs baseline) Prunes but not psyllium significantly improved BSS	Significant increase in weekly BM: +1.0 (p < 0.01 vs baseline) Prunes (+2.7) and psyllium (+1.7) significantly increased weekly BM	Significant improvement in straining (p < 0.01) and bloating (p = 0.02) Prunes and psyllium improved straining, but not bloating	[13]
Whole green kiwifruit	1 x whole fresh green kiwifruit per 30 kg body weight (2-3 fruit) / day; 6-weeks, no washout	Randomised, uncontrolled, crossover (preliminary study) Healthy elderly, n = 48	Significant improvement (14%) in consistency (p < 0.0001; NB: not BSS)	Near-significant increase in weekly BM +0.54 (p = 0.06 vs no kiwifruit)	Significant improvement in ease (p < 0.0001 vs no kiwifruit)	[14]
Whole green kiwifruit	1 x whole fresh green kiwifruit per 30 kg body weight (2-3 fruit) / day; 3-weeks, no washout	Randomised, uncontrolled, crossover (Experimental study) Healthy elderly, n = 38	Significant improvement (12%) in consistency (p < 0.0001; NB: not BSS)	Significant increase in weekly BM +0.91 (p = 0.012 vs no kiwifruit)	Significant improvement in ease (p < 0.0001 vs no kiwifruit)	[14]
Whole green kiwifruit	2 x whole fresh green kiwifruit twice daily; 3 days, 2-week washout	Randomised, crossover Healthy, n = 14	Significantly softer stools, BSS +0.6 (p = 0.011 vs control)	Significantly higher BM frequency, +0.32 BM/day vs control (p = 0.034)	No significant difference in adverse symptom scores	[15]

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