

Bieke Samijn / Kinesitherapeut

Obstipatie en neuromodulatie, een nieuwe trend?

EEN TREND?

Bijwerkingen ↓
 Thuis toepasbaar
 Kosteneffectief

EEN NIEUWE TREND?

AUSTRALIA
 Melbourne

 2006

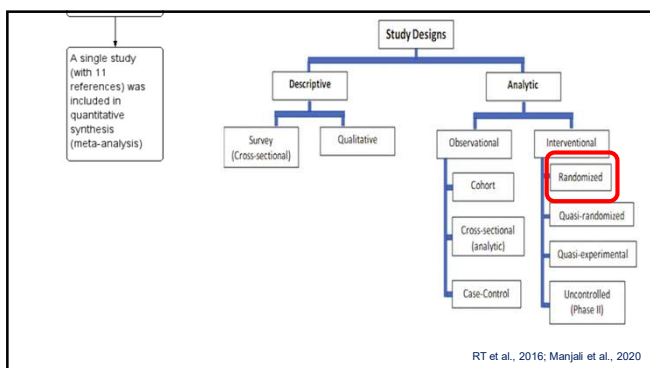
Yik et al., 2006
Yik; Ismail; Hutson; Southwell

Cochrane Library
 Cochrane Database of Systematic Reviews

Transcutaneous electrical stimulation (TES) for treatment of constipation in children (Review)

Ng RT, Lee WS, Ang HL, Teo KM, Yik YI, Lai NM

2016



Cochrane Library
 Trusted evidence. Informed decisions. Better health.
 Cochrane Database of Systematic Reviews

AUTHORS' CONCLUSIONS

Implications for practice

The results for the outcomes assessed in this review are **uncertain**. Thus **no firm conclusions** regarding the efficacy and safety of TES in children with chronic constipation can be drawn.

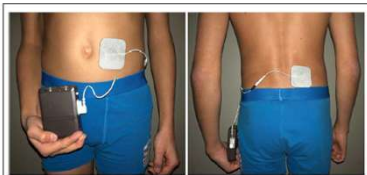


FIGURE 1 | Placement of the adhesive electrodes: the ventral electrode is set paraumbilically on the left side, the dorsal one paravertebrally on the right side.

Besendörfer et al., 2020

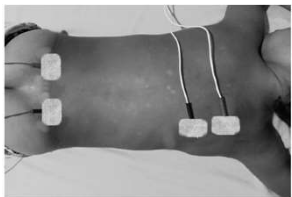
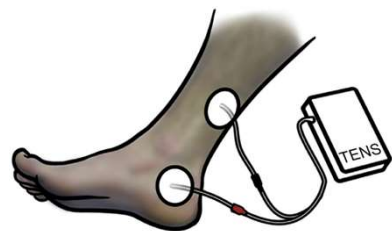
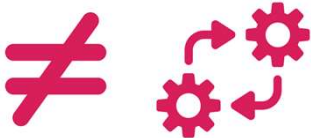


Figure 1. Position of electrodes during PTENS and scapular electrotherapy

Veiga et al., 2012; Estevam De Abreu et al., 2021



Yu et al., 2022; Velasco-Benitez et al., 2023



Article	Duration	Frequency	Total time	Electrical frequency	Pulse Width	Intensity
	Minutes	#/week	Weeks	Hz		
Yik - 2006	20	3	4	80-150		
Besendörfer - 2020	480-1440	Daily	4	15	210 μ s	6-9 V
Yik - 2012	60	Daily	13-26	80-160		< 33mA
Estevam de Abreu - 2021	20	3	7	10	700 ms	< motor threshold
Sharifi-rad - 2017	20	2	5	5-25	250 μ s	< motor threshold
Yu - 2022	15	14	4	12.5		50-100 mA
Velasco-Benitez - 2023	30	5	2	10	200 μ s	< motor threshold



Slow transit constipatie
Anorectale retentie

Therapie naïve patiënten
Therapieresistente patiënten

vanaf jonge leeftijd (4 -18 jaar)

Yik et al., 2016; Yik et al., 2006
Veiga et al., 2012



Dagboek en follow-up

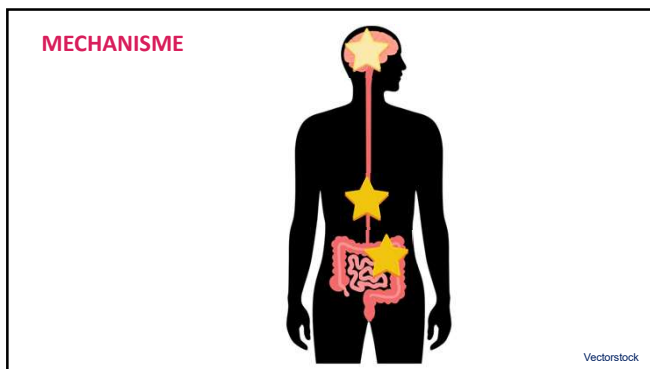
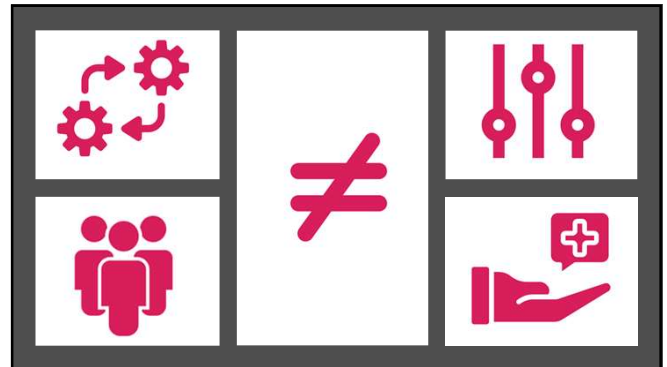
Standaard urotherapie
Constipatie management

Bekkenbodembiotherapie

ademhalingsoefeningen

Met/zonder laxativa

Estevam de Abreu et al., 2021; Zivkovic et al., 2017
Yik et al. 2012; Sharafi-rad 2017

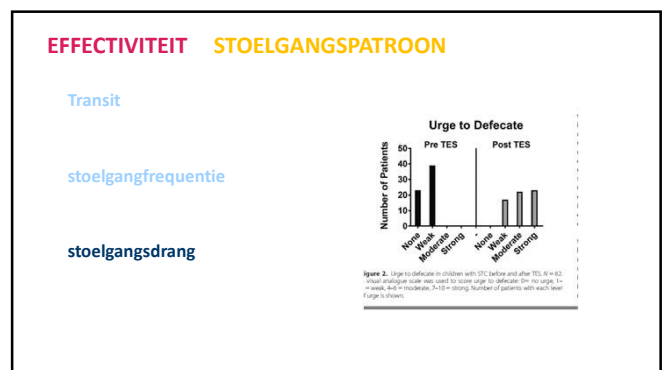
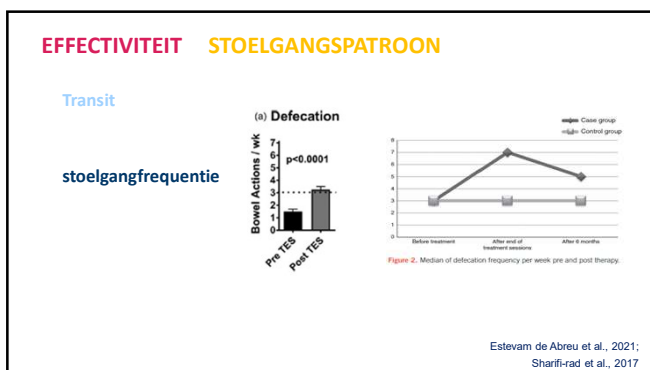


EFFECTIVITEIT **STOELGANGSPATROON**

Transit

> sham
~ 50 %
Geïsoleerde lage gastro-intestinale dismotiliteit

Yik et al., 2011 & 2012



EFFECTIVITEIT STOELGANGSPATROON

Transit

stoelgangfrequentie

stoelgangsdrang

Nood laxativa

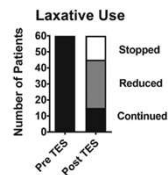


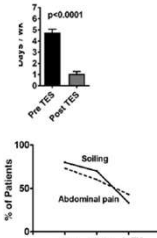
Figure 3. Laxative use in children with STC before and after TIS. N = 60. Two children had stopped laxatives before start of TIS.

Estevam de Abreu et al., 2021
Yik et al. 2017

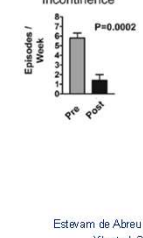
EFFECTIVITEIT SYMPTOMEN

Fecale incontinentie

(b) Soiling



b Fecal Incontinence

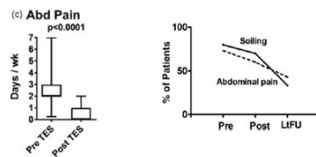


Estevam de Abreu et al., 2021
Yik et al. 2016 & 2017

EFFECTIVITEIT SYMPTOMEN

Fecale incontinentie

Pijn



Estevam de Abreu et al., 2021
Yik et al. 2016 & 2017

EFFECTIVITEIT LEVENSKWALITEIT

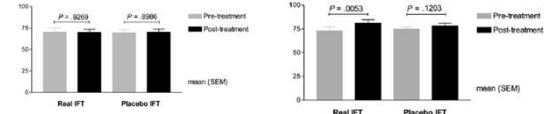


Fig. 1 Parent-reported PedsQL scores before and after both real and placebo IFT.

Fig. 2 Child-reported PedsQL scores before and after both real and placebo IFT.

Clarke et al., 2009

Rome IV Criteria for Functional Constipation^a

- 2 or fewer defecations in the toilet per week in a child of a developmental age of at least 4 years
- At least 1 episode of fecal incontinence per week
- History of retentive posturing or excessive volitional stool retention
- History of painful or hard bowel movements
- Presence of large fecal mass in the rectum
- History of large-diameter stools that can obstruct the toilet

^aMust include 2 or more of the following occurring at least once per week for a minimum of 1 month with insufficient criteria for a diagnosis of irritable bowel syndrome. Adapted from Tabbers et al.²

MINDER ROME IV CRITERIA ZIJN AANWEZIG

Veiga et al., 2012; Estevam De Abreu et al., 2021
Pawasarat et al., 2021

DIETER – 10 jaar



Aanmeldingsklacht:

Chronische functionele constipatie met fecale incontinentie



DIETER – 10 jaar

Huidig beeld:
 Stg frequentie 1-7/7
 Vegen bij meerdere dagen geen stg
 BSC 3-4
 Macrogol ½ zakje/dag
 Geen plasproblemen

Voorgeschiedenis:
 5j - conservatieve training

TRAINING

Drinkschema
 Toilethouding
 Toiletzitten
 Bekkenbodembkine (na herevaluatie)
 Proprioceptie
 Relaxatie
 Perstechniek



DIETER – 10 jaar

Colon transit tijd:
Algemeen vertraagde transit met ophoudgedrag


TENS



Parameters:
 2Hz
 60 µsec
 Sensorische drempel < 1 < motorische drempel
 2u/dag
 Dagelijks

+ Training wordt verdergezet!



Follow-up: 6 weken/12 weken



DIETER - RESULTAAT

Stg frequentie 2-4/7
 Stg tijdens toiletzitten
 vegen 1/3 weken
 BSC 3-4
 Macrogol ½ zakje – 4 dagen/week

RETROSPECTIEVE ANALYSE UZ GENT

6 weeks 12 weeks 18 weeks

MINDER PIJNLIJKE STOELGANG EN FECALE INCONTINENTIE

	Baseline		12 weeks		P-value
	n	%	n	%	
Stool frequency (≥ 3 /wk)	18	62	24	80	0,2
BSC (3-4)	17	59	19	66	0,1
Stool Pain					0,02
None	13	45	20	67	
Mild	11	38	8	27	
Severe	5	17	2	6	
Stool Loss (No)	9	31	13	43	0,2
	mean \pm SD		mean \pm SD		
Stool loss (days/wk)	3,5 \pm 3		2,7 \pm 3		0,02



NDD



Toiletzitten



Obstipatie en neuromodulatie,
Laten we de trend nog even verderzetten

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