Hypnotherapy for Functional Gastrointestinal Disorders

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Functional gastrointestinal disorders

Irritable bowel syndrome

Functional dyspepsia

Non cardiac chest pain

Biliary dyskinesia

Proctalgia fugax

Irritable bowel syndrome

Perception of IBS

Nuisance rather than serious

Not life threatening

Largely psychological

Symptoms of IBS

Abdominal pain - any site

Abdominal bloating/distension

Disordered bowel habit

- diarrhoea
- constipation
- alternating

IBS

Severity underestimated

Severity of illness

Pain (severity)

Miller el 2004

Severity of illness

Pain (severity)

IBS-D (urgency, incontinence)

Severity of illness

Pain (severity)

IBS-D (urgency, incontinence)

IBS-C (BO x 1/week or more)

Severity of illness

Pain (severity)

IBS-D (urgency, incontinence)

IBS-C (BO x 1/week or more)

Exaggerated gastro-colonic reflex

Severity of illness

Pain (severity)

IBS-D (urgency, incontinence)

IBS-C (BO x 1/week or more)

Exaggerated gastro-colonic reflex

IBS D - Afraid to eat: diarrhoea worse (housebound)

Severity of illness

Pain (severity)

IBS-D (urgency, incontinence)

IBS-C (BO x 1/week or more)

Exaggerated gastro-colonic reflex

IBS D - Afraid to eat: diarrhoea worse (housebound)

IBS C - Afraid to eat: pain worse (can get out)

Severity of illness

Pain (severity)

IBS-D (urgency, incontinence)

IBS-C (BO x 1/week or more)

Exaggerated gastro-colonic reflex

IBS D - Afraid to eat: diarrhoea worse (housebound)

IBS C - Afraid to eat: pain worse (can get out)

Bloating and distension (particularly IBS-C)

Severity of illness

Sexual function

Guthrie et al 1987

Severity of illness

Sexual function

Other symptoms

Non colonic symptoms

Nausea

Chest pain

Backache

Lethargy

Urinary symptoms

Gynaecological symptoms

→ burden of illness

→ diagnostically useful

→ inappropriate referral

Whorwell et al, 1986
Maxton et al, 1991

Inappropriate referral

(gynaecological, urological, orthopaedic, geriatric)

Poor outcome

Unnecessary investigation

Unnecessary treatment

Prior et al, 1989
Francis et al, 1997
Agrawal et al, 2009

Severity of illness

Sexual function

Extra-intestinal features

Absenteeism from work

Schuster 1991

Severity of illness

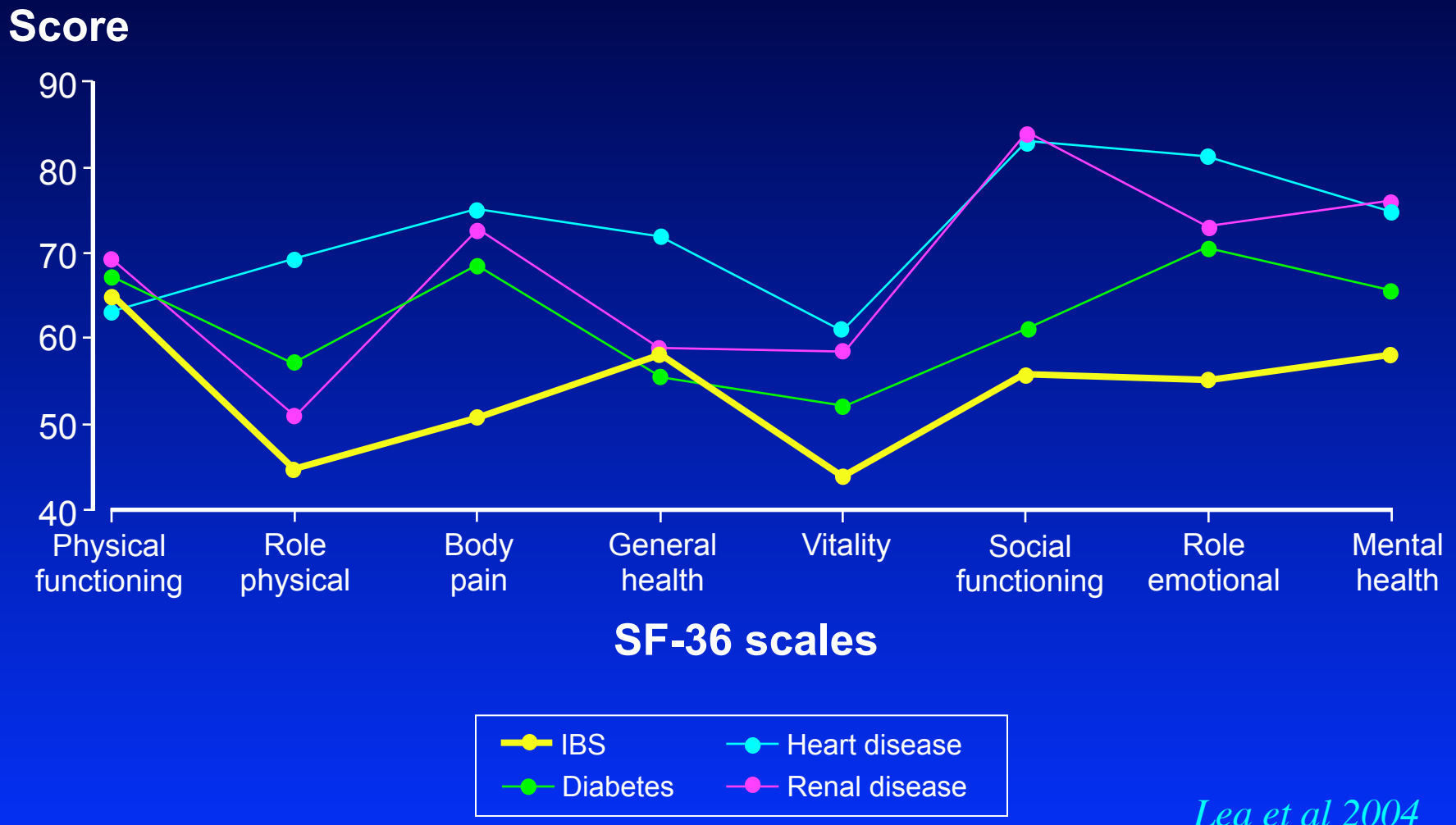
Sexual function

Extra-intestinal features

Absenteeism from work

Quality of life

Mean SF-36 scores for subjects with IBS compared with other medical conditions



Lea et al 2004

Faecal incontinence

500 consecutive IBS patients

IBS-D 65%

IBS-A 63%

IBS –C 38% (laxatives 35%)

23% not told anyone

Only 50% had told their doctor

66% carried a change of clothes

30% regularly used incontinence pads

Atarodi et al, 2015

Other issues

Wind

Other issues

Wind

Stigmatised

Other issues

Wind

Stigmatised

Inadequacies of treatment

Other issues

Wind

Stigmatised

Inadequacies of treatment

Hopelessness

Other issues

Wind

Stigmatised

Inadequacies of treatment

Hopelessness

Suicide

Suicidal ideation in IBS

Comparison of severe IBS with active ulcerative colitis and Crohn's disease

"*Have you ever seriously contemplated or attempted suicide solely on account of your gastrointestinal disorder as opposed any other issues*"

Suicide data in IBS and IBD

	tertiary care IBS	active IBD
Mean age	51.1	45.8
Suicidal thoughts concerning disease	38%	15%
Attempted suicide because of disease	5%	1%
Mean depression score	8.3	5.6
Symptoms rated as severe	70%	40%
Substantial interference with life	71%	41%
Treatment considered adequate	36%	64%

Miller et al 2004

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Indicator of hopelessness and despair

Management

Pathophysiology

Multifactorial

Motility

Visceral sensitivity

Central processing

Inheritance

Inflammation

Bacterial imbalance (dysbiosis)

Dietary factors

Psychological factors

Treatment approach

There is no single ‘stand alone’ treatment

Education

Dietary manipulation

Medication

Support - helpline

Behavioural approaches

‘Alternative’ drugs

Palliation

Education

Positive diagnosis

Understanding the disorder (multifactorial)

Explanation of symptoms (IBS / non colonic)

Role of investigation (avoid disappointment)

Tailor treatment to the patient

What can and cannot be achieved (no cure, but control)

Follow up until under control

The IBS patient

Eating makes symptoms worse

Ragnarsson et al, 1998

Patient : blames food

dietary allergy

wants discussion of food

diet sheet

Dietary management

Cereal fibre

Overall symptomatic response to fibre

Fibre Source	Better		Worse		Unchanged	
Cereal fibre	11	(11%)	55	(55%)	33	(33%)
Cornflakes	0		0		88	(100%)
Rice Crispies	0		0		81	(100%)
Porridge	0		9	(12%)	66	(88%)
Muesli	0		21	(27%)	58	(73%)
Vegetables	3	(3%)	24	(25%)	71	(72%)
Fruit	5	(5%)	42	(45%)	47	(50%)
Pulses	0		22	(25%)	65	(75%)
Nuts	0		23	(27%)	61	(73%)
Proprietary fibre	27	(39%)	15	(22%)	27	(39%)

Francis et al, 1994

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Diet sheet

Cereal fibre exclusion

Refined wheat allowed (eg white bread)

3 month trial

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Francis et al, 1994

Carbohydrate intolerance

(fermentable oligo- di- mono- saccharides and polyols FODMAPS)

Examples:

Fructose
Lactose
Fructans
Galactans
Sorbitol

Cause problems in IBS
Widely used in the food industry
Occur in fruit and vegetables

Foods with high fructose content

(in ascending order)

Pineapple
Orange
Melon
Honey
Mandarin
Peach
Mango
Apple
Pear
Fruit juice

Foods containing polyols

Fruits

Apples

Pears

Apricots

Peaches

Plums

Cherries

Nectarines

Artificial sweeteners

Sorbitol

Mannitol

Isomalt

Xylitol

Vegetables

Fibre and FODMAPS!

Is 5 a day good advice for IBS?

Drugs

Antispasmodics

Anti-diarrhoeals

Laxatives

Antidepressants

Other approaches

Acupuncture - equivocal

Probiotics

Behavioural approaches

Behavioural Treatments

Psychotherapy

Cognitive behavioural hypnotherapy

Hypnotherapy

Hypnotherapy for GI disorders

IBS

Motility

Visceral sensitivity

Central processing

Inheritance

Inflammation

bacterial imbalance

Dietary factors

Anxiety

IBS

Motility

Visceral sensitivity

Central processing

Inheritance

Inflammation

bacterial imbalance

Dietary factors

Psychological factors

Hypnotherapy

Documentary

Don’t do it!

Consultant in Manchester

Learnt the technique

Practice

IBS Trial

Hypnotherapy package

Gut focused

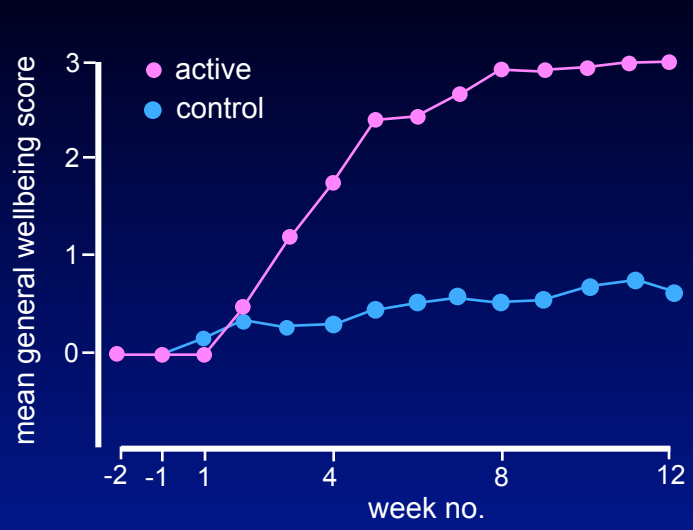
Tutorial on IBS

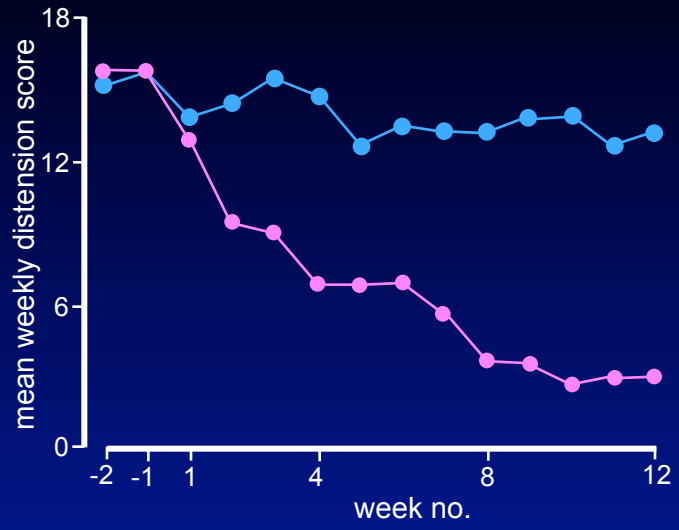
Normalisation of function:
- tactile
- visualisation

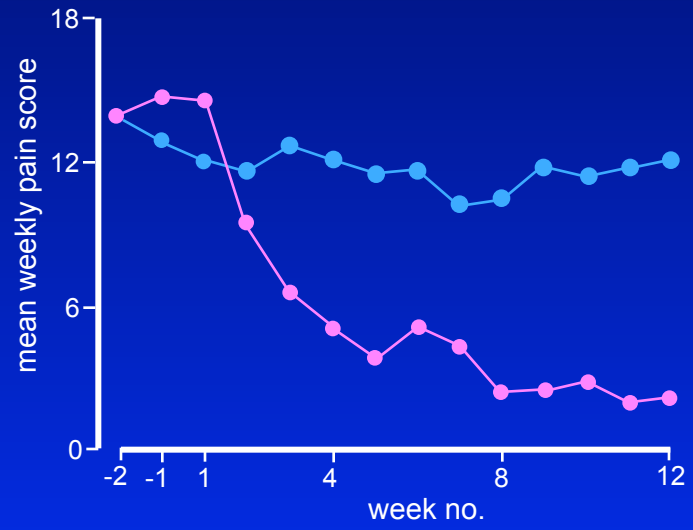
Weekly intervals

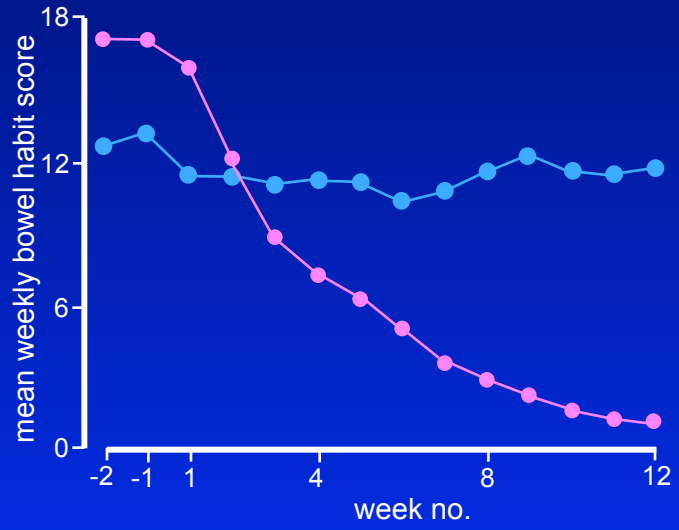
Daily practice with audio recording

Google: Vasant & Whorwell

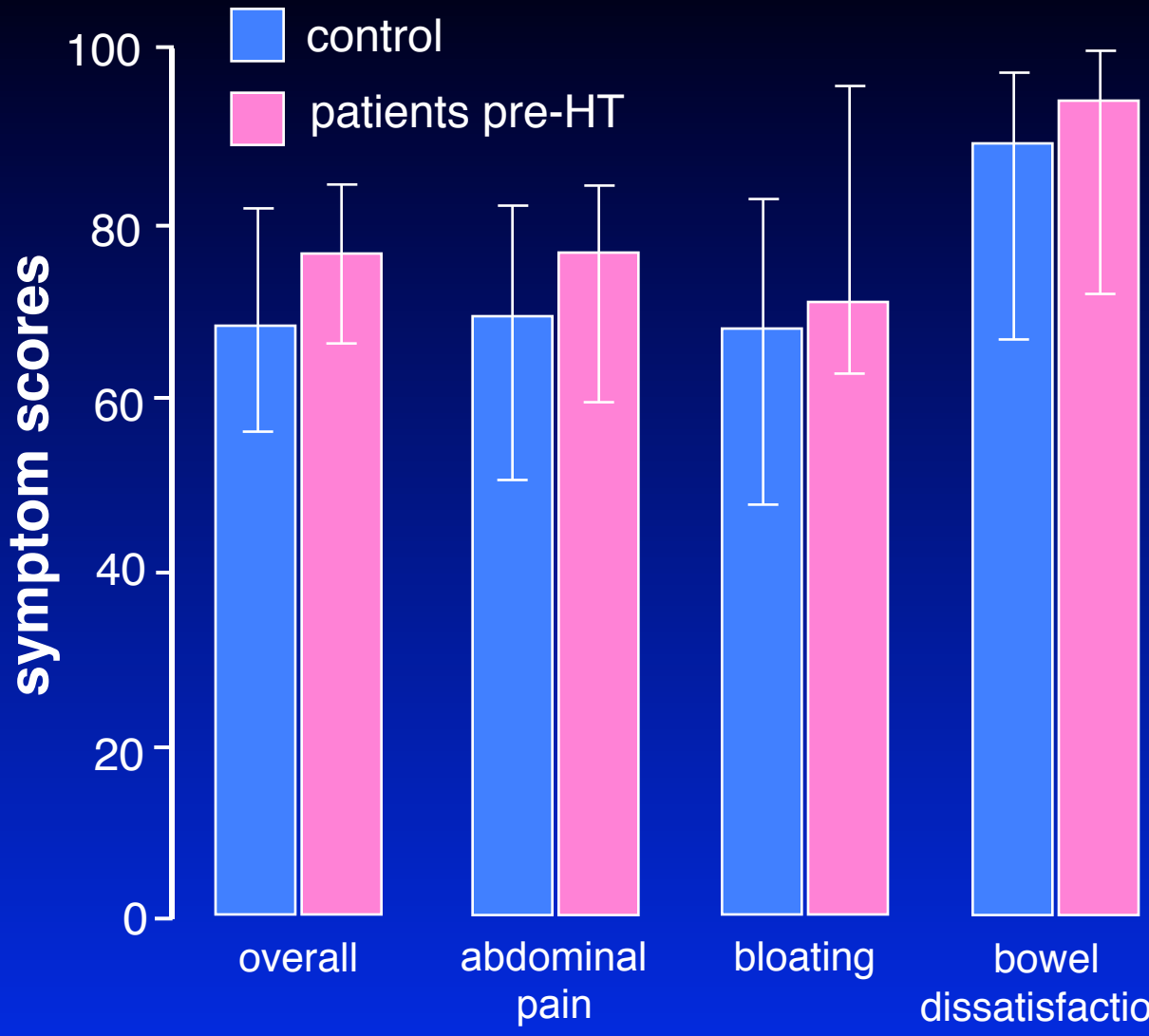






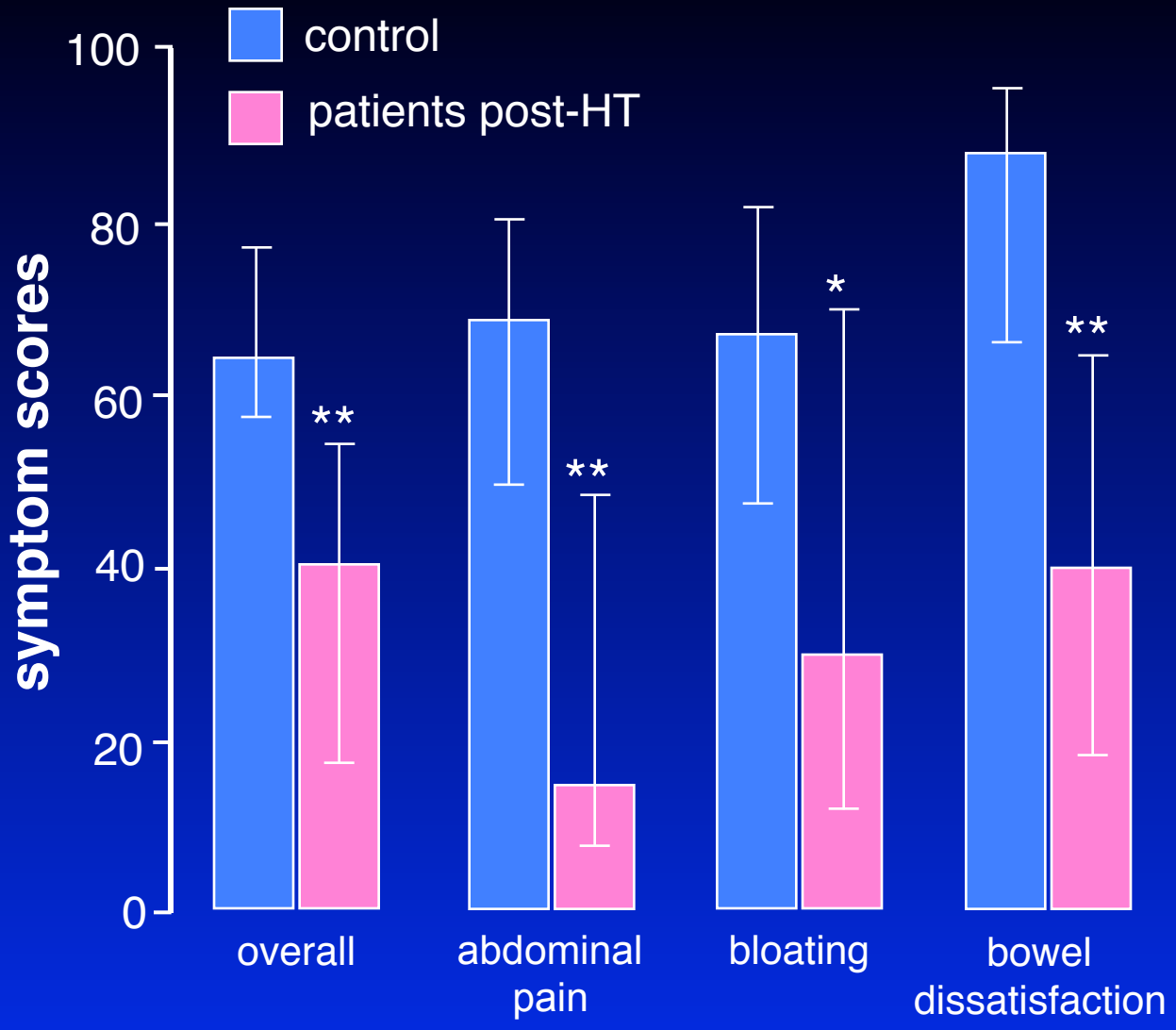


Lancet 1984 2 1232-1234



Results expressed as median and interquartile range

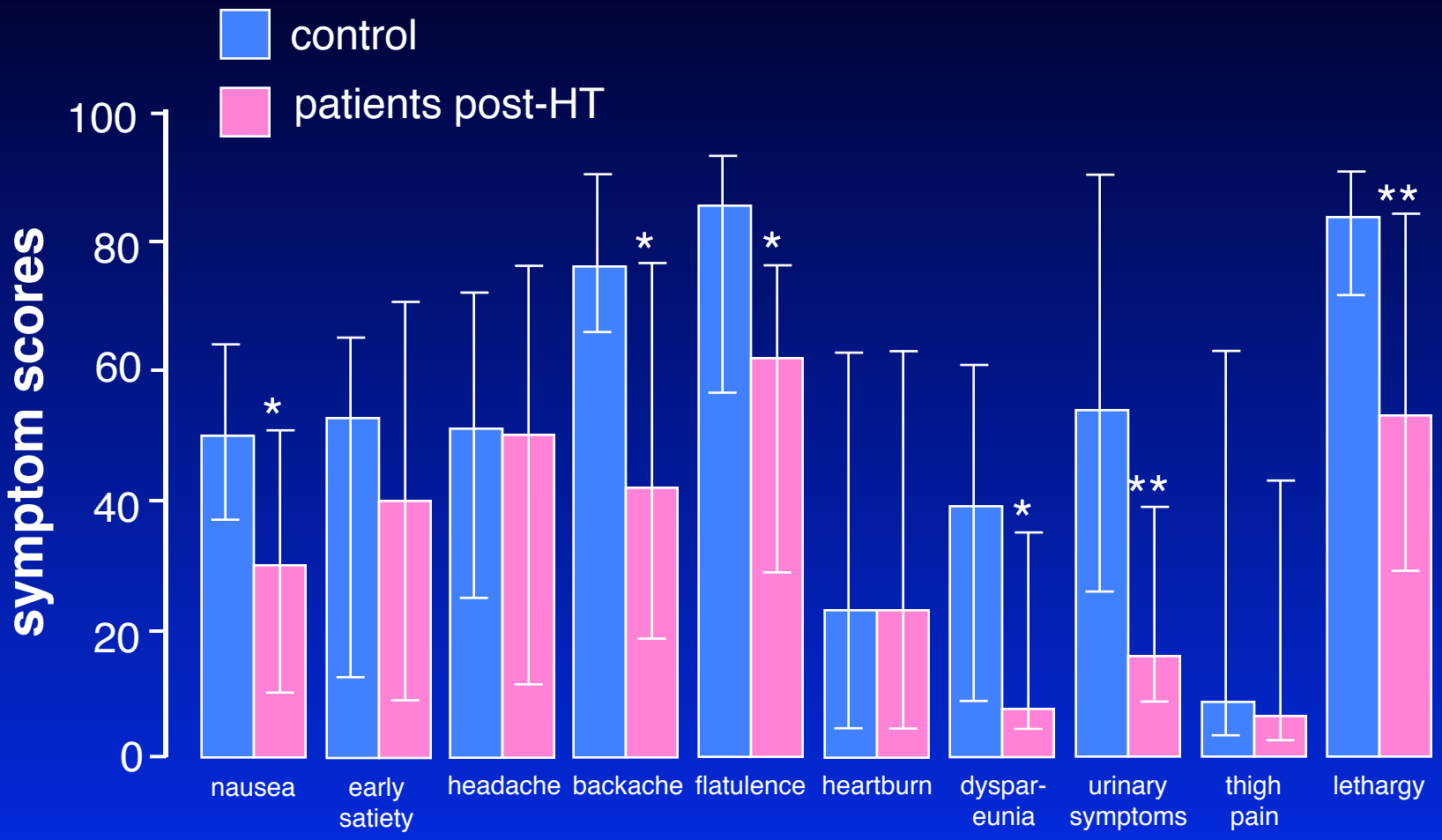
Alimentary Pharmacology and Therapeutics 1996;10:91-95



*Results expressed as median and interquartile range * p<0.05;** p<0.0001*

Alimentary Pharmacology and Therapeutics 1996;10:91-95

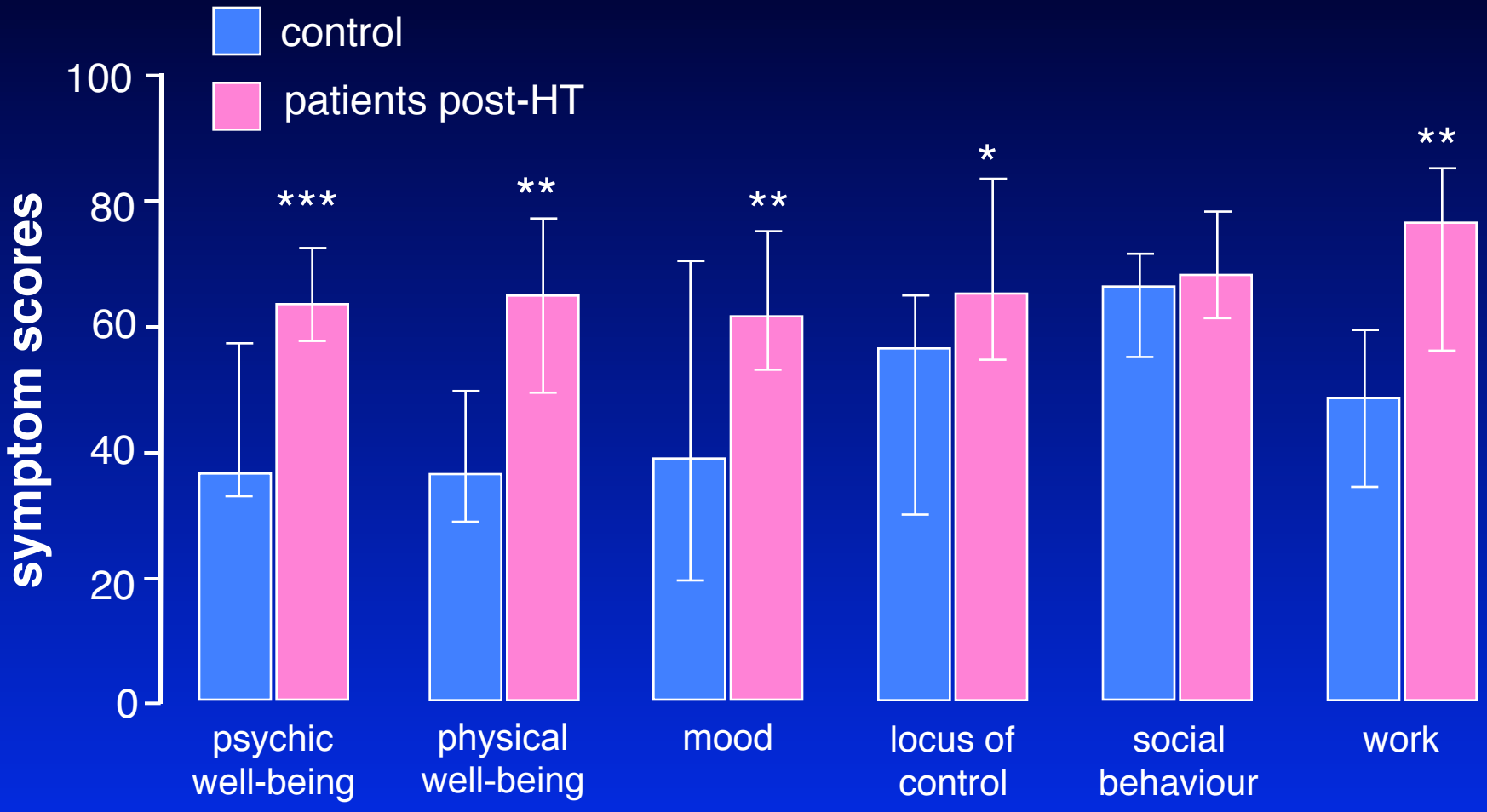
Non-colonic symptoms



*Results expressed as median and interquartile range ** p<0.01; * p≤0.05*

Alimentary Pharmacology and Therapeutics 1996;10:91-95

Quality of life



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Additional advantages

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Less GP consultations

- for IBS

Alimentary Pharmacology and Therapeutics 1996;10:91-95

Additional advantages

Back to work

Less time off work

More effective at work

Less GP consultations

- for IBS
- for other conditions

Alimentary Pharmacology and Therapeutics 1996;10:91-95

Established NHS service with 6 therapists

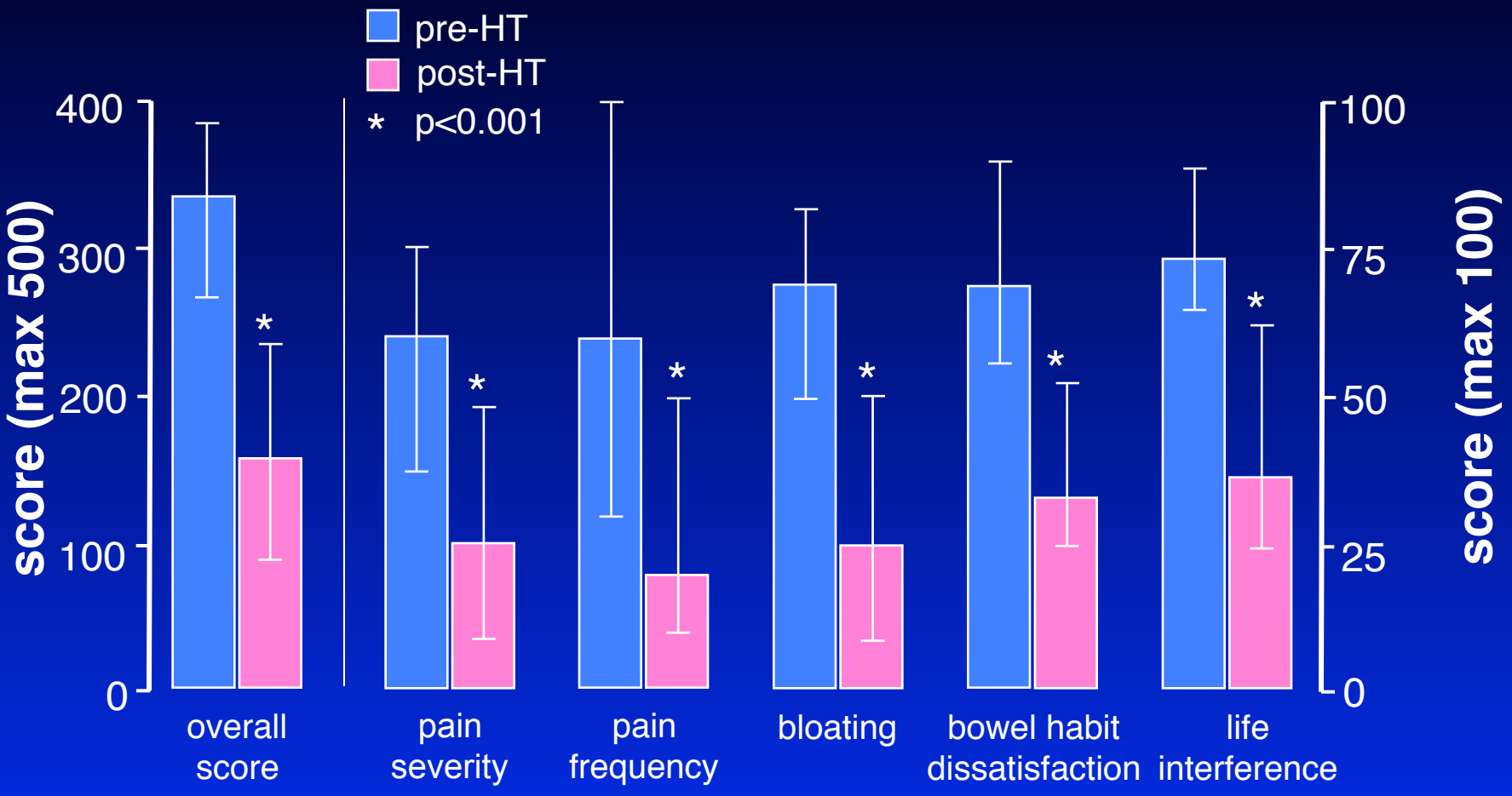
Results for first 250 treated

Patients referred from GI clinic

All patients treated

Very severe cases included

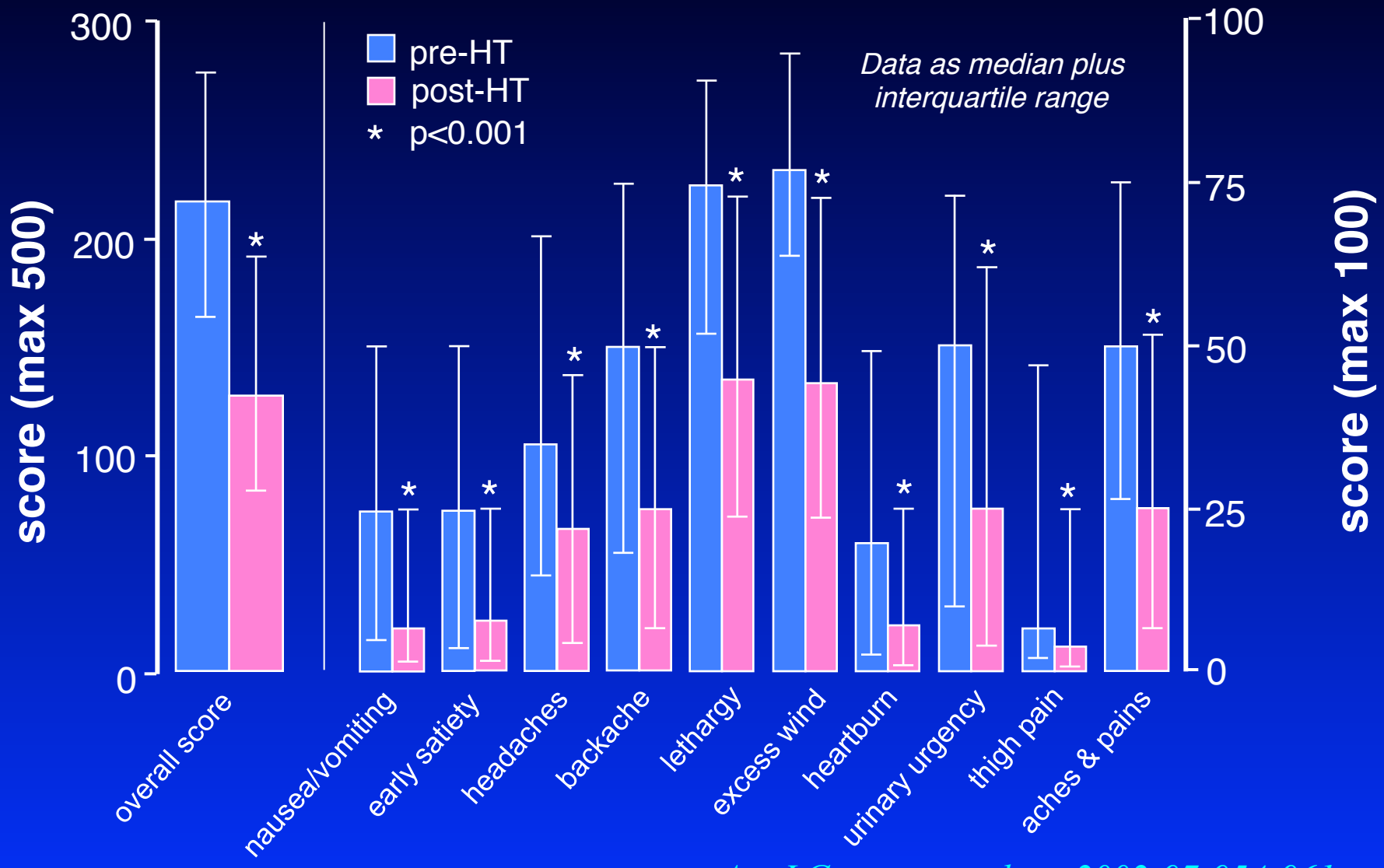
IBS symptom score



Data as median plus interquartile range

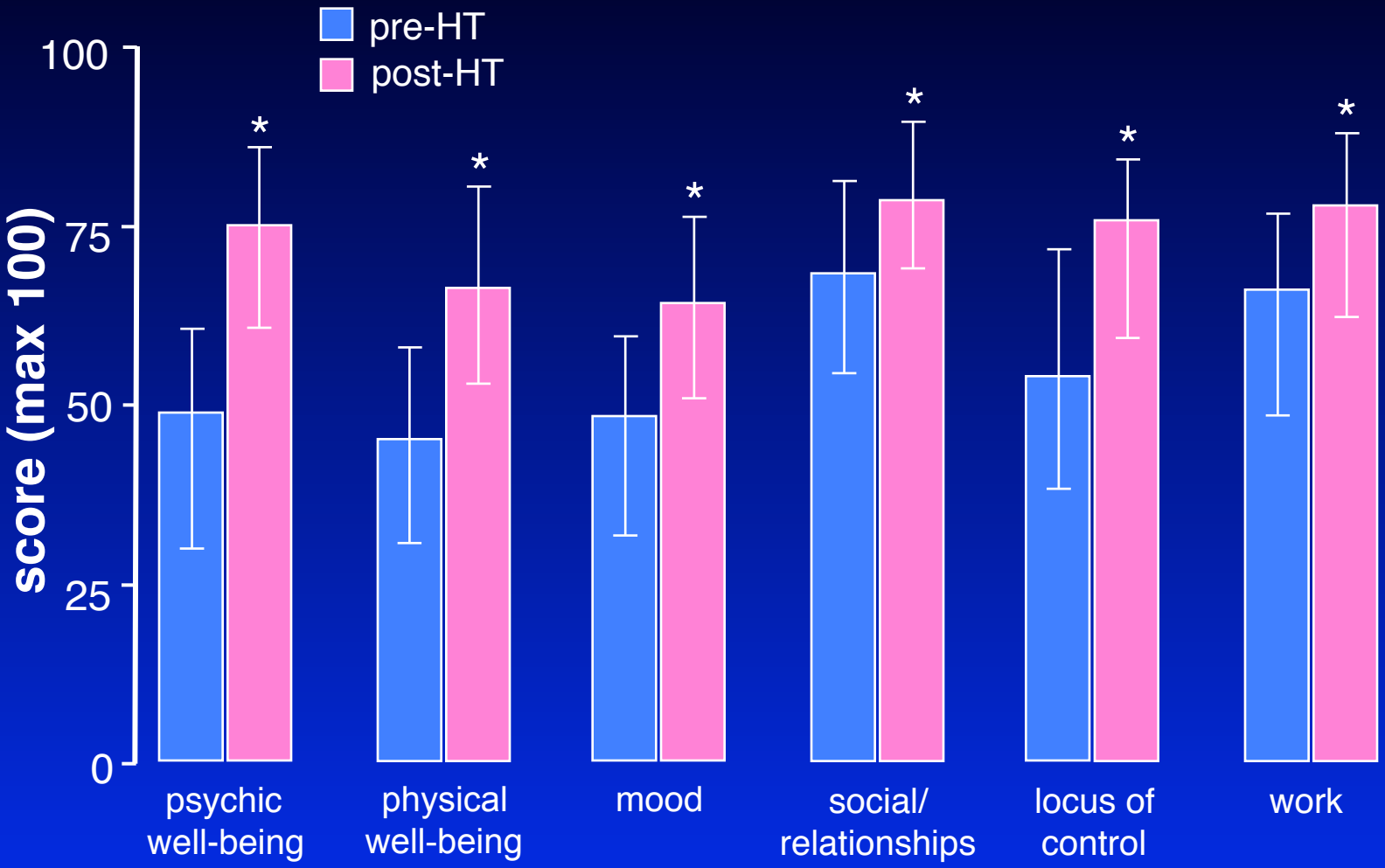
Am J Gastroenterology 2002;97:954-961

Non-colonic features



Am J Gastroenterology 2002;97:954-961

Quality of life measures



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Anxiety and depression
HAD scores

	pre-HT	post-HT	'p' value
HAD 'A' Score	11.1 ± 0.3	7.3 ± 0.3	p<0.001
% anxious (score ≥9)	68.3%	34.6%	p<0.001
HAD 'D' Score	7.2 ± 0.3	4.1 ± 0.3	p<0.001
% depressed (score ≥9)	36.1%	14.6%	p<0.001

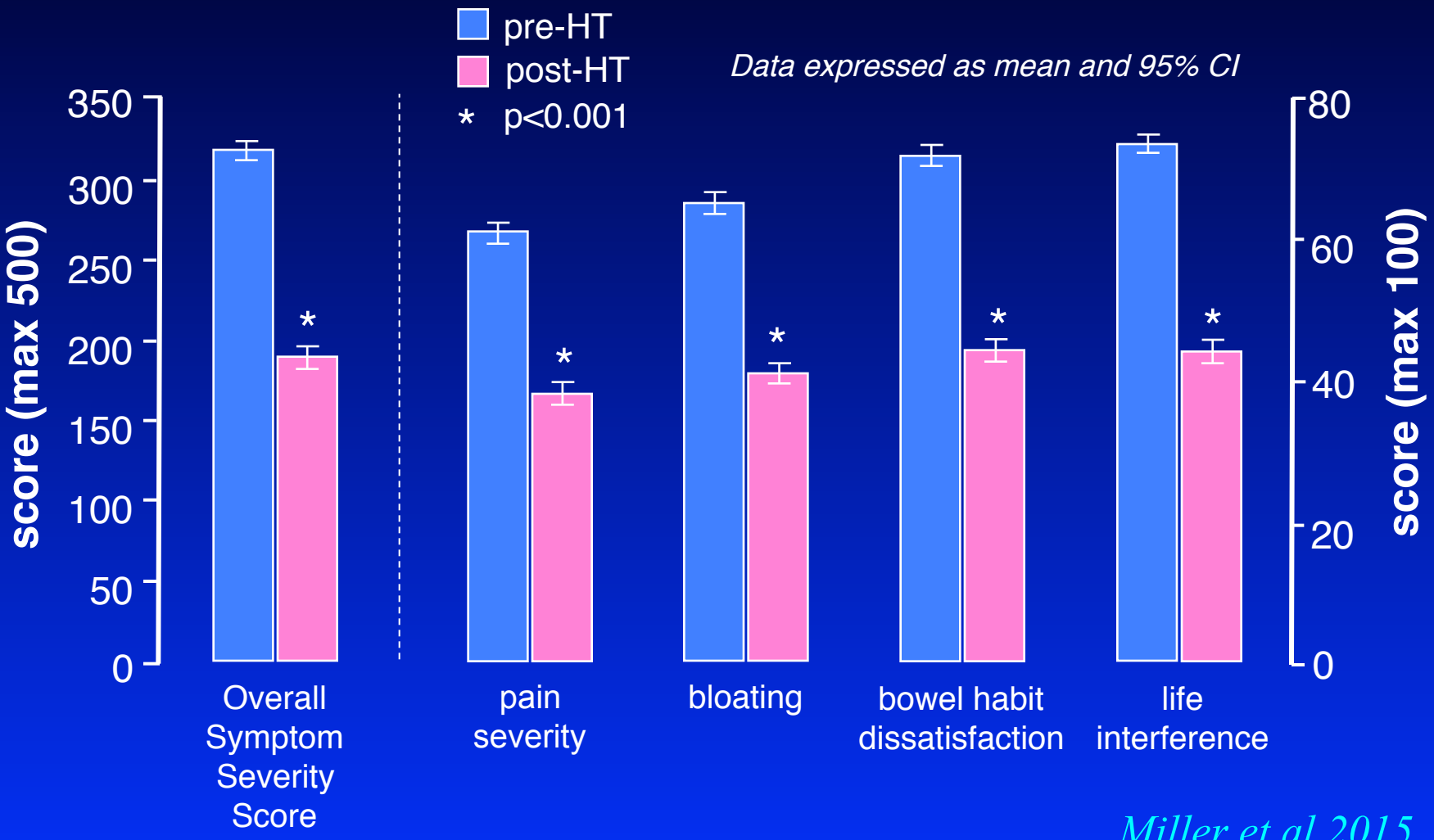
HAD Scores expressed as mean ± S.E.M.
**post-HT v pre-HT, paired 't' test*

Am J Gastroenterology 2002;97:954-961

Hypnotherapy for irritable bowel syndrome: an audit of 1000 patients

Miller et al Aliment Pharmacol Ther 2015;41:844-55

IBS symptom severity score



Miller et al 2015

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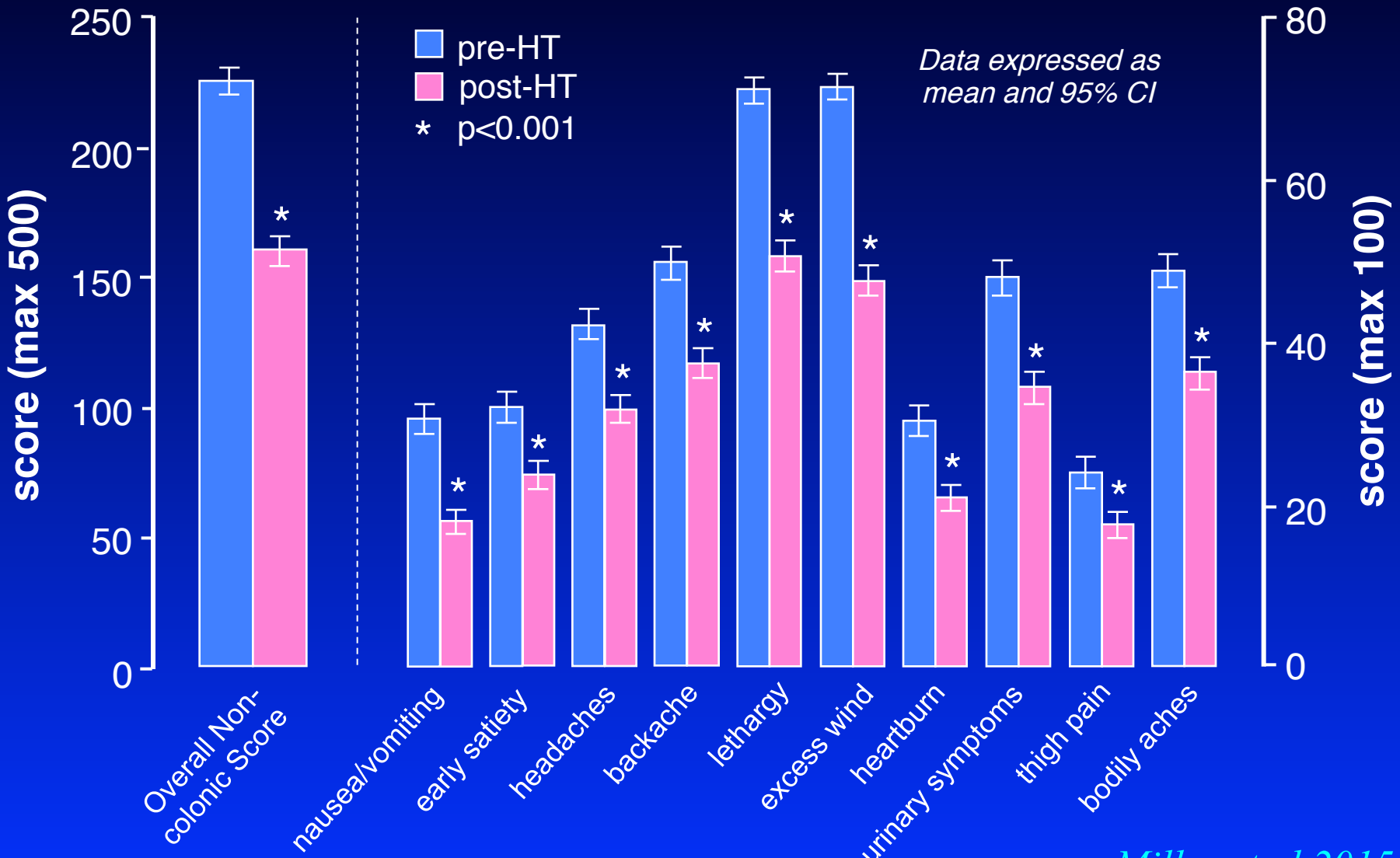

Miller et al 2015

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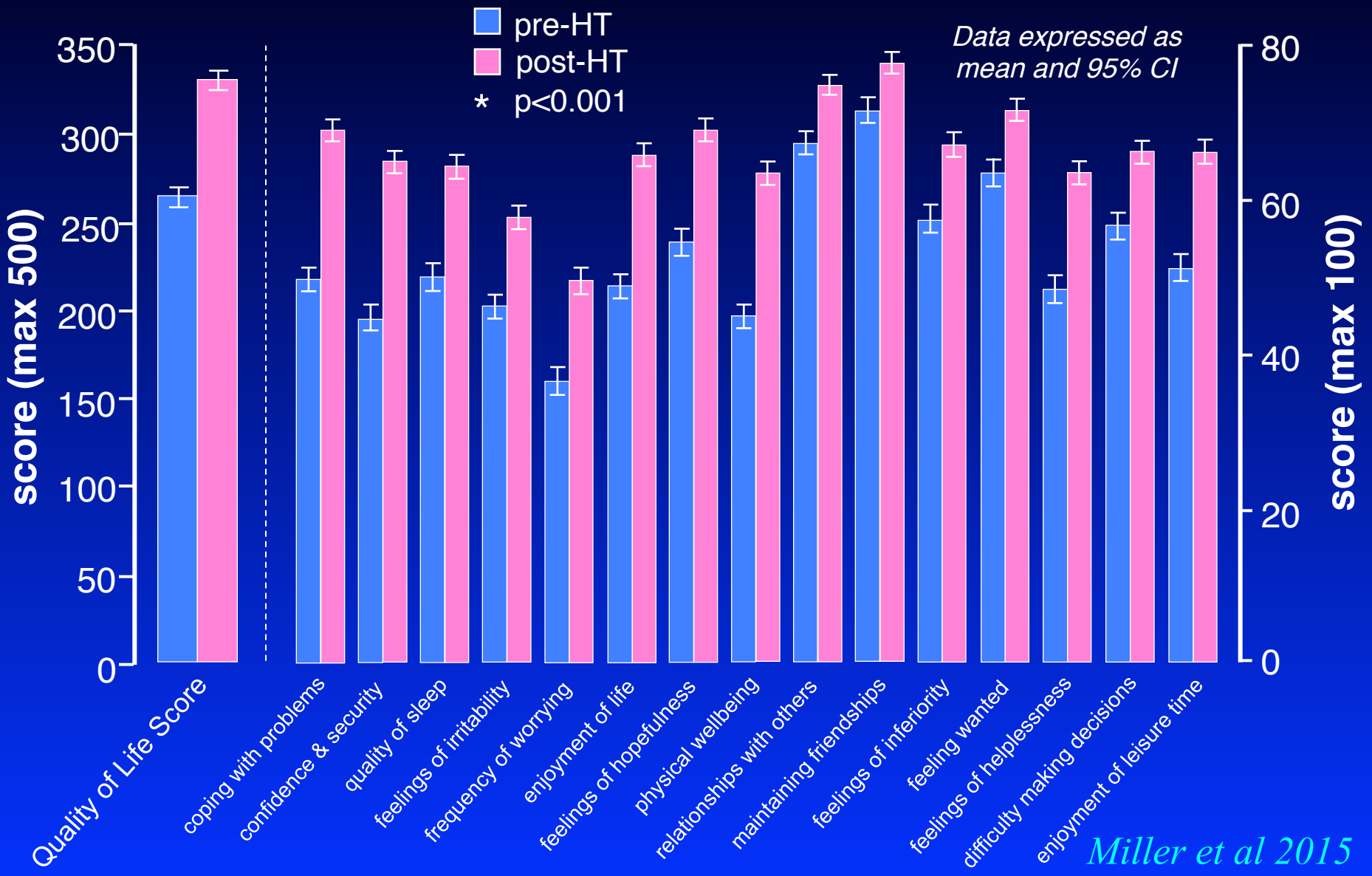


Miller et al 2015

Audit of 1000 patients

76% of patients achieved a 50 point or more(clinically significant) reduction in symptom severity score

Overall response rate 80% in females and 62% in males

67% achieved 30% or more reduction in pain scores (FDA requirement)

Miller et al 2015

Confirmation of results

Harvey et al. *Lancet 1989;1:424-425*

Galovski and Blanchard. *Appl Psychophysiol Biofeedback 1998;23:219-232*

Vidakovic-Vukic. *Scan J Gastroenterol 1999;230(supp):49-51*

Forbes et al. *Internat J Colorect Dis 2000;15:328-34*

Palsson et al. *Dig Dis Sci 2002;47:2605-14*

Simren et al. *Psychosomatic Med 2004;66:233-8*

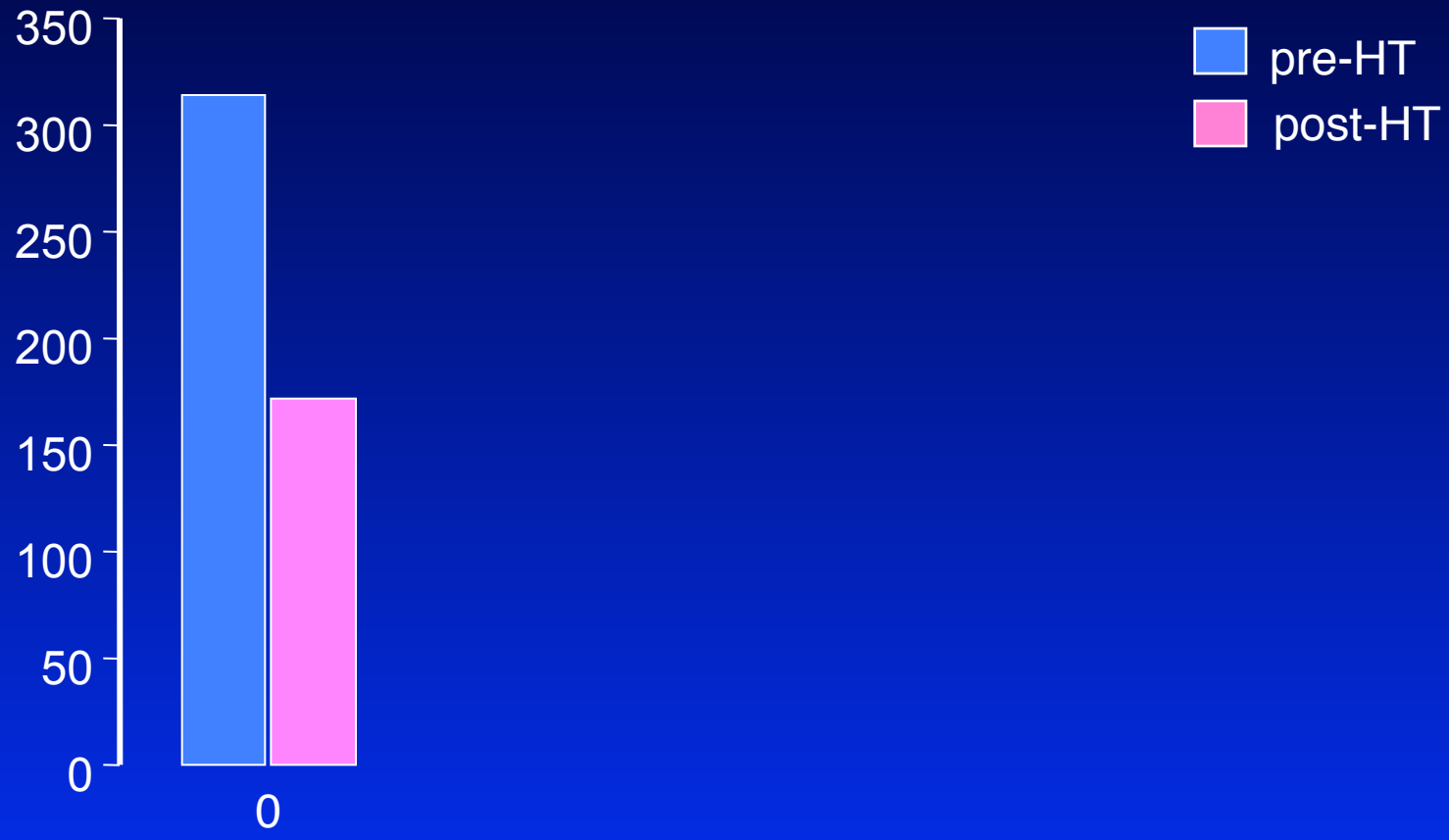
Lindfors et al. *Am J Gastroenterol 2012;107:276-85*

Moser et al. *Am J Gastroenterol 2013;10:602-9*

Long term benefits of hypnotherapy

Long term benefits in IBS

Total symptom scores



Gut 2003;52:1623-9

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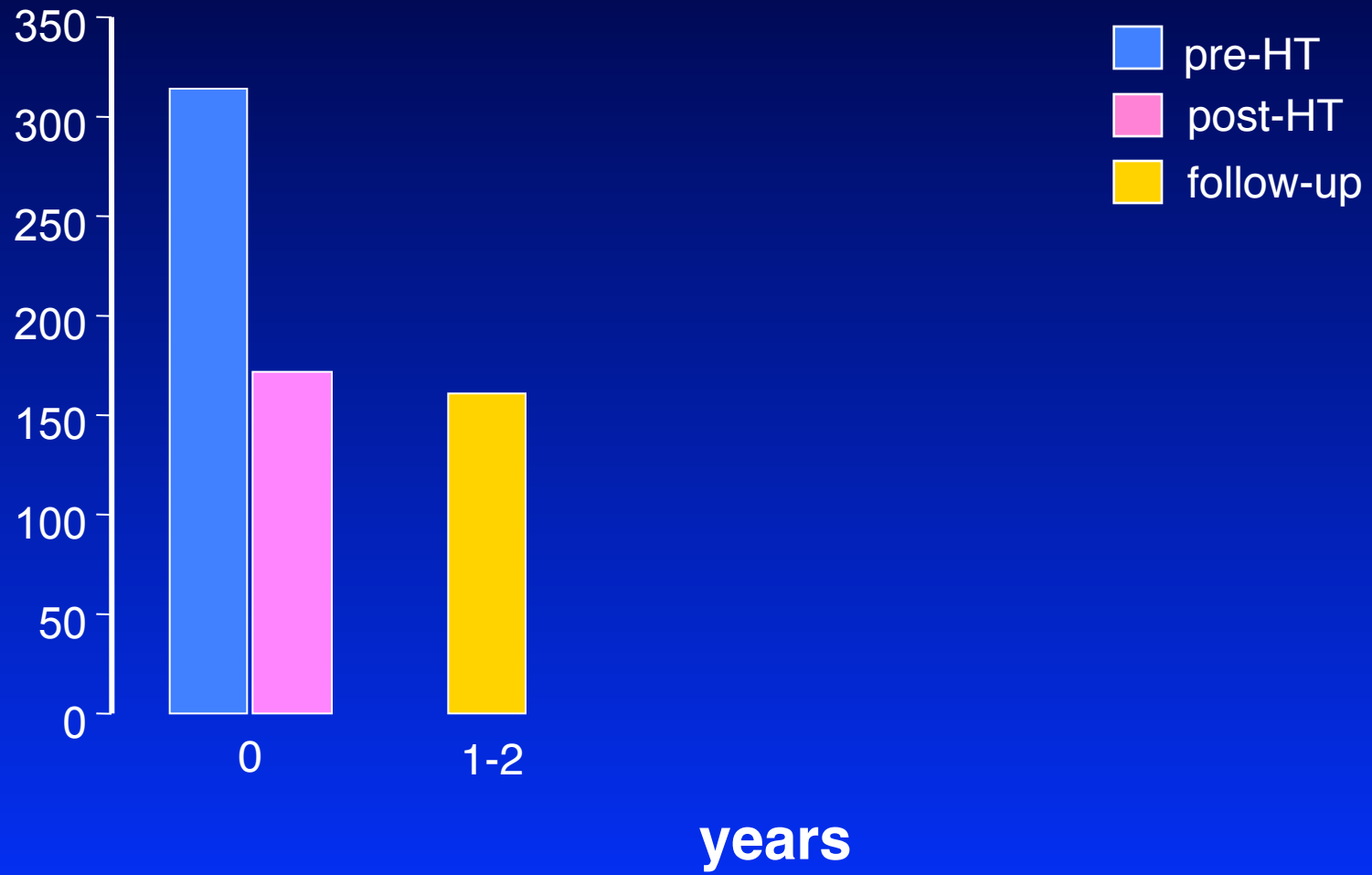

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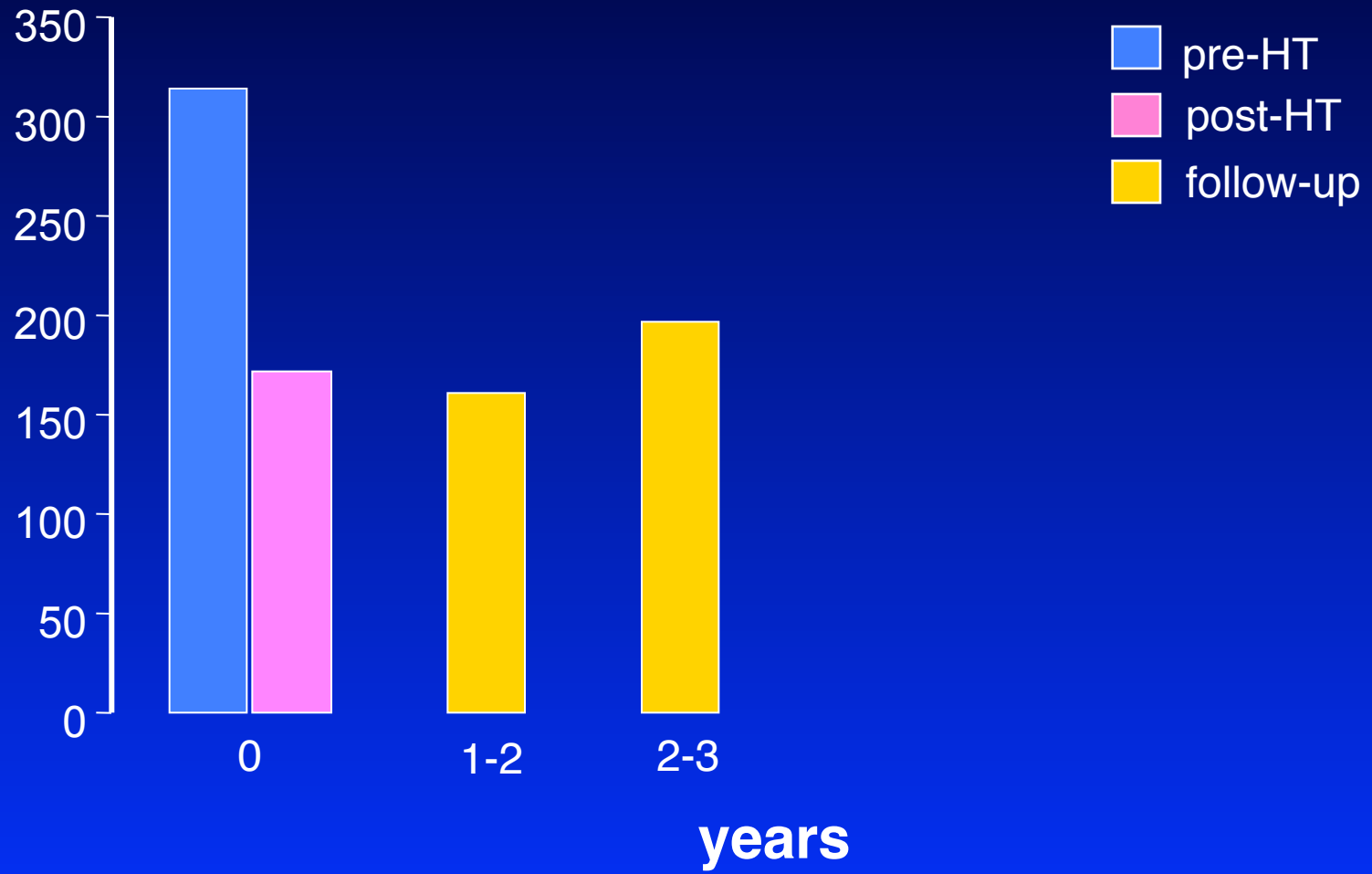

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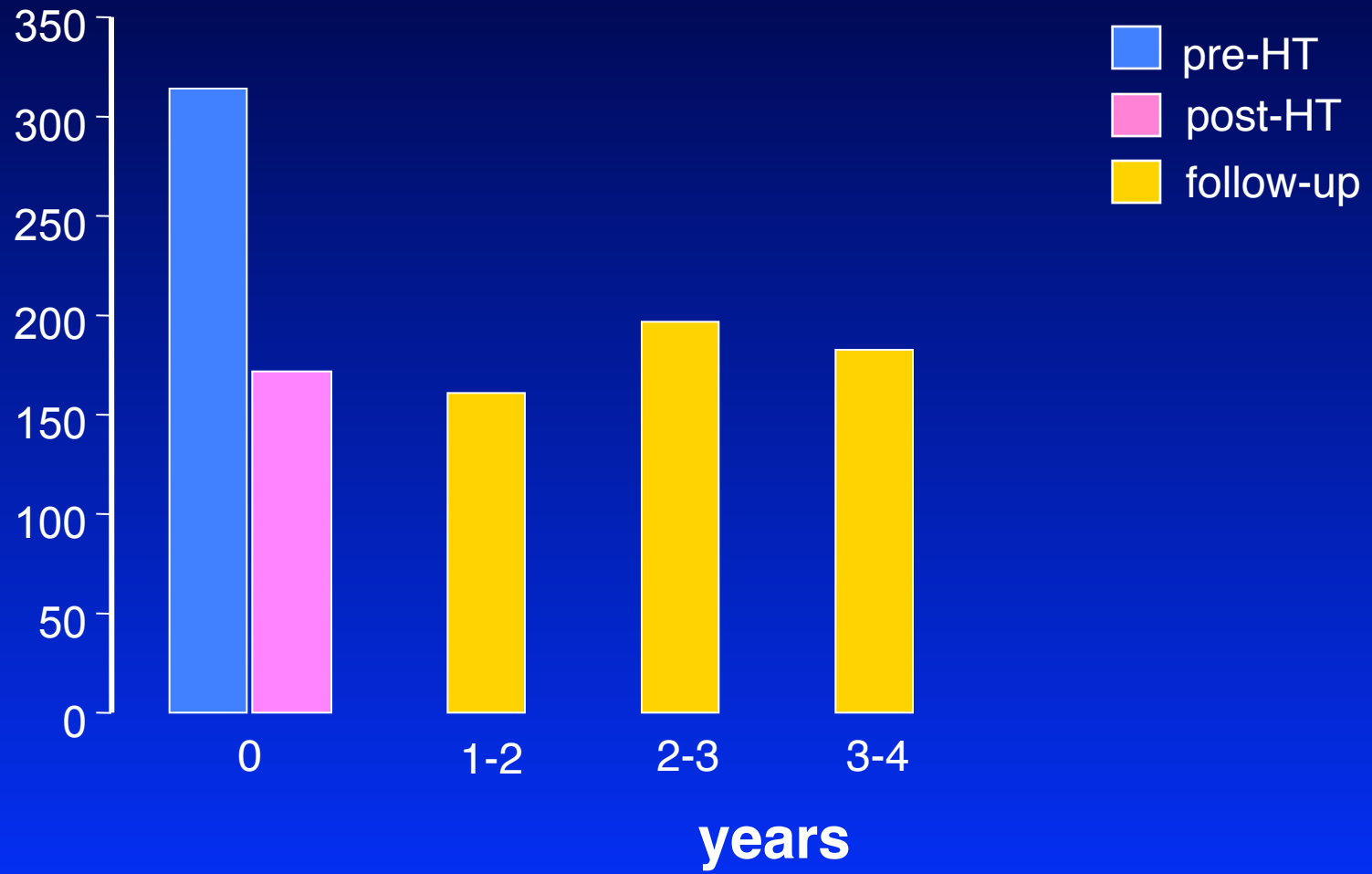

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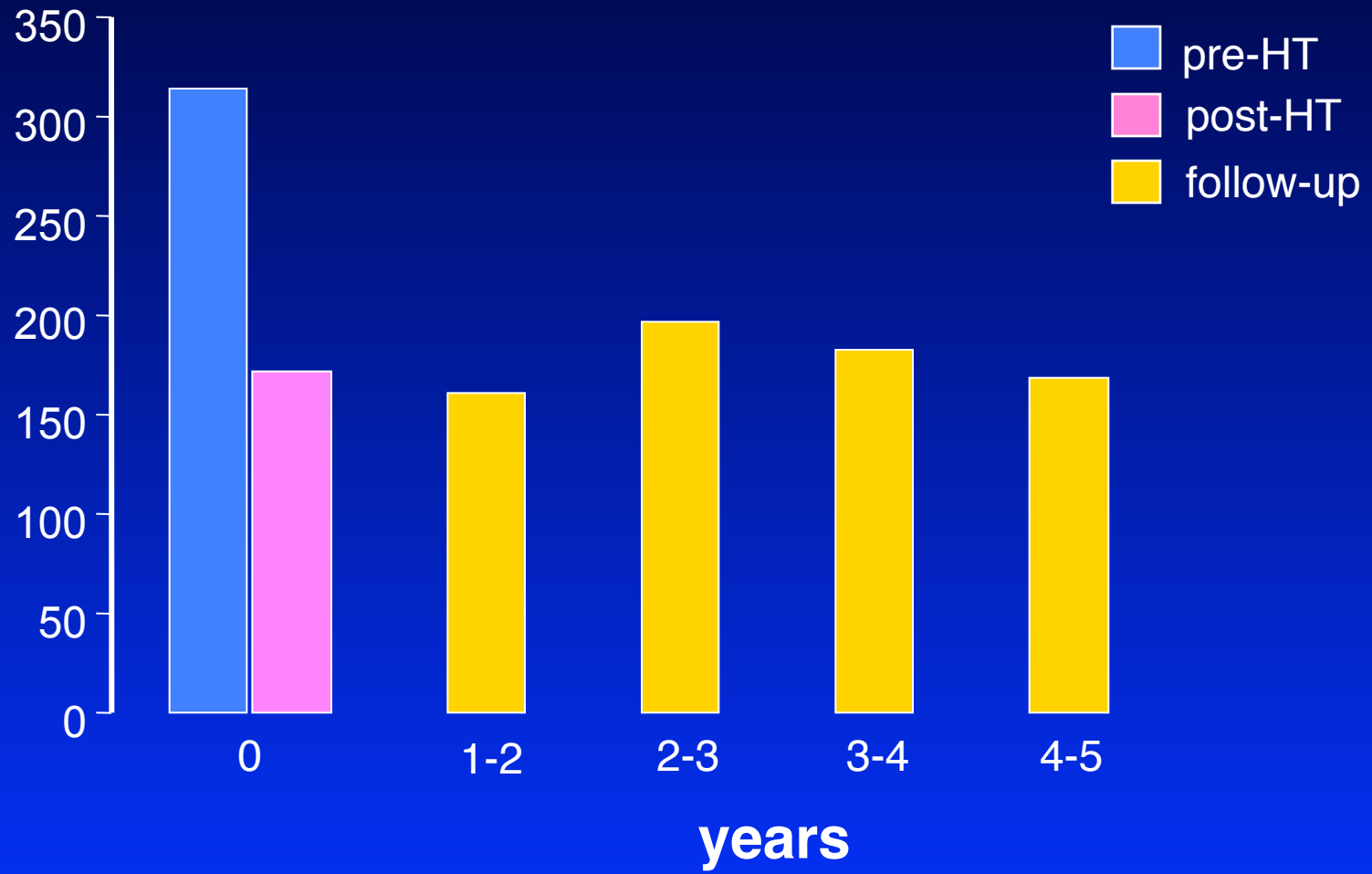

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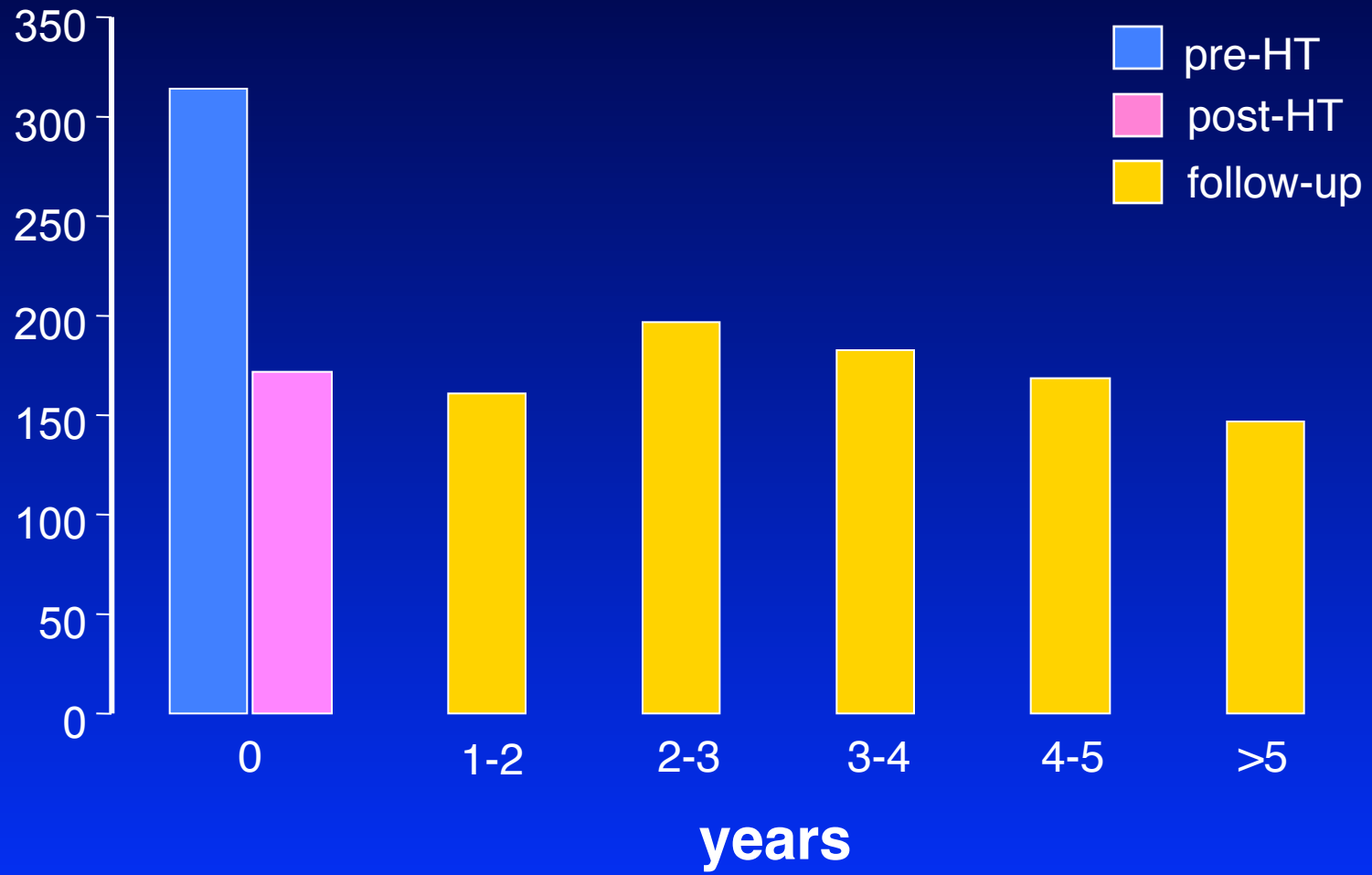
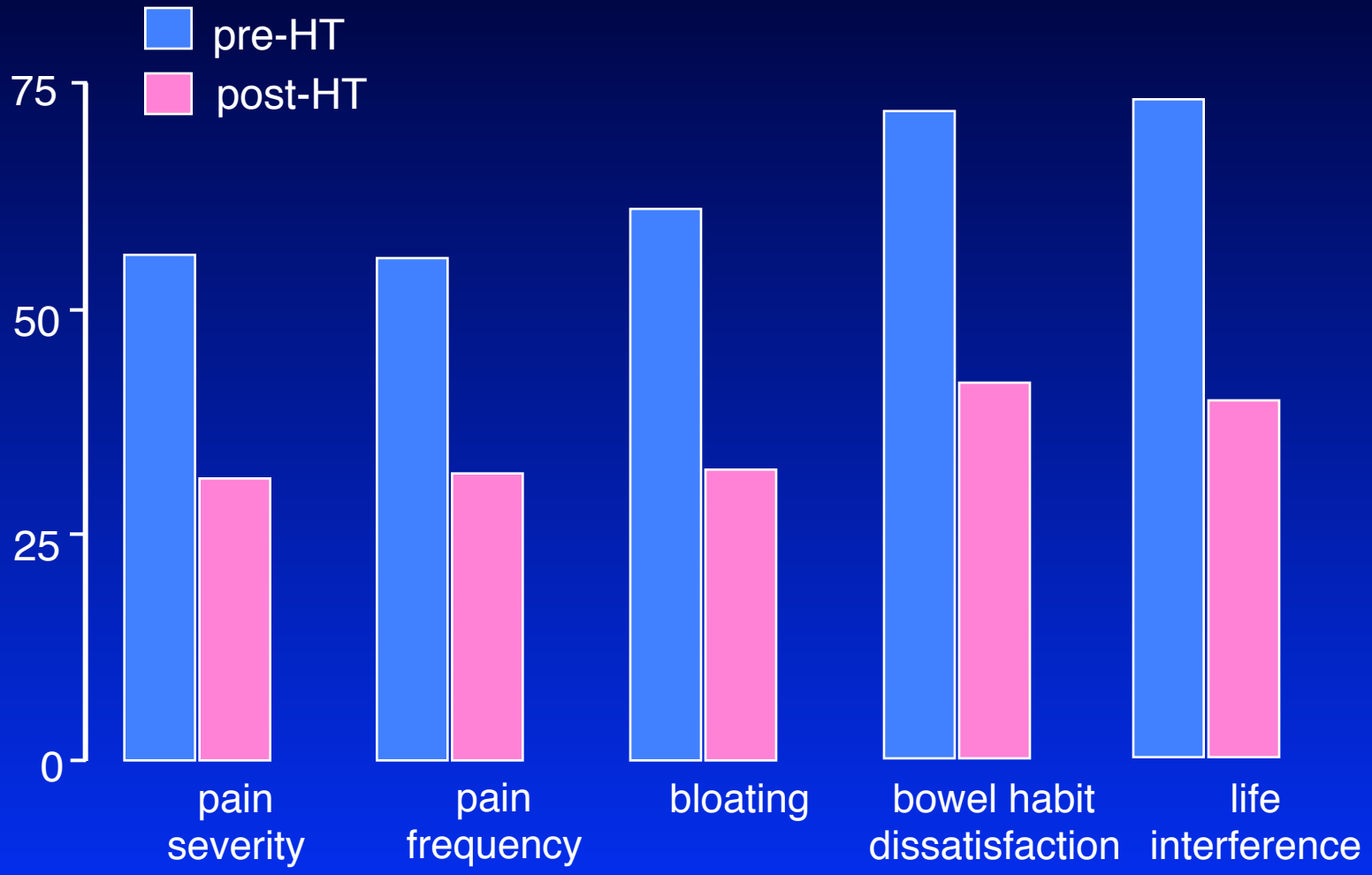


Gut 2003;52:1623-9

Long term benefits in IBS

Individual symptom scores



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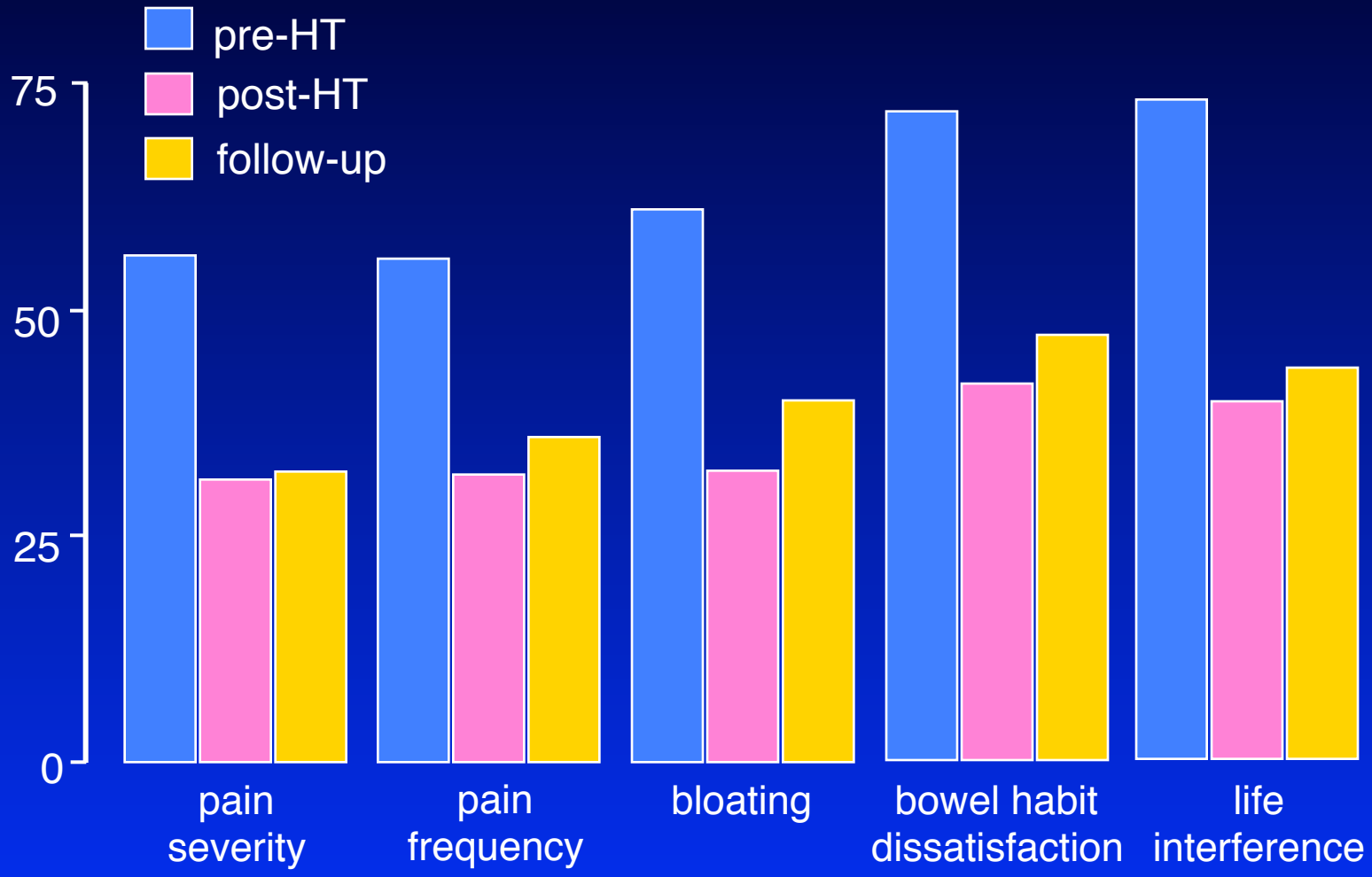


Gut 2003;52:1623-9

Long term benefits in IBS

General

83% of responders well after 1-5 years

Medication use

59% taking no medication

42% on medication taking it less often

Consultation behaviour

79% consulted GP/hospital consultant less often or not at all

47% consulted GP less often about other symptoms

Gut 2003;52:1623-9

Long term benefits in IBS

71% of remained well after 2-7 years (mean 4 years)

Continued improvement

Reduced medication needs

Reduced consultation rates in both 1^0 and 2^0 care

Scand J Gastroenterol 2012;47:413-20

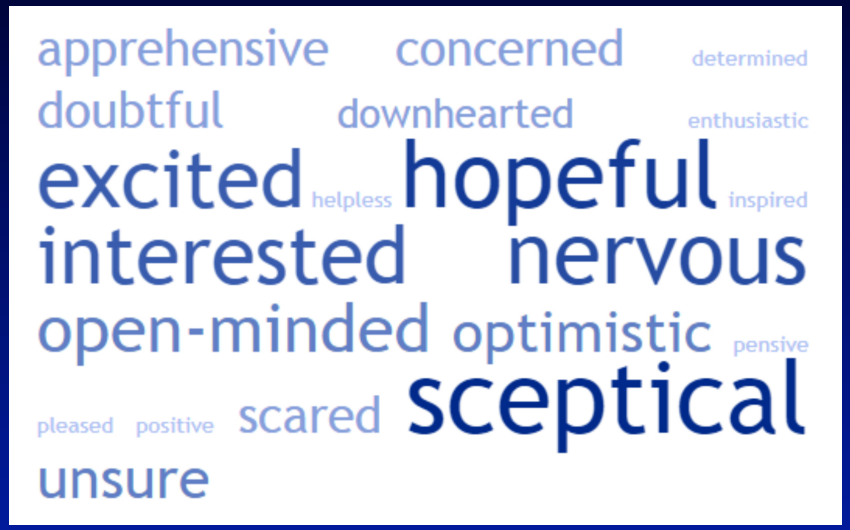
Patient satisfaction with HT

High proportion of satisfaction with treatment

Satisfaction high even when GI symptoms not improved

Neurogastroenterology Motility 2012;25:169-186

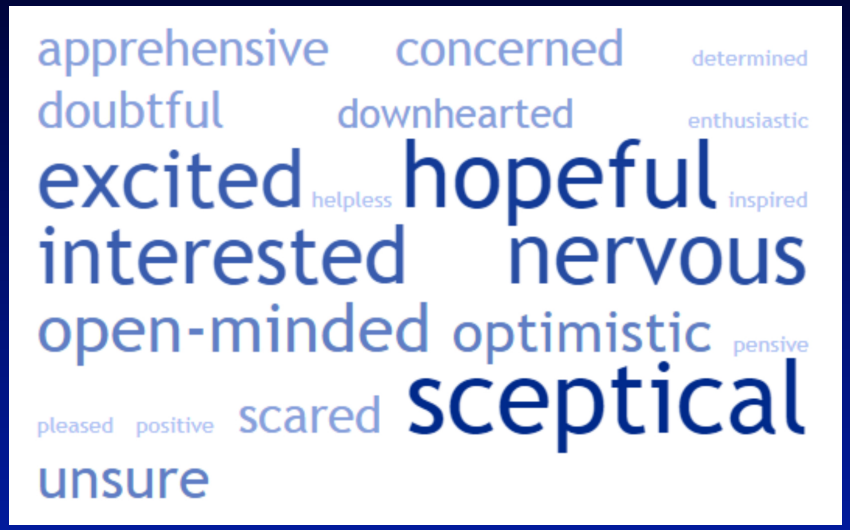
Patient's perception



Pre-HT

Donnet et al. *Submitted*

Patient's perception



Pre-HT

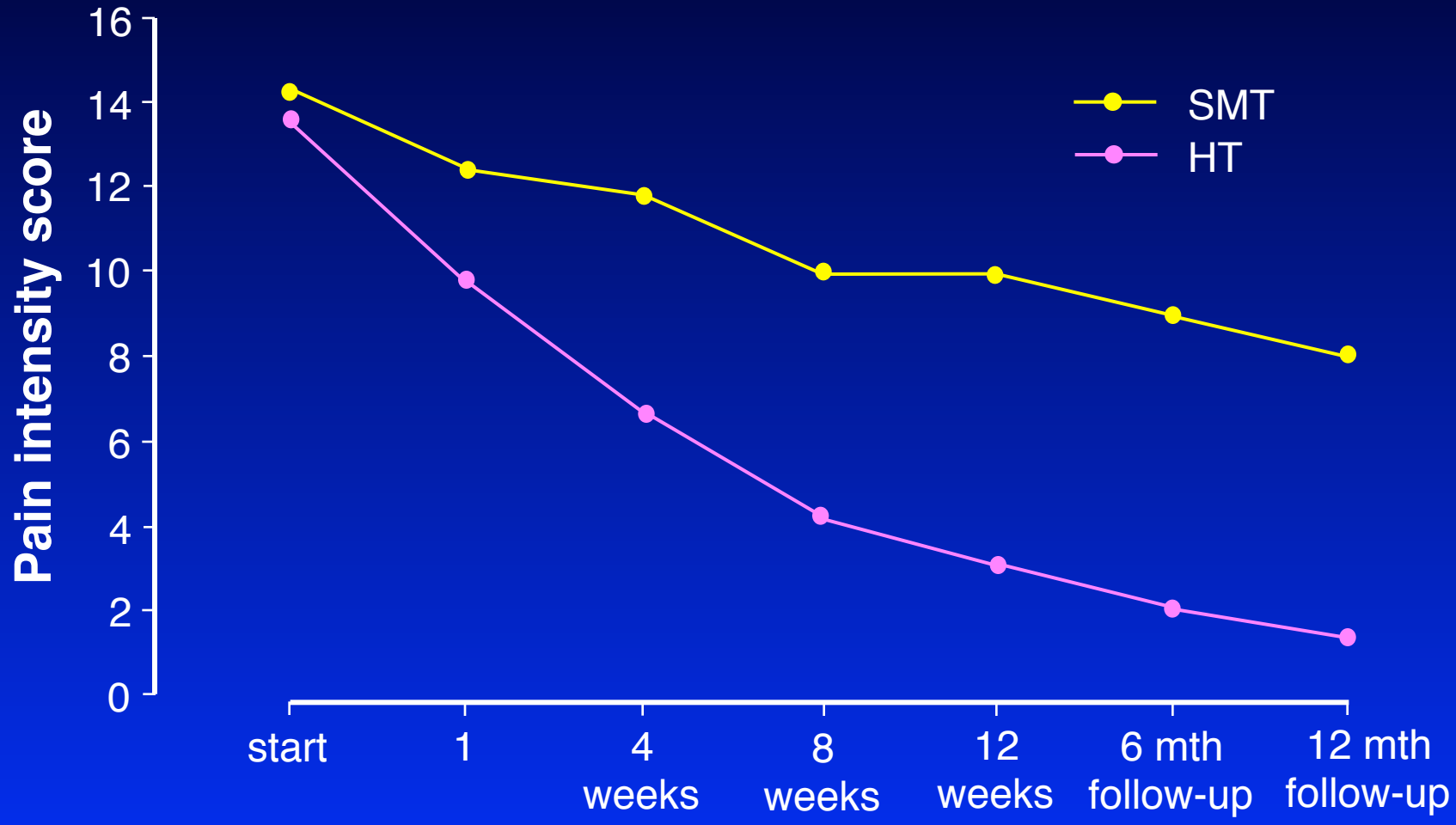
Post-HT

Donnet et al. *Submitted*

Hypnotherapy in children

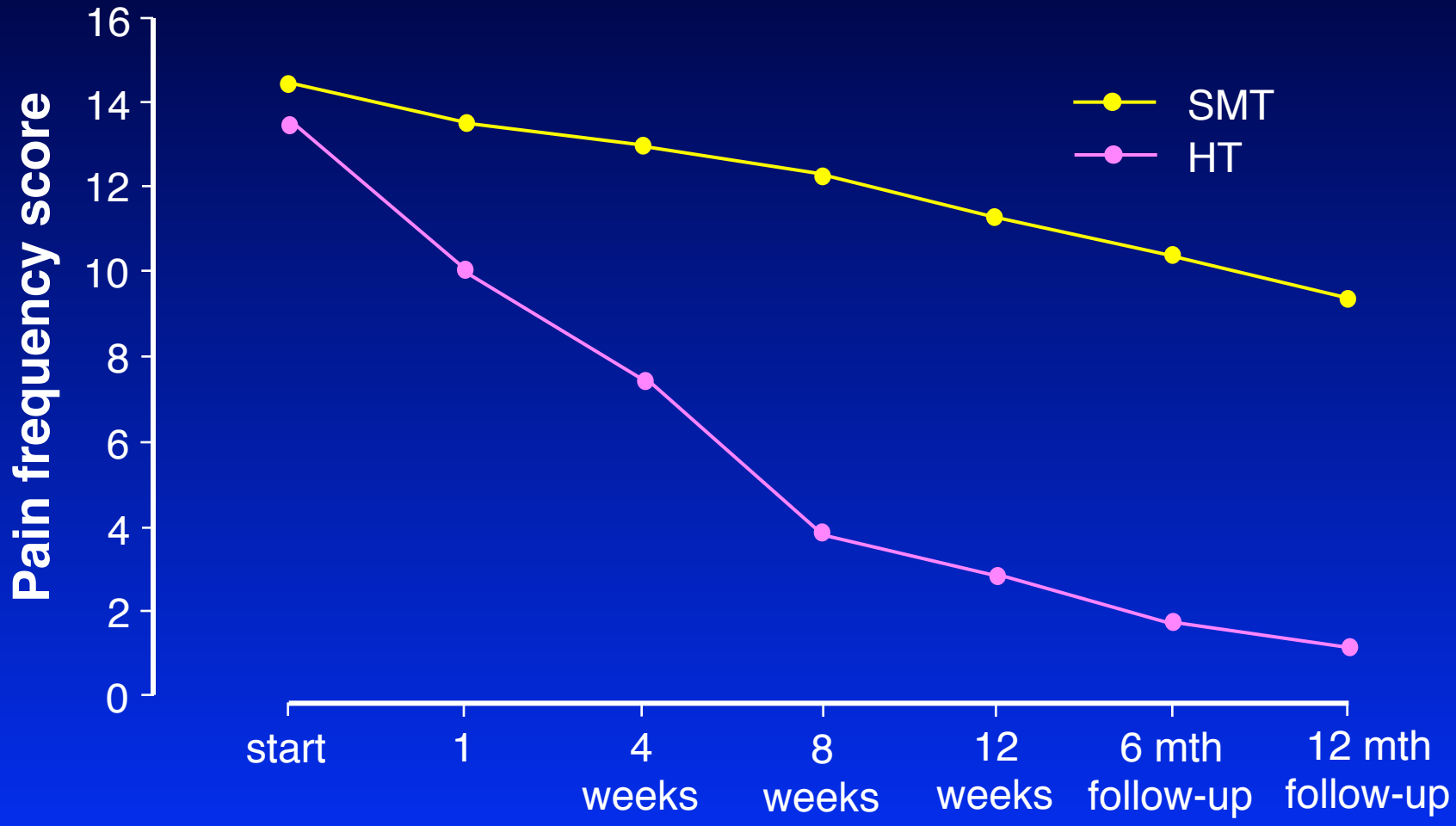
Vlieger et al. *Gastroenterology 2007;133:1430-6*

Hypnotherapy in children



Vlieger et al. *Gastroenterology 2007;133:1430-6*

Hypnotherapy in children



Vlieger et al. *Gastroenterology 2007;133:1430-6*

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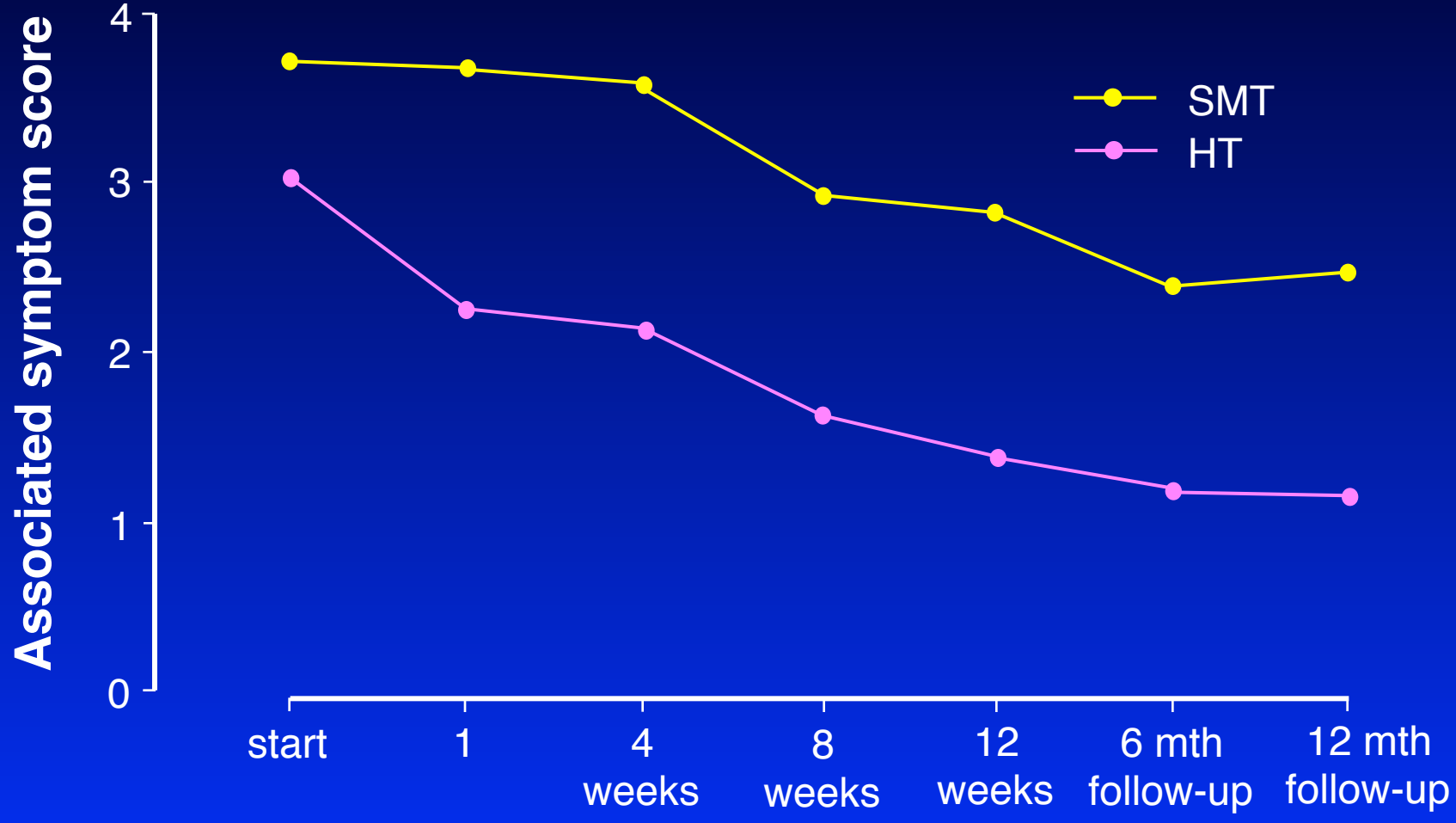


Vlieger et al. *Gastroenterology 2007;133:1430-6*

Hypnotherapy in children

Overall outcome:

Hypnotherapy: 85% response

Supportive therapy + usual care: 25% response

Vlieger et al. *Gastroenterology 2007;133:1430-6*

Audit of 32 consecutive children in Manchester

88% response rate

Vasant et al. *Frontline Gastroenterology (in press)*

Hypnotherapy in children
Long term

Response rate maintained up to 4.8 years

Vlieger et al. *Am J Gastroenterol 2012;107:627-31*

Hypnotherapy in children

Most adults admit to childhood GI symptoms

Adult response reduces with age

Shorter length of illness – better the response

Learn to control symptoms before behaviour change

Children >10 - respond better than adults

Opportunity to involve parents and change their reaction

Opportunity to reduce prevalence of adult IBS?

Group hypnotherapy

Gerson et al, Int J Clin Exp Hypn 2013;61:38-54

Moser et al, Am J Gastroenterol 2013;108:602-9

Berens et al, J Psychosom Res 2018;105:72-79

Flik et al, Lancet Gastroenterol Hepatol 2019;4:20-31

Skype hypnotherapy

	Skype	Face to face	Significance
Response rate	65%	76%	ns

Slightly less effective

Suitable for long distance patients

Suitable for patients unable to travel (diarrhoea)

Int J Clin Exp Hypn 2019;67:69-80

Functional dyspepsia

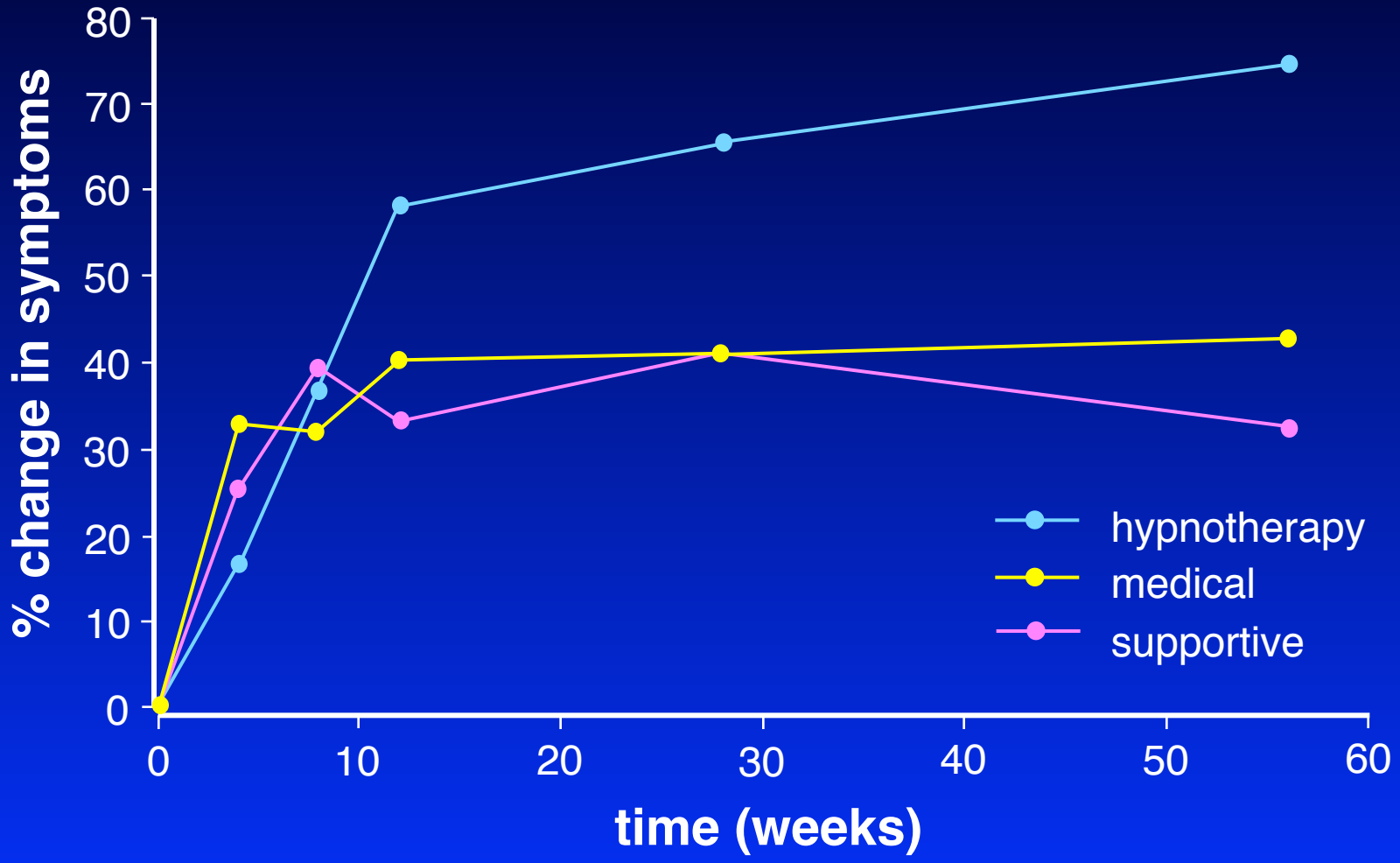
Treatments

Hypnotherapy

Supportive treatment

Conventional treatment

Functional dyspepsia



Gastroenterology 2002;123:1778-85

Medication use and consultation rate of patients during the long-term follow-up

	40 week follow-up		
Medication	**Hypnotherapy (n=26)**	**Supportive (n=24)**	**Conventional (n=29)**
Number taking medication	0	20	26
% taking medication	0	81.8*	89.7*
PPI	0	6	15
H_2 antagonists	0	8	8
Prokinetics	0	0	0
Antacids	0	4	3
Antidepressants	0	5	0
None	26	4	3
No. of GI consultations median (IQR)	0 (0-0)	3.5 (0-10)*	3 (0-9)*
Total no. of consultations median (IQR)	1 (0-2)	4 (1-10)*	4 (0-9)*

**p<0.001 verses HT*

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Gastroenterology 2002;123:1778-85

Non cardiac chest pain

Non cardiac chest pain

Angina-like pain - no heart disease

Difficult condition to treat - fear sudden death

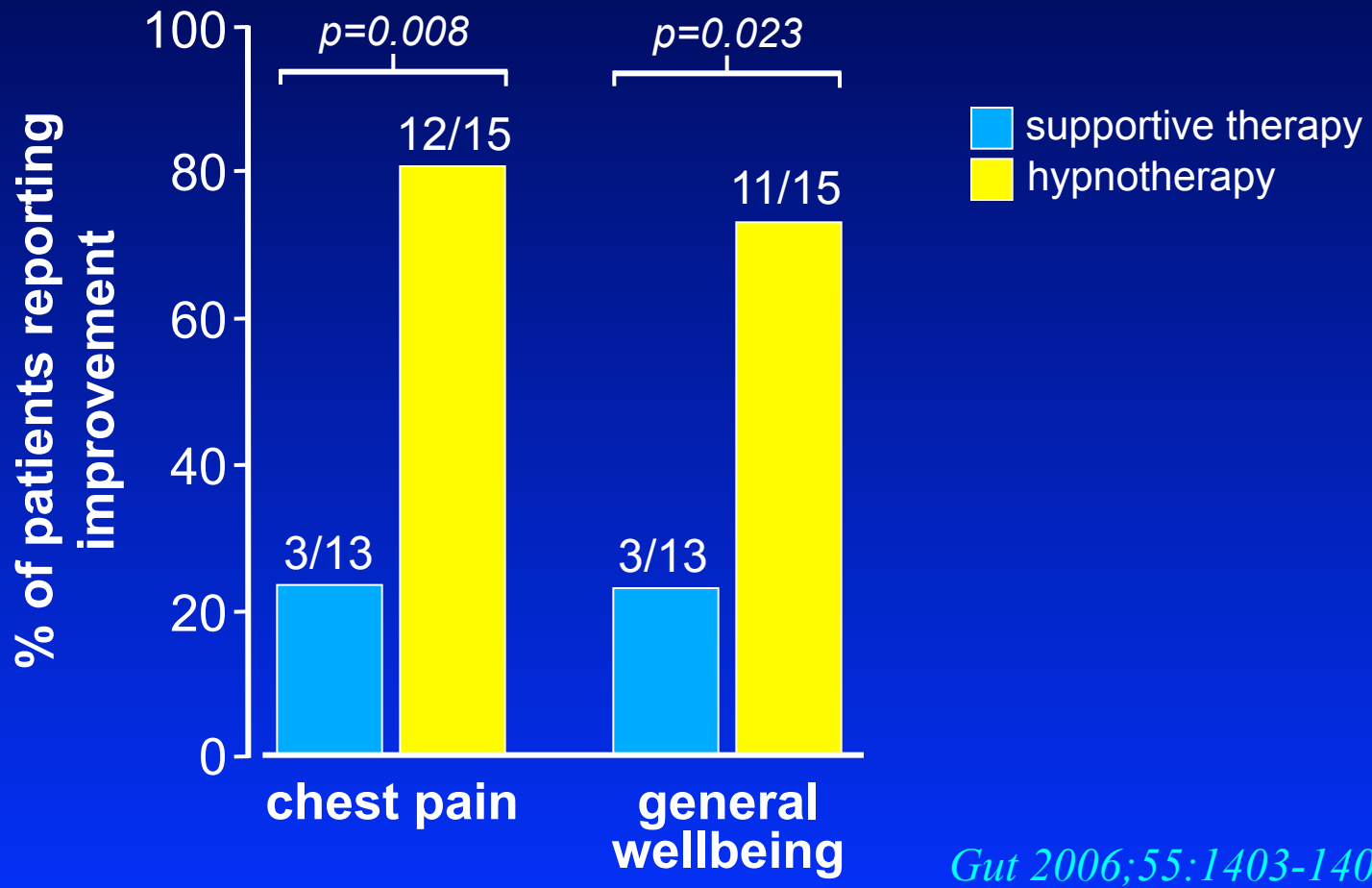
28 angiogram negative patients

Hypnotherapy vs supportive therapy (12 weeks)

Primary outcome: global relief of chest pain

Gut 2006;55:1403-1408

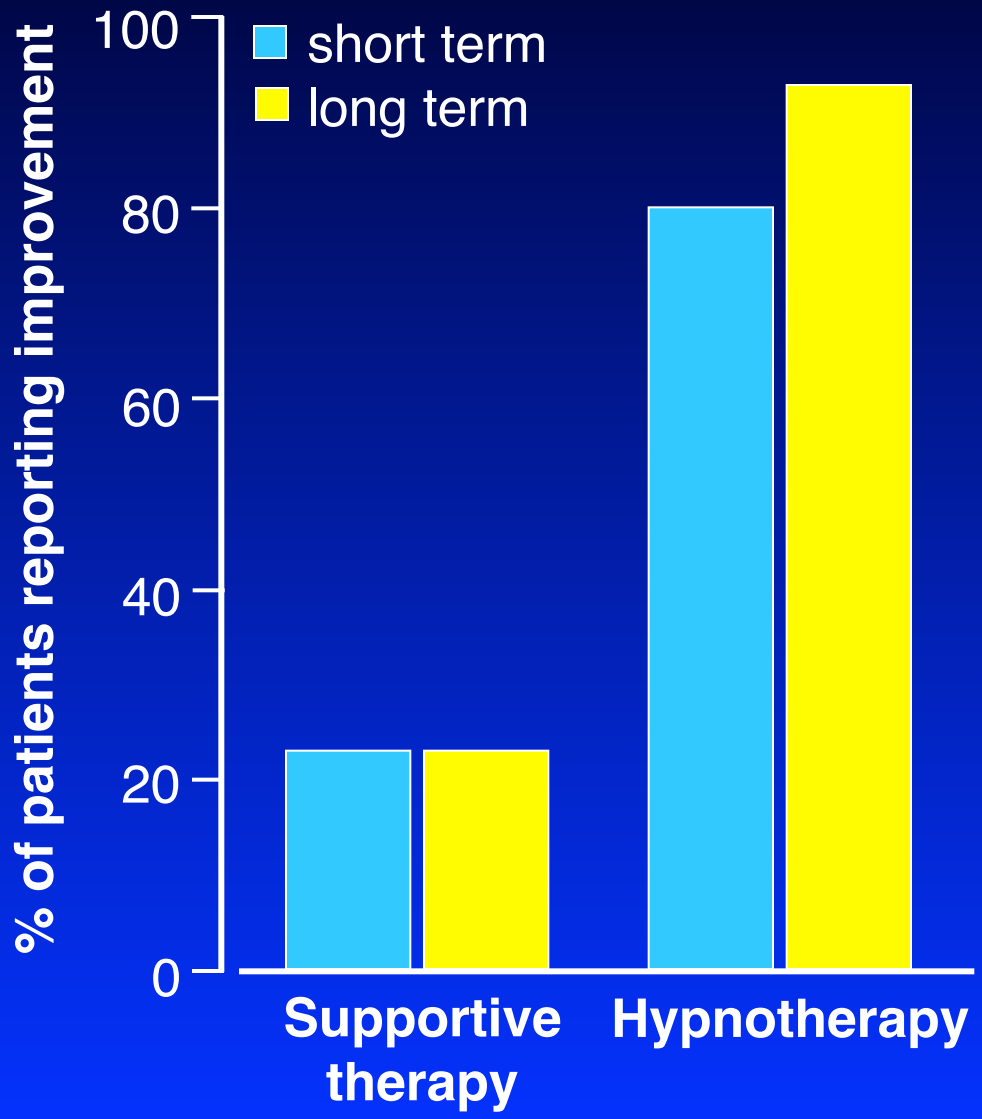
Improvement of global chest pain and well being scores



Gut 2006;55:1403-1408

Chest pain: long term improvement

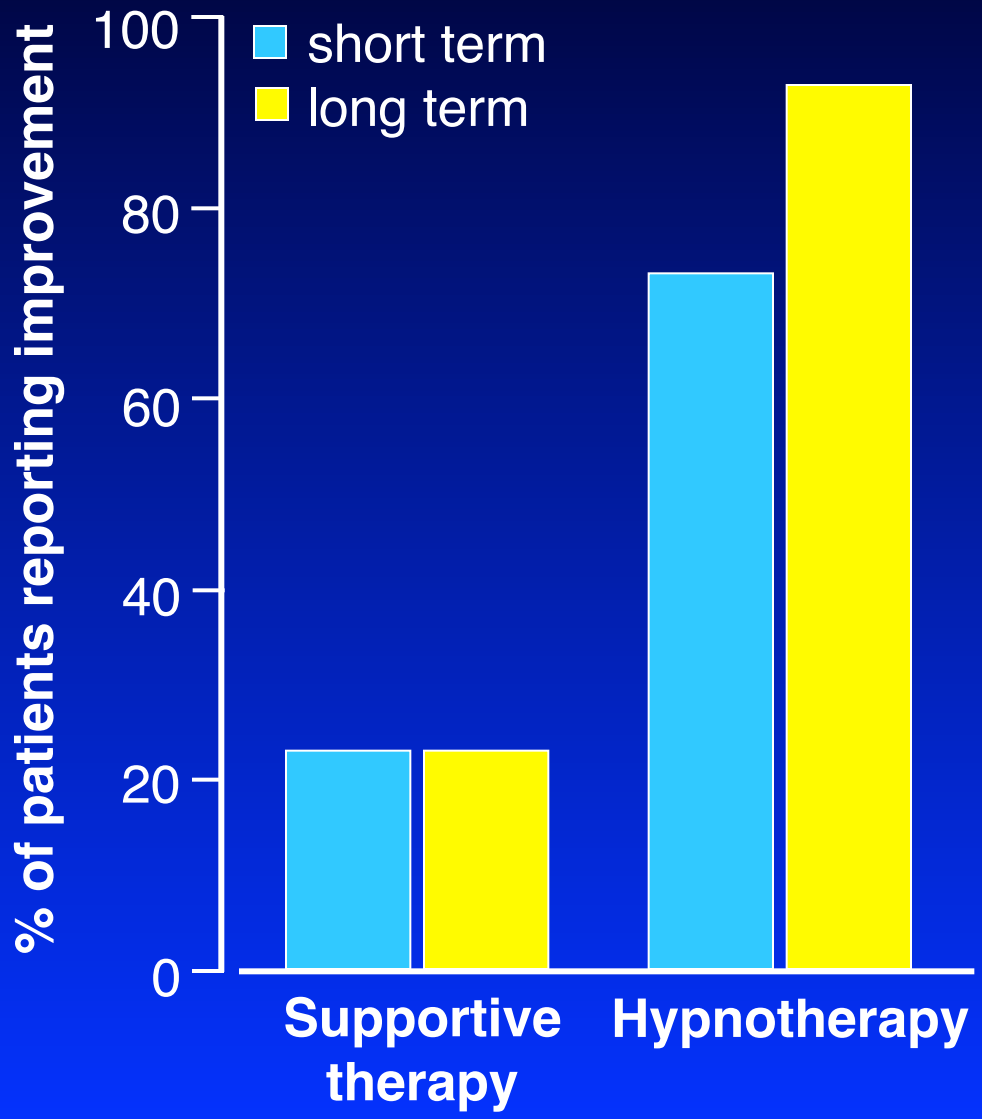
(mean 2.8 years)



Gut 2007;56:1643

Quality of life: long term improvement

(mean 2.8 years)



Gut 2007;56:1643

Mechanism of action

Hypnosis

Mechanism of action
Hypnosis

Psychological: non specific

anxiety / depression

cognitive change

Mechanism of action
Hypnosis

Psychological: non specific

anxiety / depression

cognitive change

Physiological: motility

visceral sensitivity

central processing

Mechanism of action

Pathophysiology

Motility

Visceral sensitivity

Central processing

Inheritance

Inflammation

bacterial imbalance

Dietary factors

Psychological factors

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Psychological factors

Anxiety and depression
HAD Scores

	pre-HT	post-HT	'p' value
HAD 'A' Score	11.1 ± 0.3	7.3 ± 0.3	p<0.001
% anxious (score ≥9)	68.3%	34.6%	p<0.001
HAD 'D' Score	7.2 ± 0.3	4.1 ± 0.3	p<0.001
% depressed (score ≥9)	36.1%	14.6%	p<0.001

HAD Scores expressed as mean ± S.E.M.
**post-HT v pre-HT, paired 't' test*

Am J Gastroenterology 2002;97:954-961

Cognitive scale - 31 items (1-7)

a) **Bowel function:**

Bowel performance anxiety	(9 items)
Pain	(3 items)
Control	(2 items)
Self-efficacy	(6 items)
Anger/frustration	(1 item)
Embarrassment/shame	(2 items)
Disease conviction	(1 item)

b) **Personal themes:**

Social approval	(3 items)
Social rules/norms	(1 item)
Self-nurturance	(2 items)
Perfectionism	(1 item)

Psychosomatic Medicine 1998;60:492-7

Cognitive change

78 patients

Cognitive Scale before and after HT

Cognitive Scale scores

	Pre-HT	Post-HT	
Bowel performance anxiety	4.83 (1.62)	3.71 (1.49)	p<0.001
Pain	5.13 (1.54)	3.55 (1.65)	p<0.001
Control	4.99 (1.61)	3.66 (1.69)	p<0.001
Self-efficacy	5.27 (1.33)	3.63 (1.45)	p<0.001
Anger/frustration	5.97 (1.45)	4.03 (1.91)	p<0.001
Embarrassment/shame	4.77 (1.60)	3.80 (1.46)	p<0.001
Disease conviction	4.62 (1.97)	3.00 (1.66)	p<0.001
Social approval	4.73 (1.26)	4.05 (1.24)	p<0.001
Social rules/norms	5.41 (1.54)	4.93 (1.61)	p<0.01
Self-nurturance	4.57 (1.46)	4.08 (1.48)	p<0.05
Perfectionism	5.71 (1.40)	5.55 (1.29)	ns
Total Score	151.2 (36.2)	114.5 (38.8)	p<0.001

J Psychosomatic Research 2004 56 271-8

Cognitive scale scores

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J Psychosomatic Research 2004 56 271-8

Mechanism of action

Pathophysiology

Motility

Visceral sensitivity

Central processing

Inheritance

Inflammation

Bacterial imbalance

Dietary factors

Psychological factors

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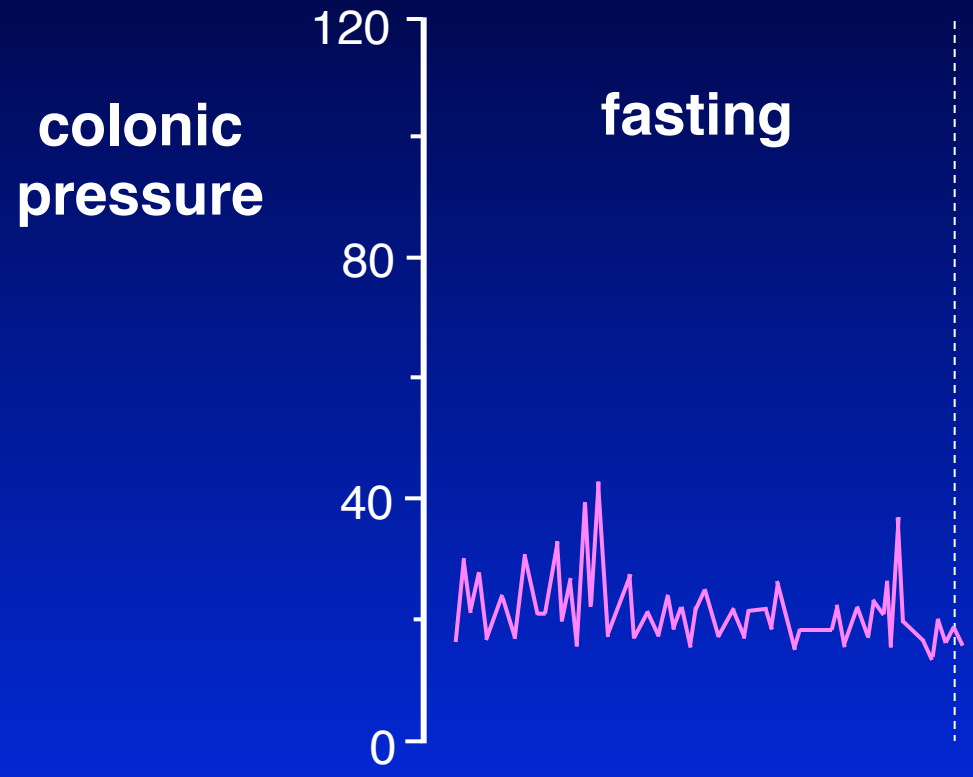
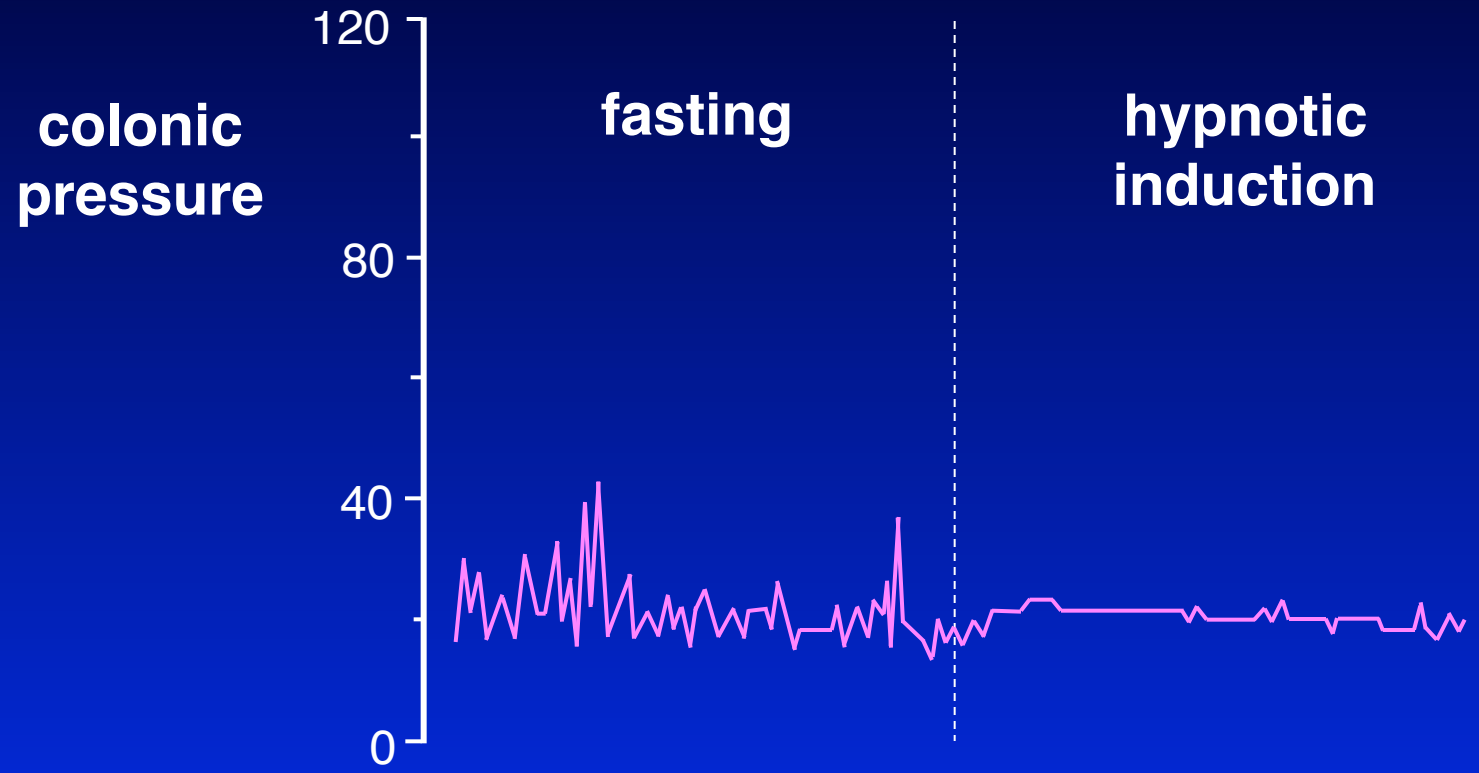
Motility



Lancet 1992;2:69-72

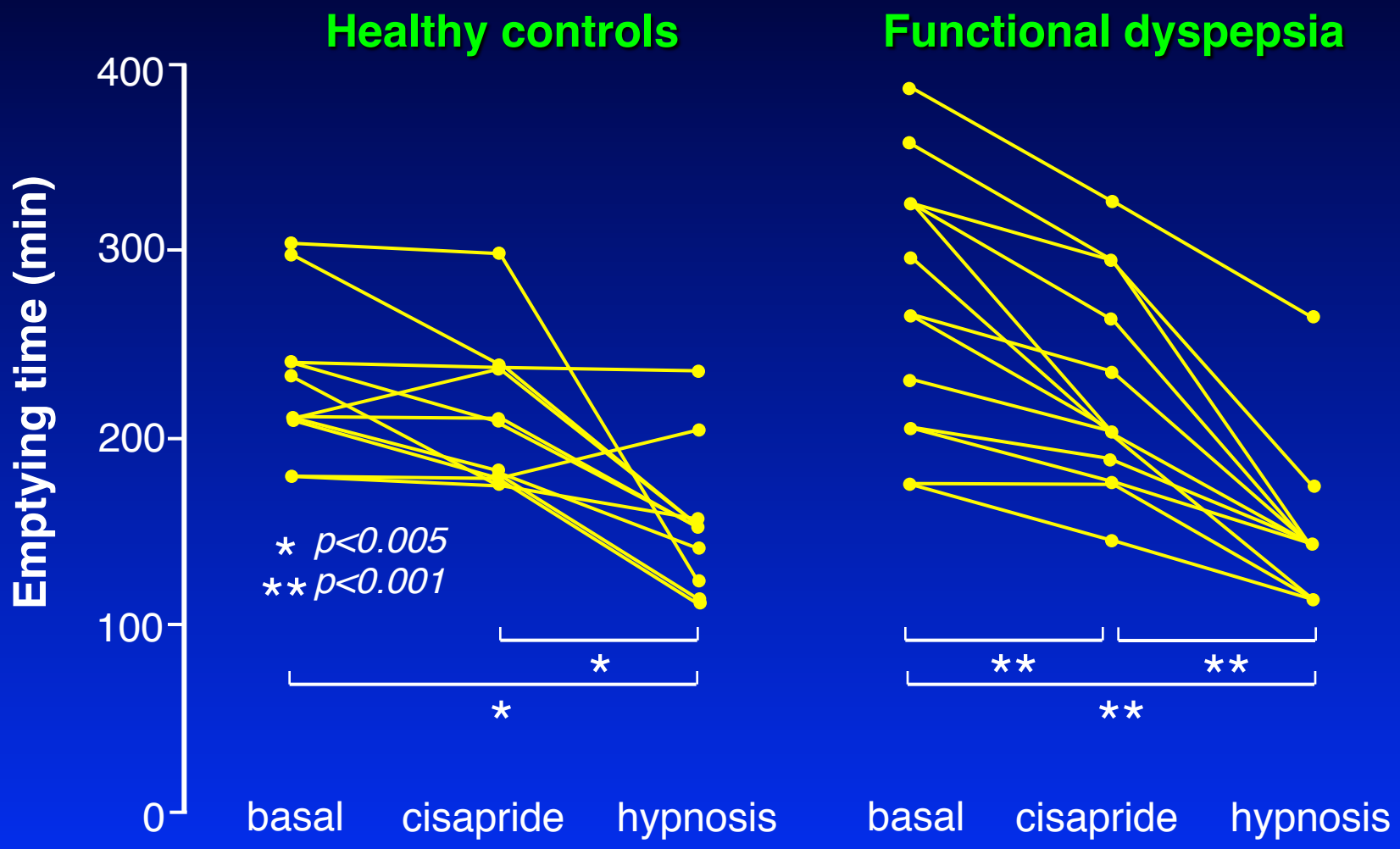
Motility



Lancet 1992;2:69-72

Motility (stomach)

Gastric emptying



Alimentary Pharmacology and Therapeutics 2006;23:1241-49

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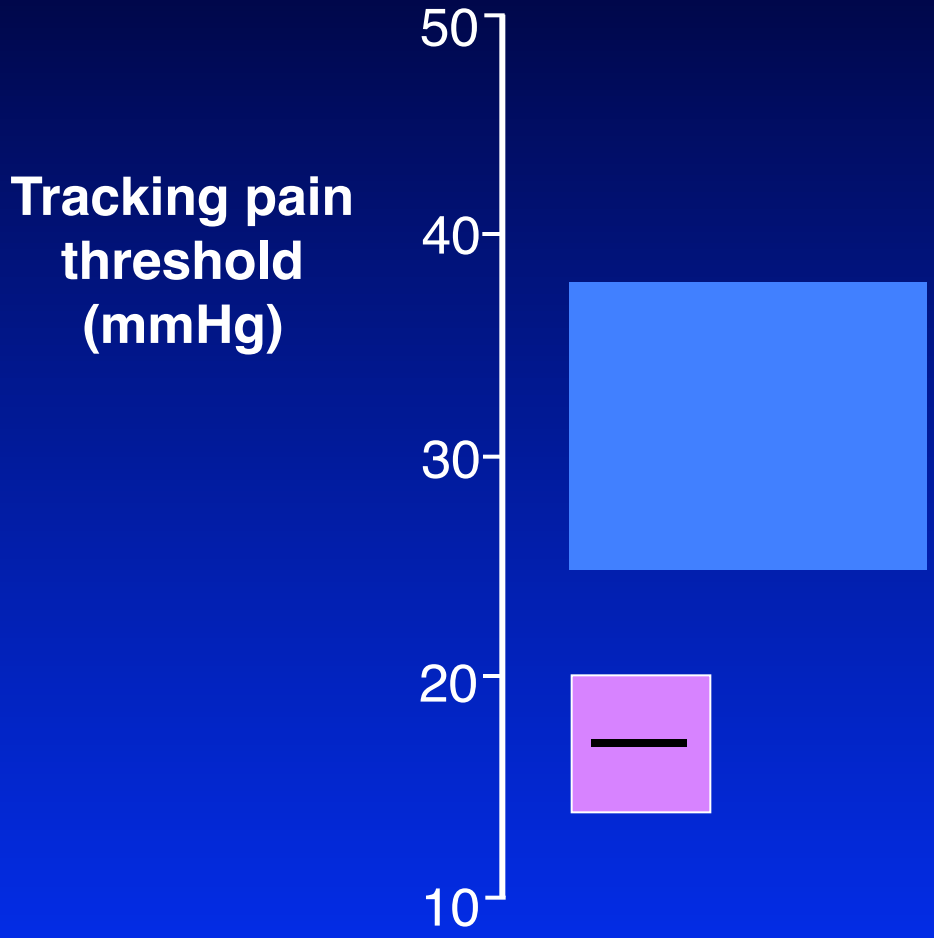
Change in rectal hyper-sensitivity



Alimentary Pharmacology and Therapeutics 2003;17:635-42

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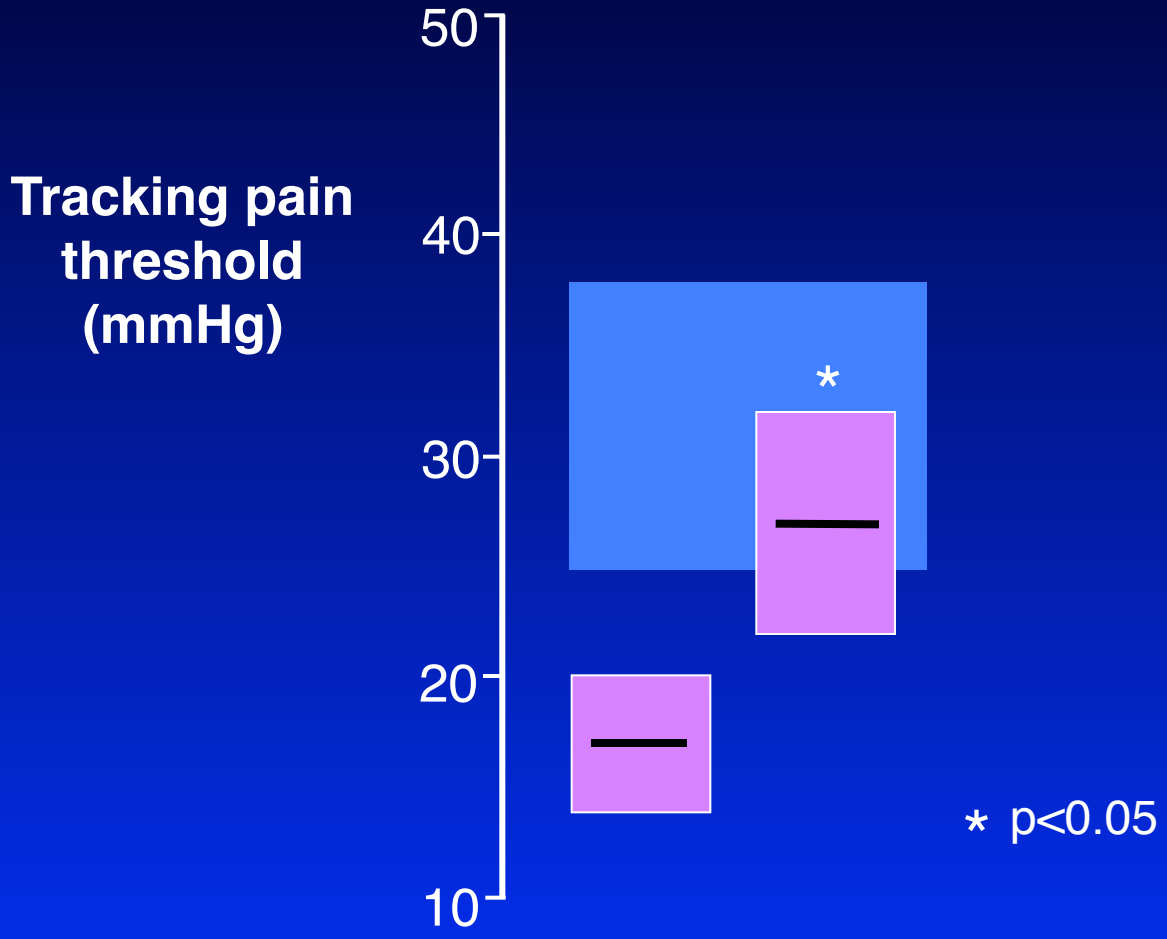

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~~Psychological factors~~

ACC - important pain processing area

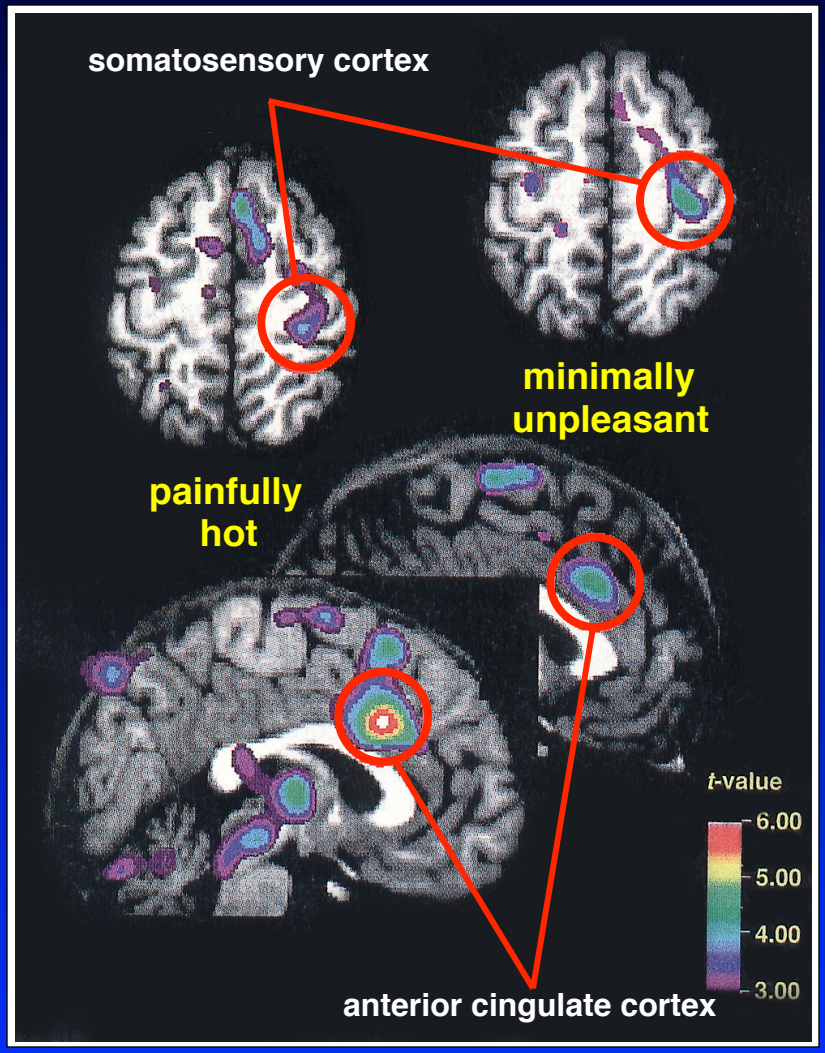
Painful rectal stimulus activates ACC

activation in IBS > controls

Gastroenterolgy 2000;118:842

Effects of hypnosis on brain response to pain

Hypnotic suggestion reduces suffering from but not perception of a painfully hot stimulus



Science 1997;277:969-71

fMRI scanning in IBS

Abnormal processing and enhanced perception of visceral stimuli in IBS can be normalised on fMRI scanning by psychological interventions

Alimentary Pharm Ther 2013;37:1184 -97

Functional connectivity in IBS with fMRI

Anterior insula − abnormal pain processing in IBS

HT reduces connectivity with other brain areas

Reduced connectivity correlated with reduced symptoms

HT decouples maladaptive conditioning to pain

J Neurogastroenterol Motil 2019;25:478-9

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IBS symptoms worse with food

Exaggerated gastrocolonic response

Duodenal lipid infusion

Colonic sensory and motor responses

Hypnotherapy results in reduced reactivity

Psychosomatic Medicine 2004 66 233-8

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Hypnotherapy in inflammatory bowel disease

IJCEH 2008;56:306-17

Hypnotherapy in inflammatory bowel disease

(Crohn's Disease & Ulcerative Colitis)

15 patients

12 ulcerative colitis, 3 Crohn's

All active not responding to steroids or azathioprine

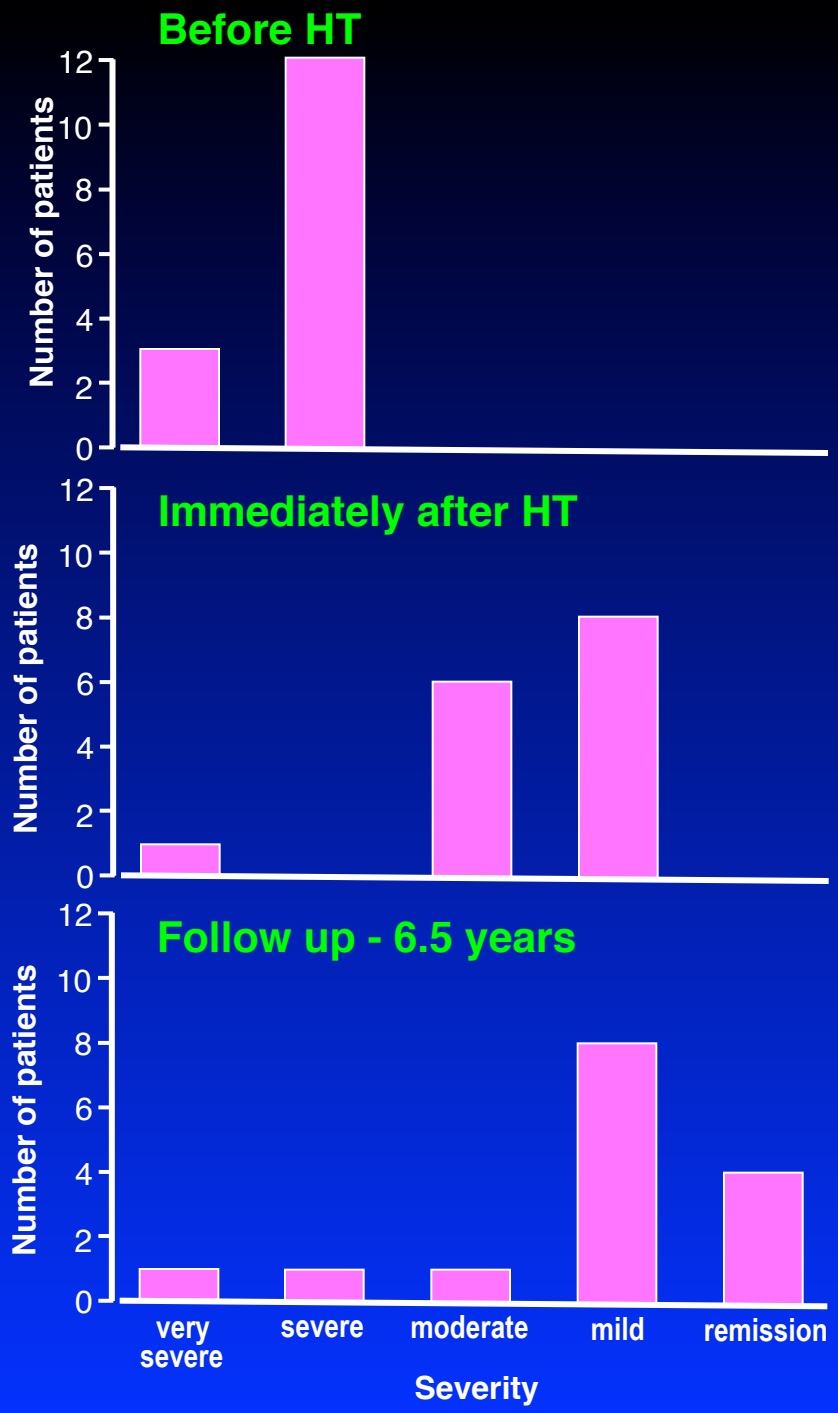
All still taking steroids (15 mg or above)

Gut focused hypnosis for 12 sessions

Followed up for a mean of 6.5 years

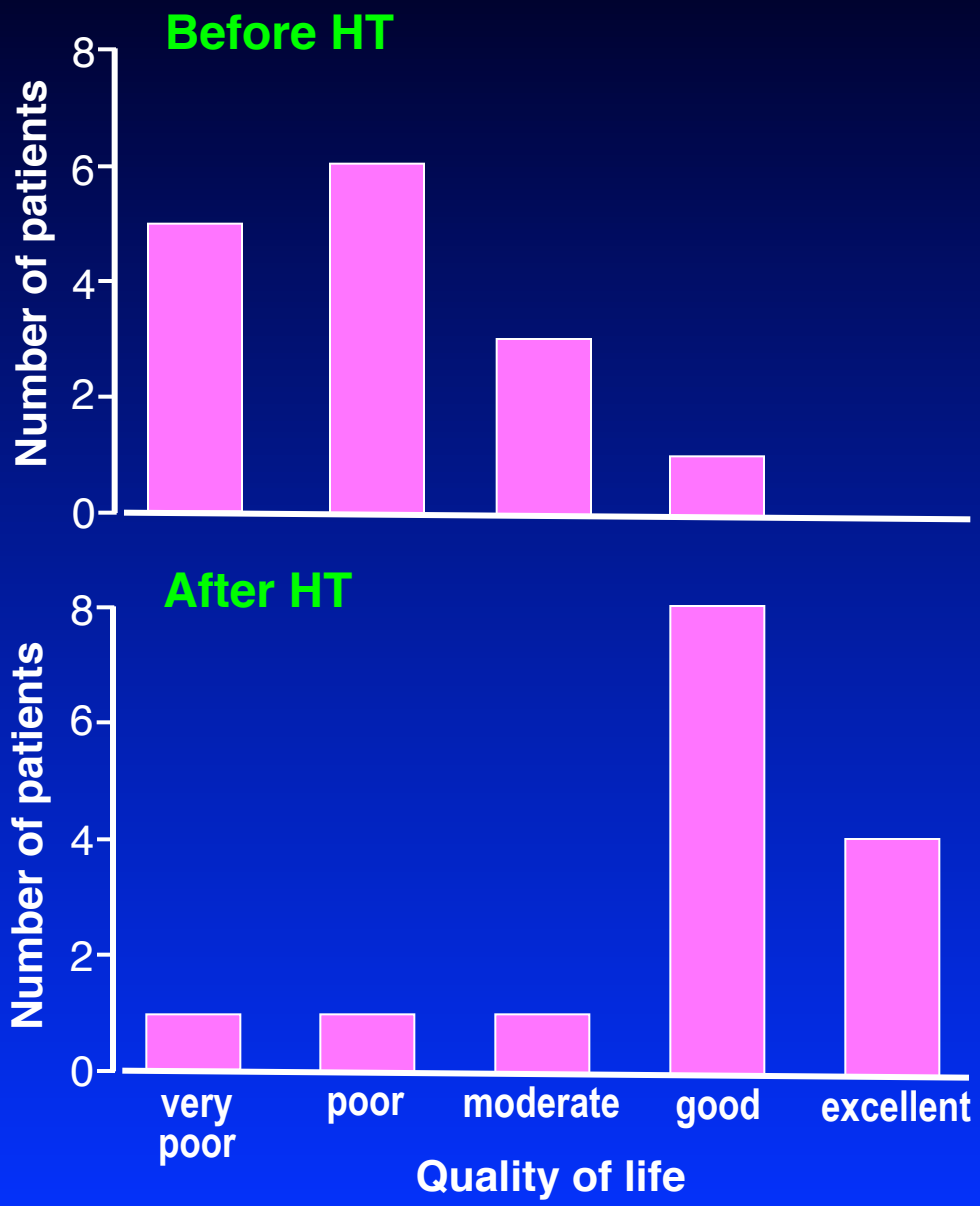
IJCEH 2008;56:306-17

Effect of HT on disease activity



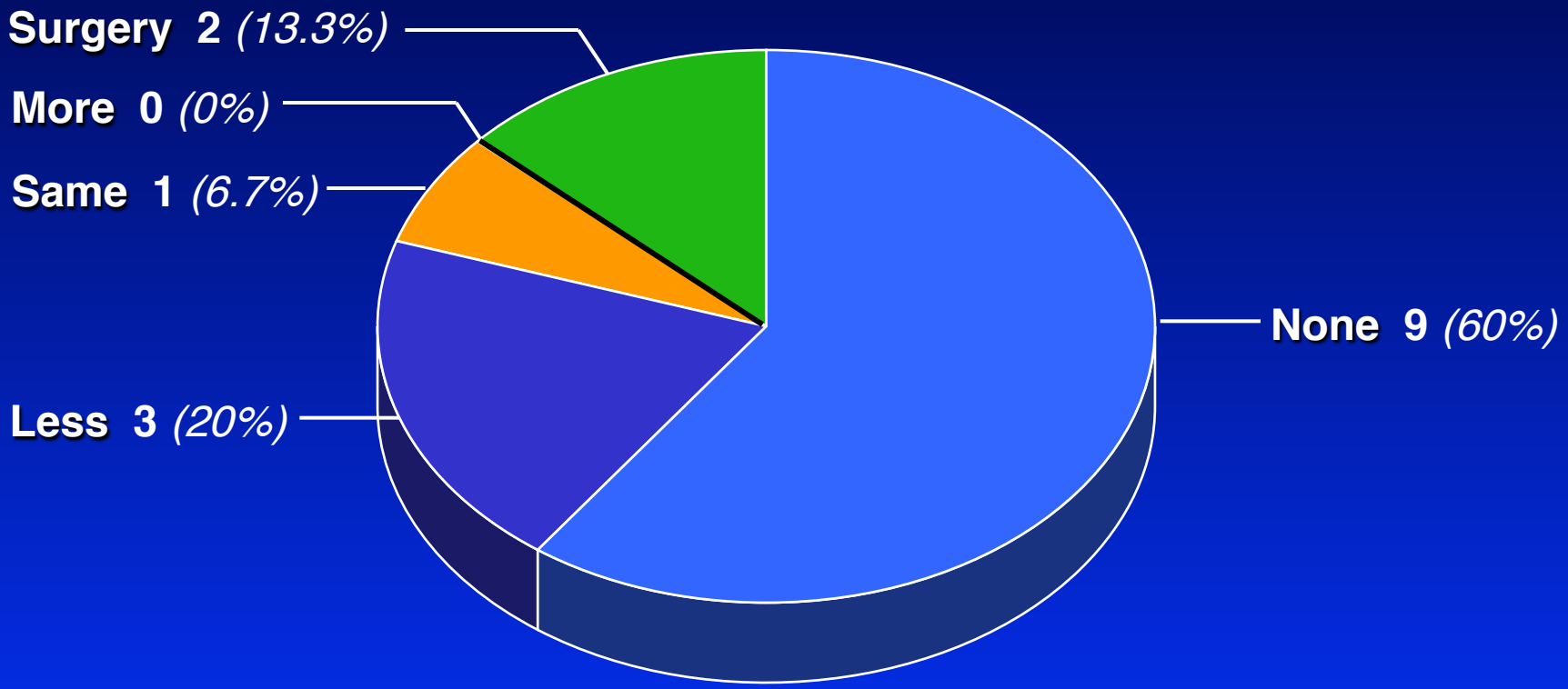
IJCEH 2008;56:306-17

Effect of HT on quality of life



IJCEH 2008;56:306-17

Corticosteroid use at follow up



IJCEH 2008;56:306-17

Effect of hypnotherapy on maintenance of remission in ulcerative colitis

	Hypnotherapy (25)	Attention control (25)	p value
Days to relapse	359	281	p=0.03
No. in remission at 1 year	68%	40%	p=0.04

Keefer et al. Alimentary Pharmacology & Therapeutics. 2013;38:761-71

Mechanism of action

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Summary

60-70% response rate

Sustained relief of all symptoms

Modifies motility

Modifies visceral sensitivity

Improves quality of life

Less time off work

Back to work

Less GP consultations

Reduced medication needs

Conclusions

Positive: Very effective

Helps all symptoms

Conclusions

Positive: Very effective

Helps all symptoms

Negative: Time consuming

Costly to provide

Current treatment relatively cheap

Still poor support by the NHS

Conclusions

Positive: Very effective

Helps all symptoms

Negative: Time consuming

Costly to provide

Current treatment relatively cheap

Still poor support from the NHS

Need to have strategy for caring for failures

PROFESSOR
PETER WHORWELL
WORLD-LEADING EXPERT ON IBS

Take Control of Your IBS

The complete guide to managing your symptoms