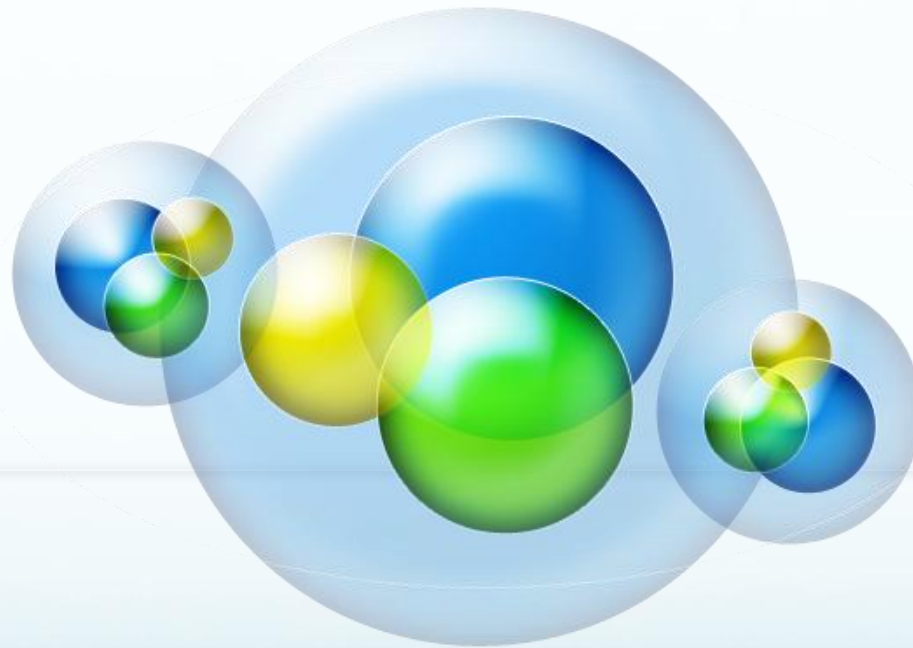


Bekkenbodempromblematiek: Diagnostiek en Therapie



Richelle Felt-Bersma, MDL arts

Joke Groot, Bekkenfysiotherapeut

Indeling

1. Wat is het klinisch probleem: **klachten**?
2. Wat is de **oorzaak** van de klachten ?
 - *Maakt dit uit voor de behandeling?*
3. Welke **onderzoeken (LO/aanvullend)** zijn er?
 - *Kunnen die de oorzaak aantonen?*
 - *Beleidsverandering?*
4. Welke **therapieën** zijn er?



1. Klachten



"ACH KIND, IK KAN AL VIJFTIEN
JAAR NIET POEPEN."

- **Incontinentie**: ongewild verlies van ontlasting
- **Soiling**/lekkage: lokale oorzaak, evt icm incontinentie
- **Obstipatie**
 - Slow transit
 - Evacuatie

Incontinentia alvi-definitie

- graad 1 continent
 - graad 2 incontinent voor flatus
 - graad 3 incontinent voor zachte ontlasting
 - graad 4 incontinent voor vaste ontlasting
-

Fecale incontinentie volgens Parks 1975

Wexner 1993 puntensysteem max 20

Vaizey 1999 puntensysteem (max 24) voor bovenstaand en frequentie, sociale handicap, incontinentie materiaal

Constipation Rome 3 criteria (2010)

- 1 Two or more:
 - Defecation < 2 x week
 - Straining(>25% defecations)
 - Solid stool (>25% defecations)
 - feeling of anal bloccade>25% defecations
 - manual manipulations to defecate >25% defecations (eg, digital evacuatie , support pelvic floor)
 - Incomplete evacuation (25% defecations)
- 2 rarely loose stools without laxatives
- 3 Insufficient criteria for IBS

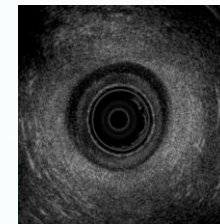
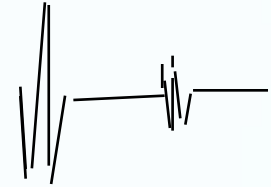
2. Oorzaken

Maakt dit uit voor de behandeling?



Incont. oorzaken - anatomie

- langdurige obstipatie → **Rekbeschadiging van n. pudendus**
- partus → **Sfincter trauma**
- anorectale chirurgie (ander trauma) → **Sfincter trauma**



- proctitis → **Kleine rectale compliantie**



- CNS dysfunctie → **bewustzijn, willekeurige controle**



- congenitale aandoeningen → **Anatomie defecten**

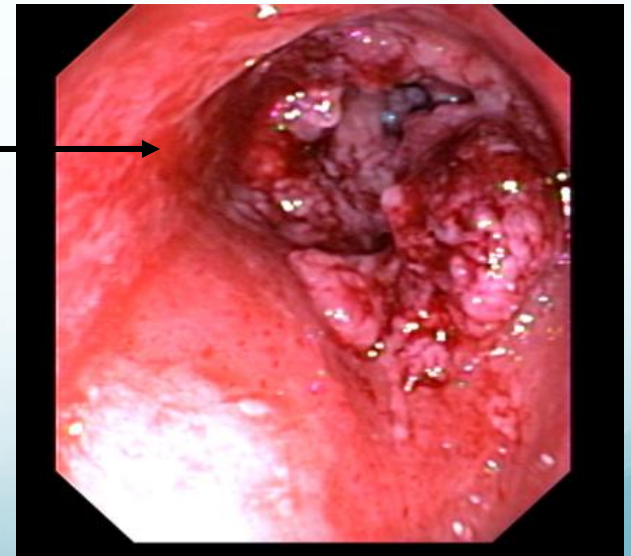


- diarree (overloop) → **Uitdaging totale continentie mechanisme**



Obstipatie - oorzaken

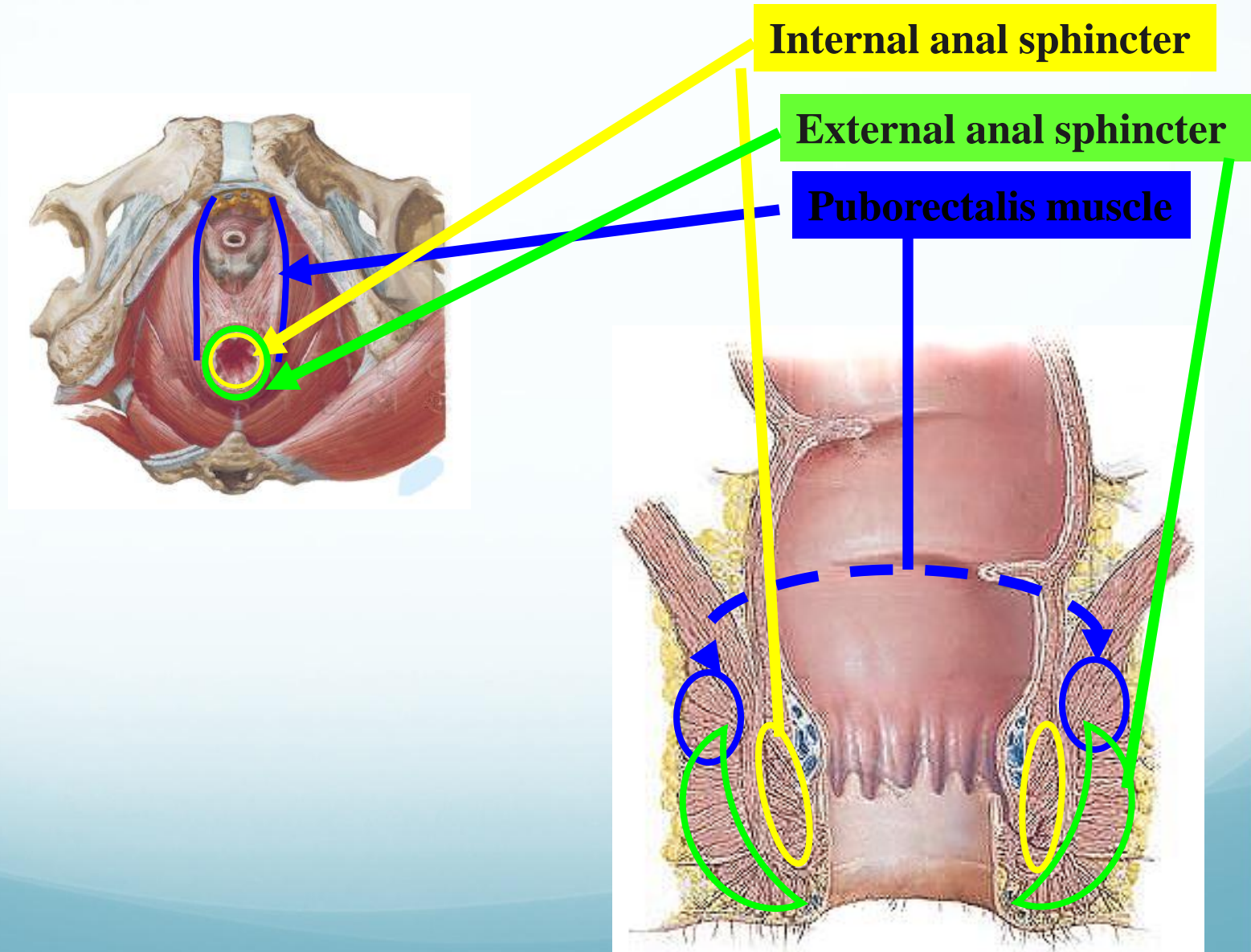
- algemeen
 - lifestyle, diet
 - medicatie (neurologisch/psychiatrisch)
 - endocrien/metabool (thyroid, calcium)
 - neurologische en psychiatrische ziekten
- colon
 - **obstructie (tumor)**
 - myopathie en neuropathie
 - sclerodermie
 - **idiopatisch**



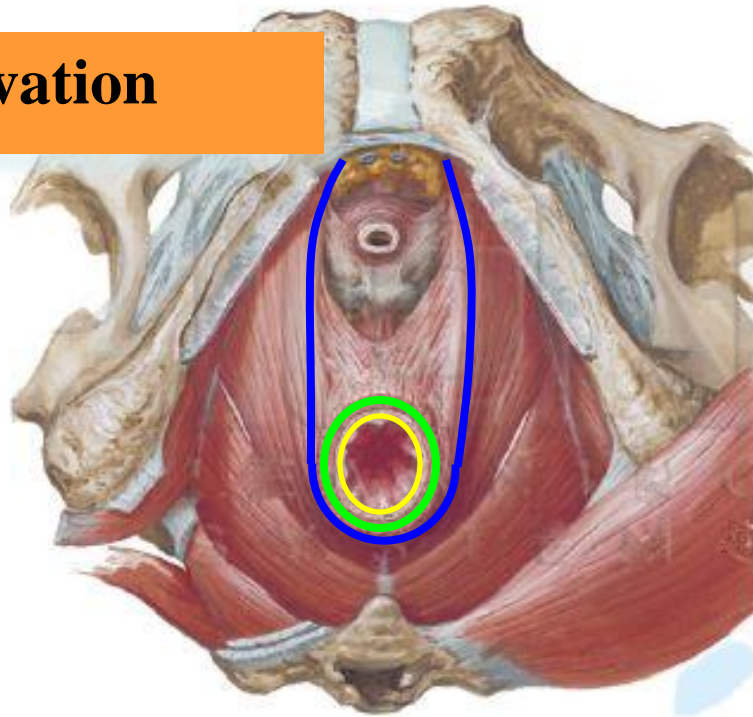
Obstipatie: Anorectaal: (evacuatie)

- Aangeboren afwijkingen
 - Hirschsprung
 - Anal atresia
- Secundaire stenosering
 - Inflammatoire darmziekten
 - chirurgie
- Dyssynergic Pelvic Floor (Anismus)
- Rectocele

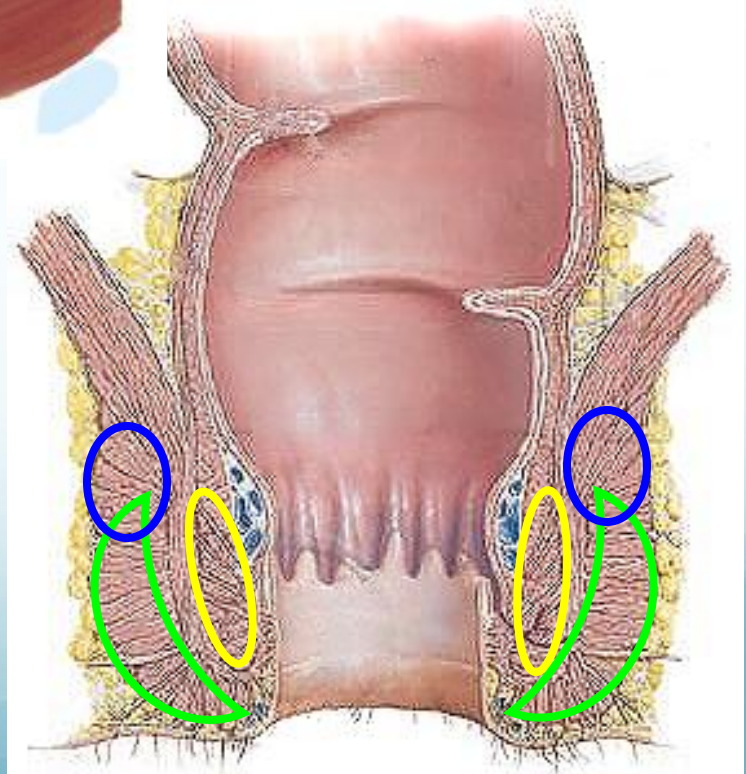
Fysiologie: Defecatie reflex



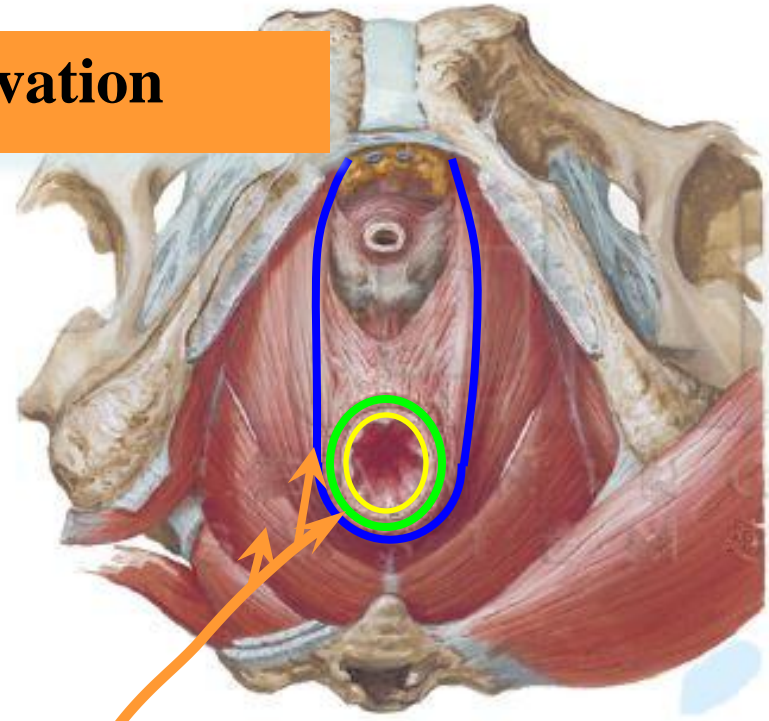
Innervation



S1
S2
S3
S4



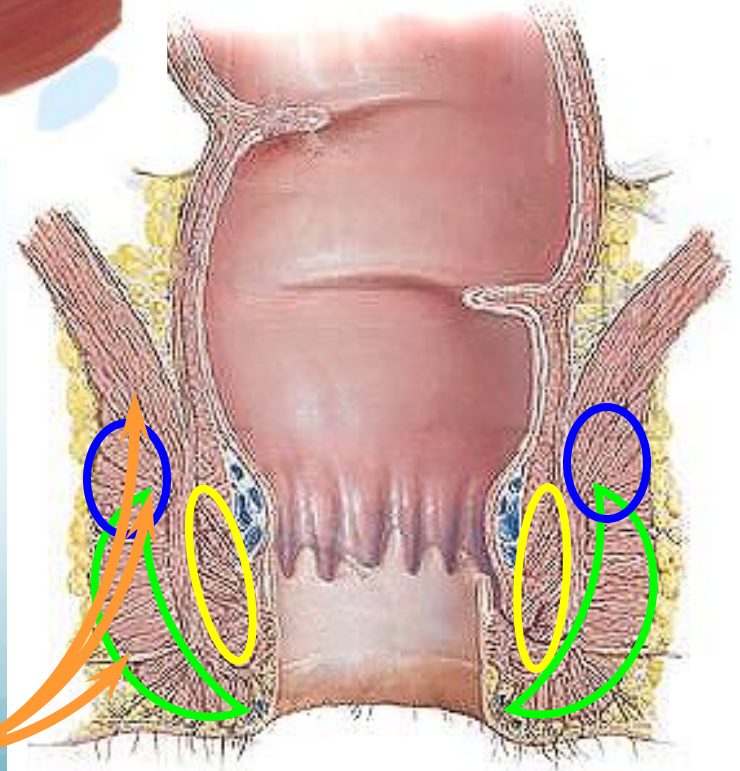
Innervation



Somatic innervation

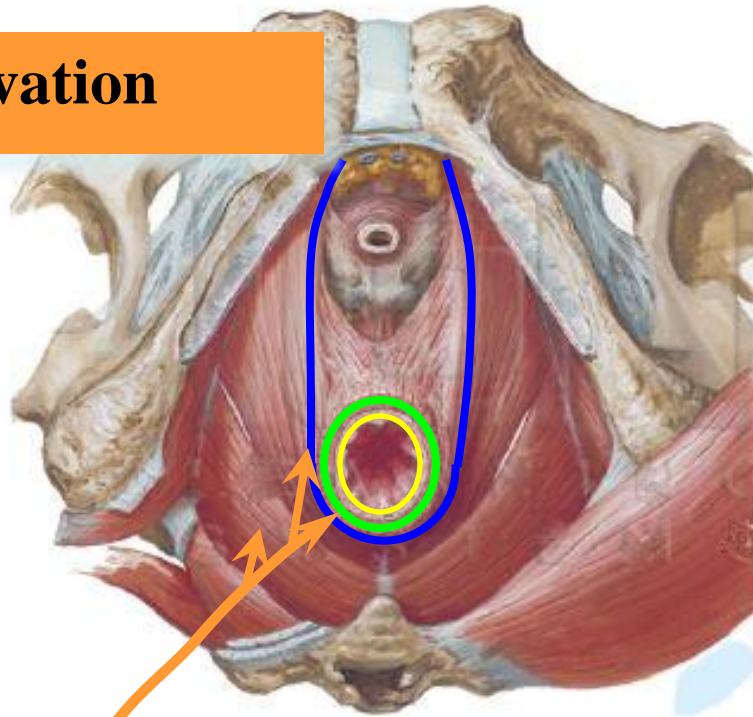
Sacral (S_2-S_4)

Pudendal nerve



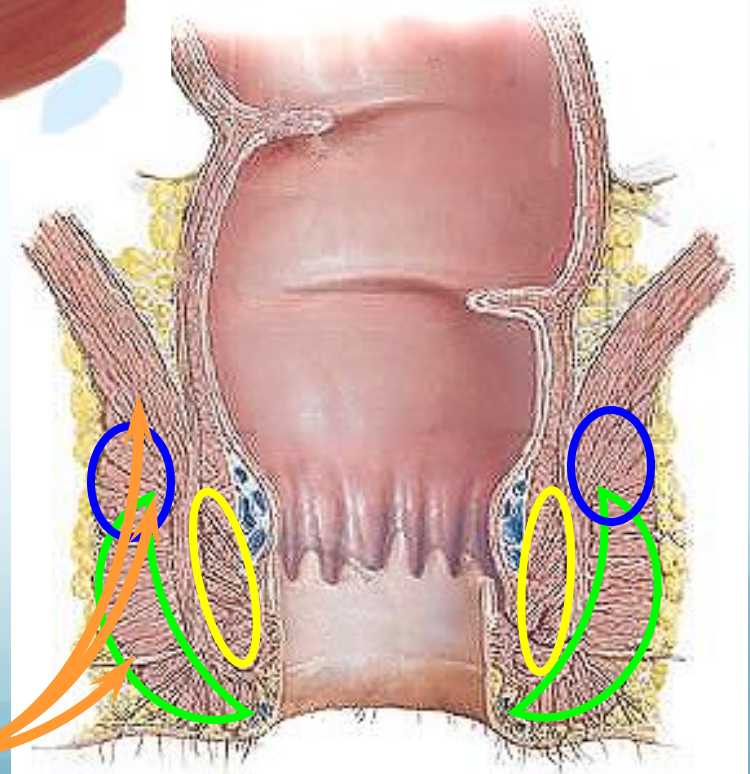
Innervation

Motor Function *CNS Control*



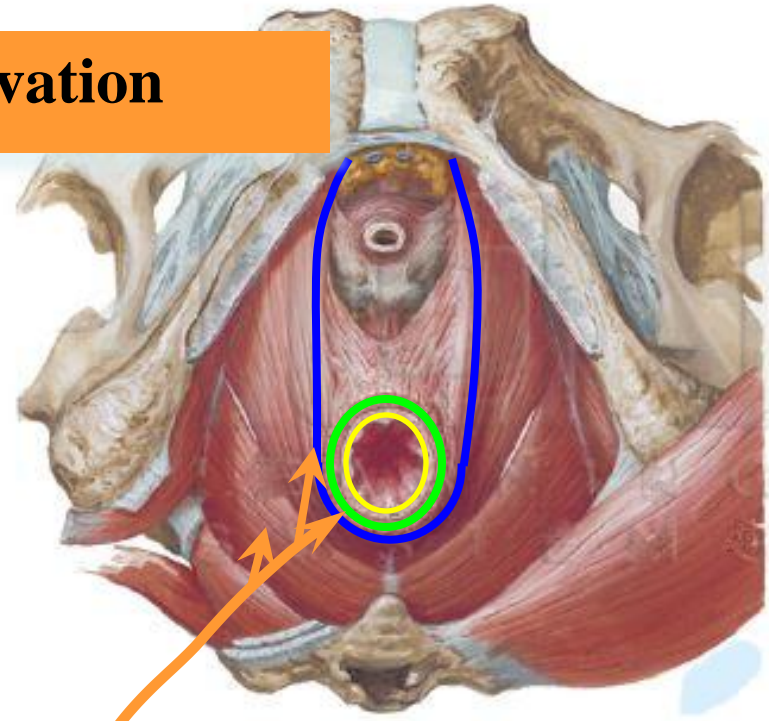
Voluntary Contraction
Voluntary Relaxation

Pudendal nerve



Innervation

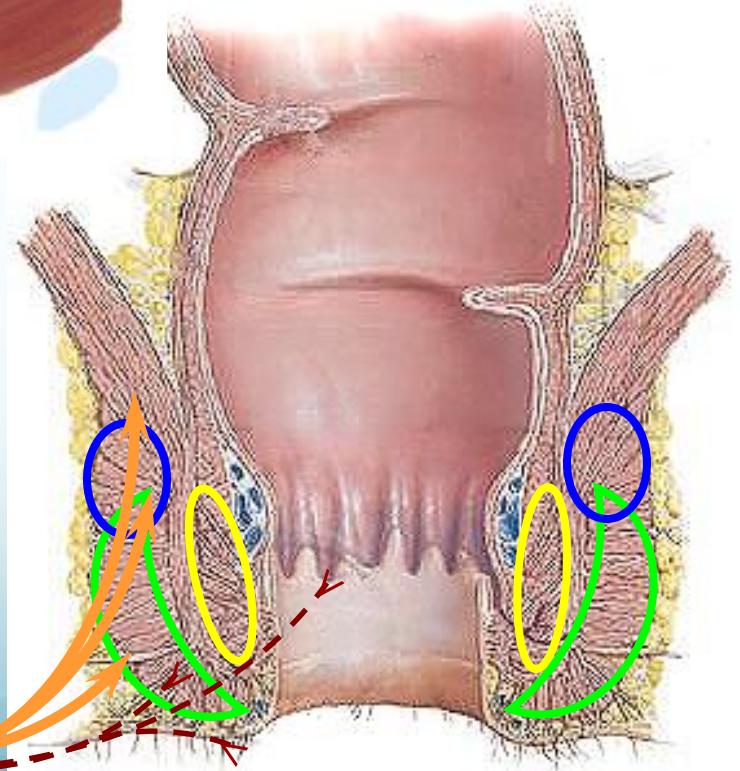
Sensory Function



Reflex Control
Sacral reflex

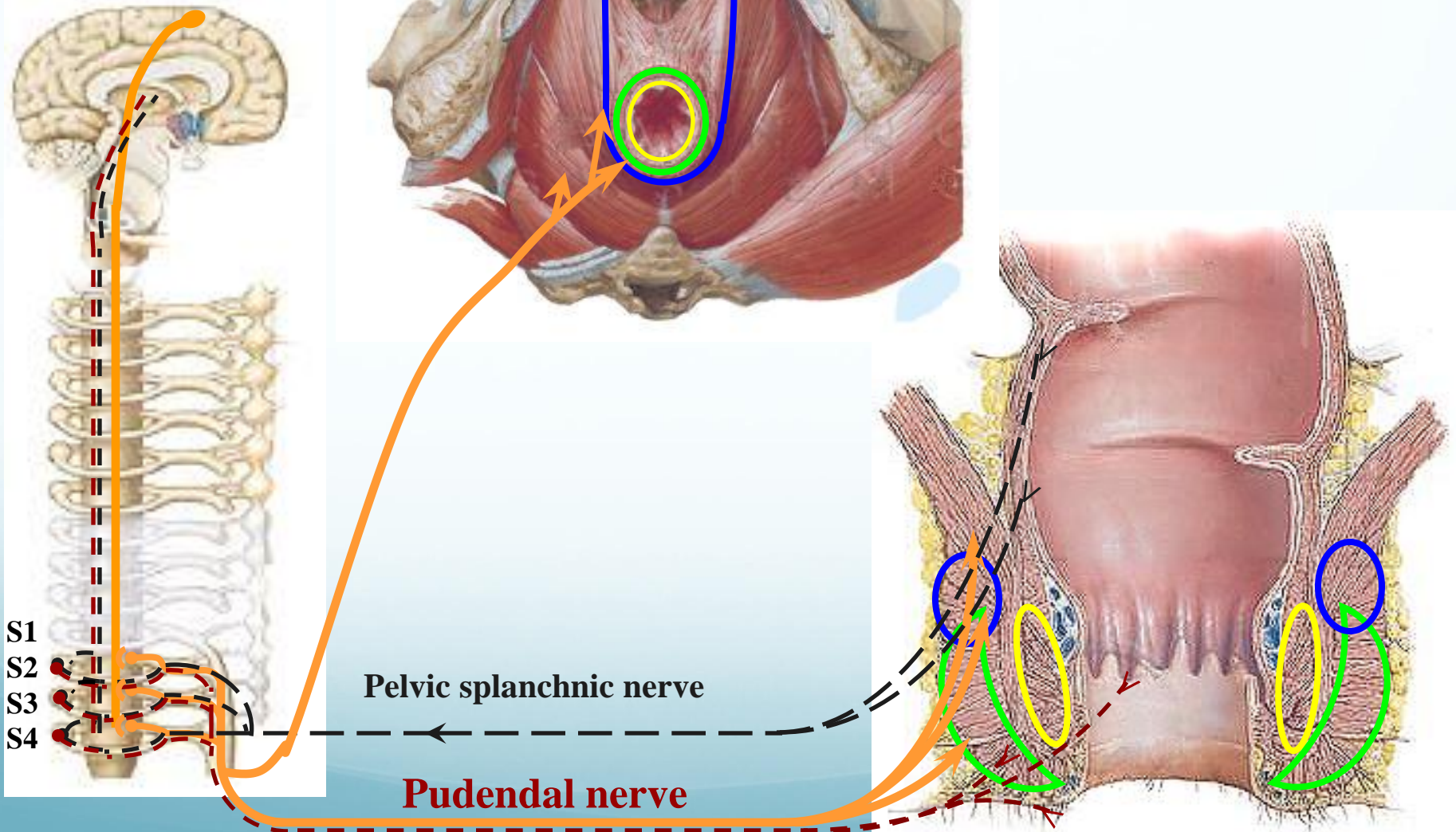
- S1
- S2
- S3
- S4

Pudendal nerve

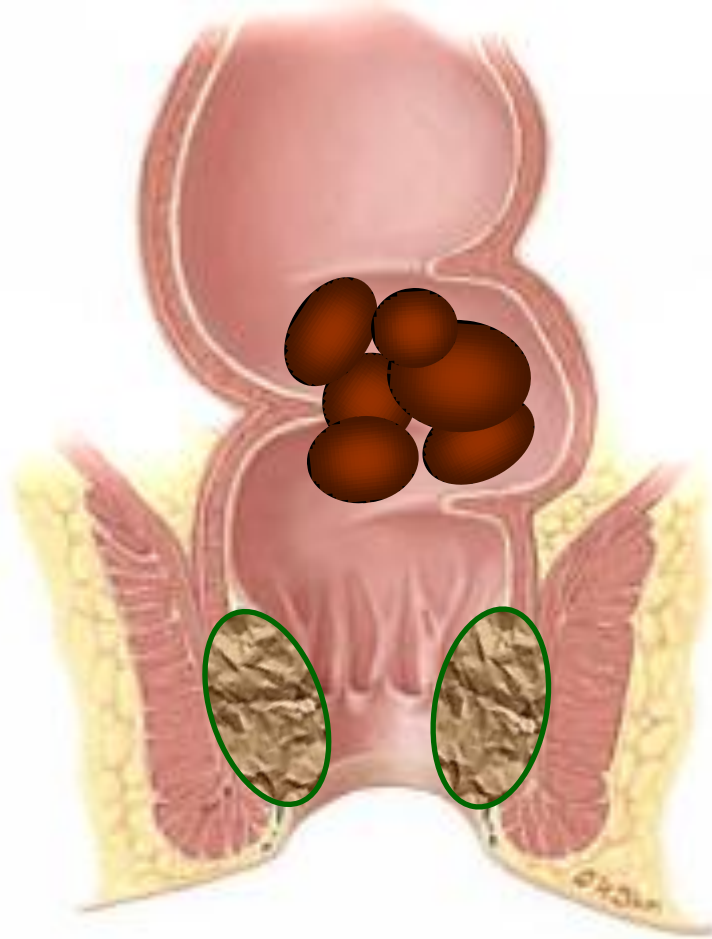


Innervation

Sensory Function

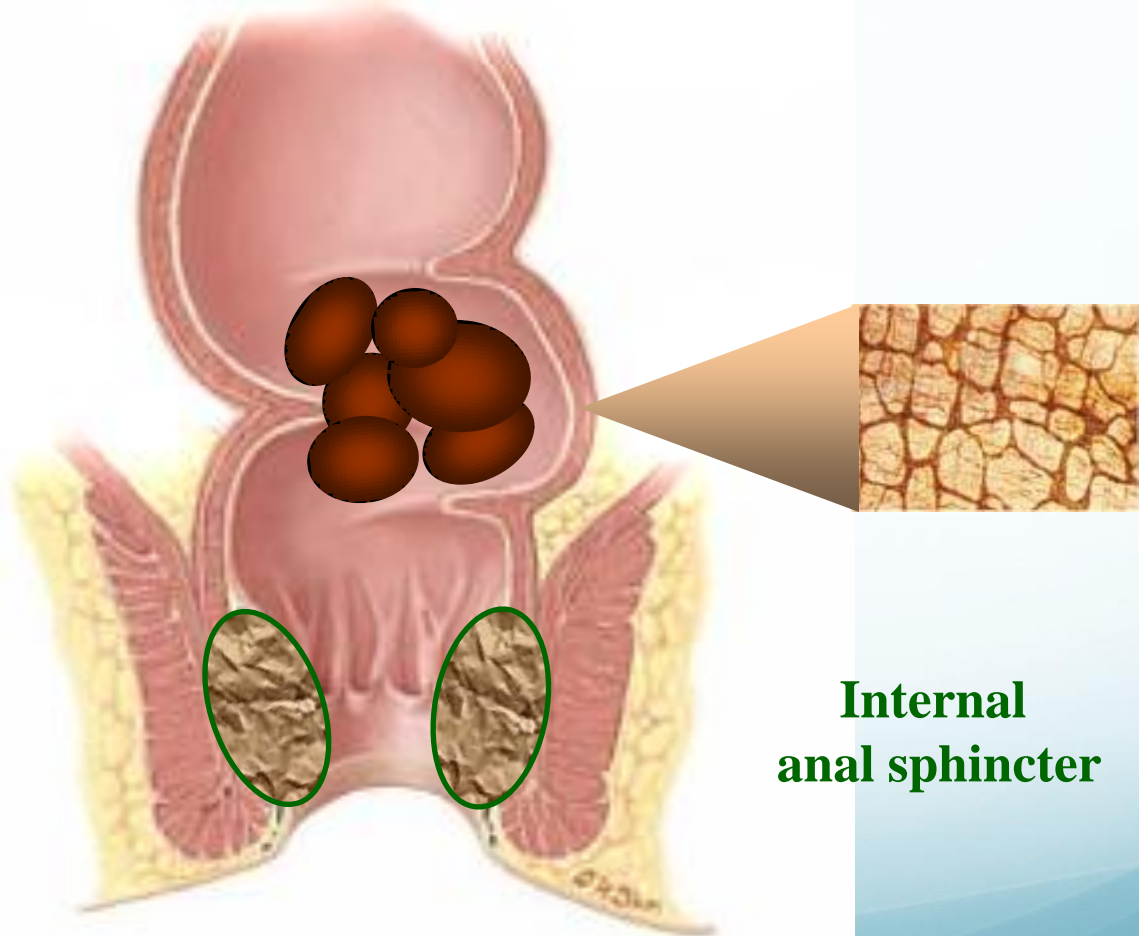


Inhibitory



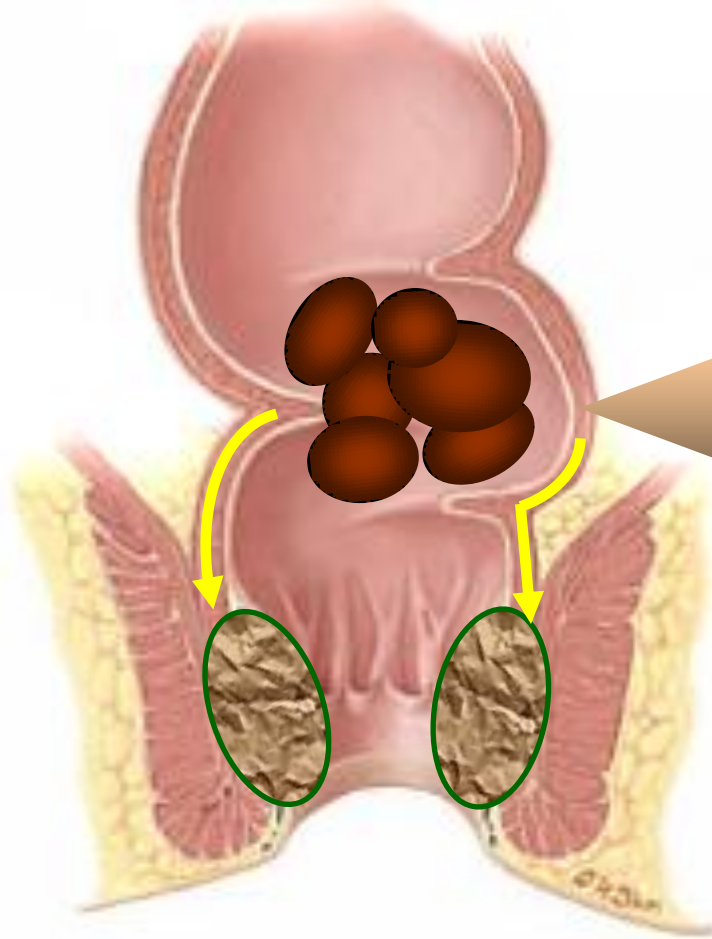
**Internal
anal sphincter**

Inhibitory



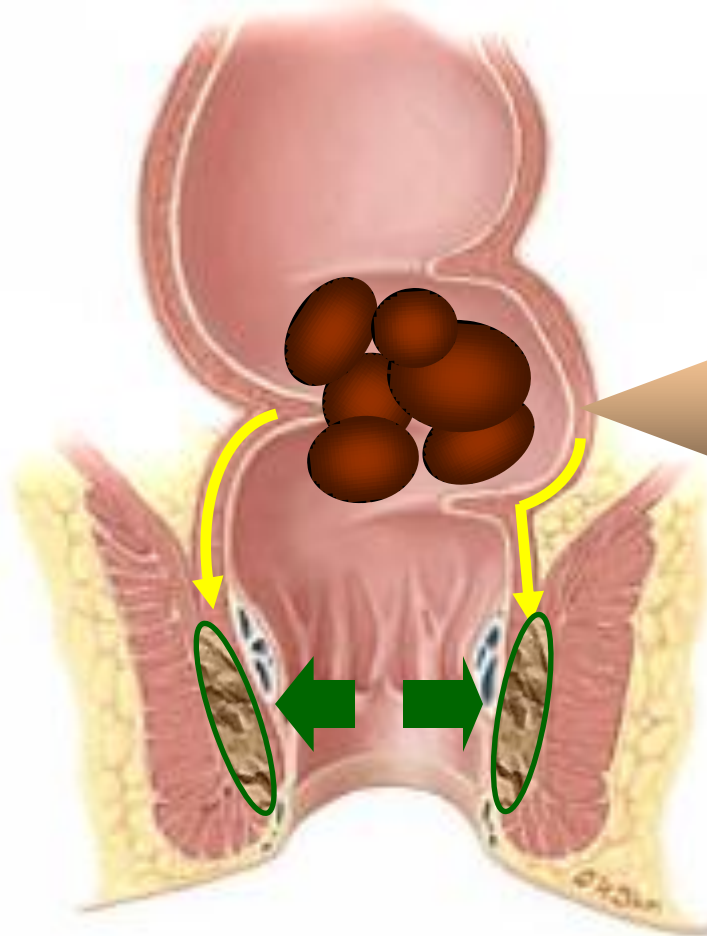
**Internal
anal sphincter**

Inhibitory



**Internal
anal sphincter**

Inhibitory



**Internal
anal sphincter**

Rectoanal **Sampling** Reflex



S2
S3
S4

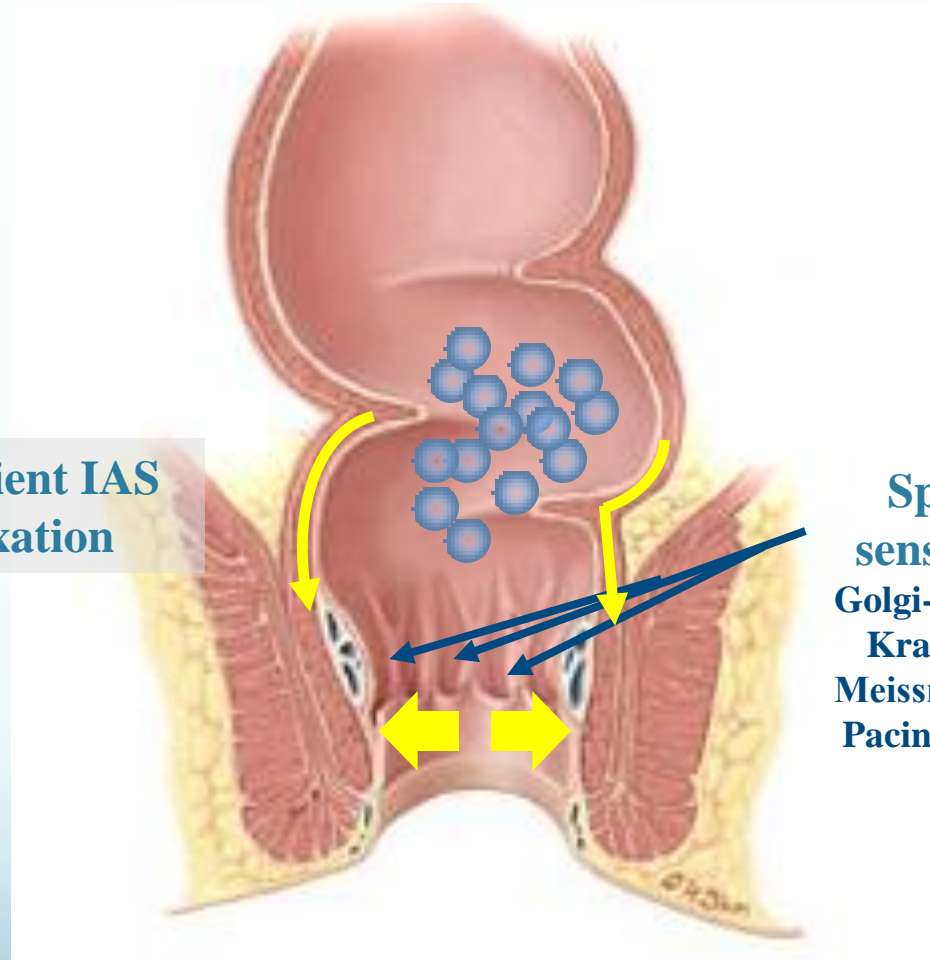


**Specialized
sensory organs**
Golgi-Mazzoni bodies
Krause end-bulbs
Meissner's corpuscles
Pacinic corpuscles

Rectoanal **Sampling** Reflex



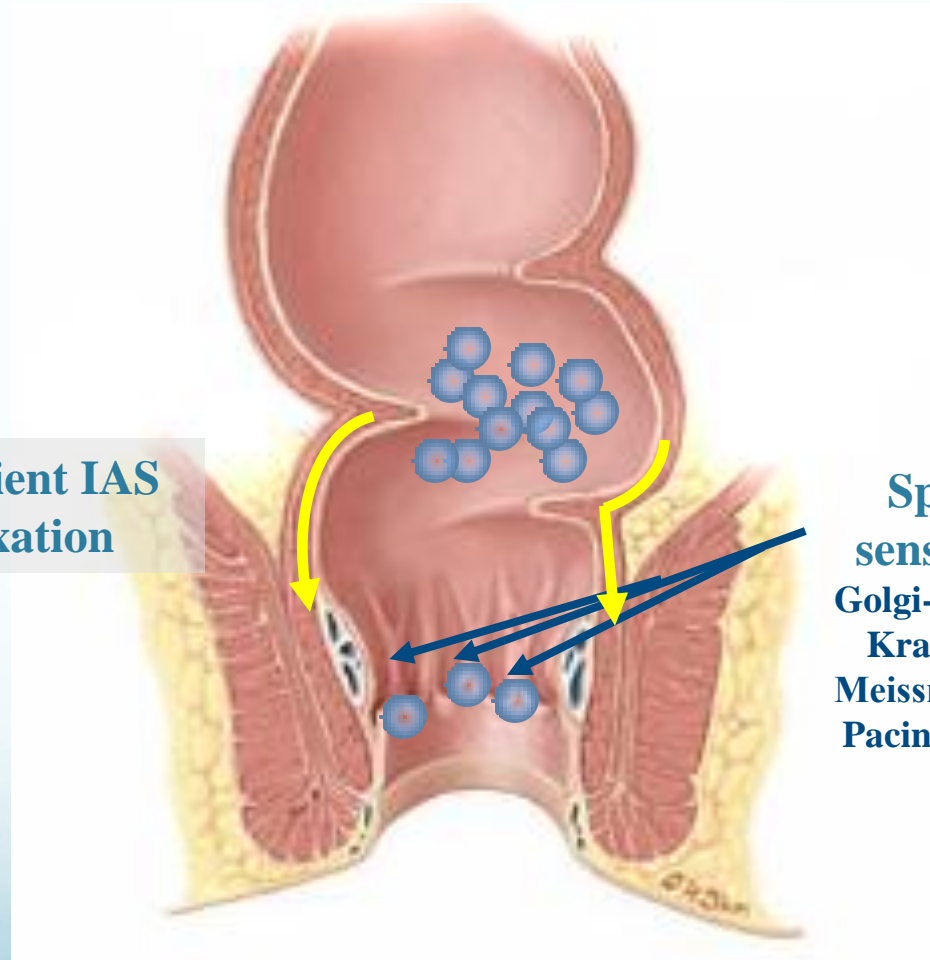
Transient IAS
relaxation



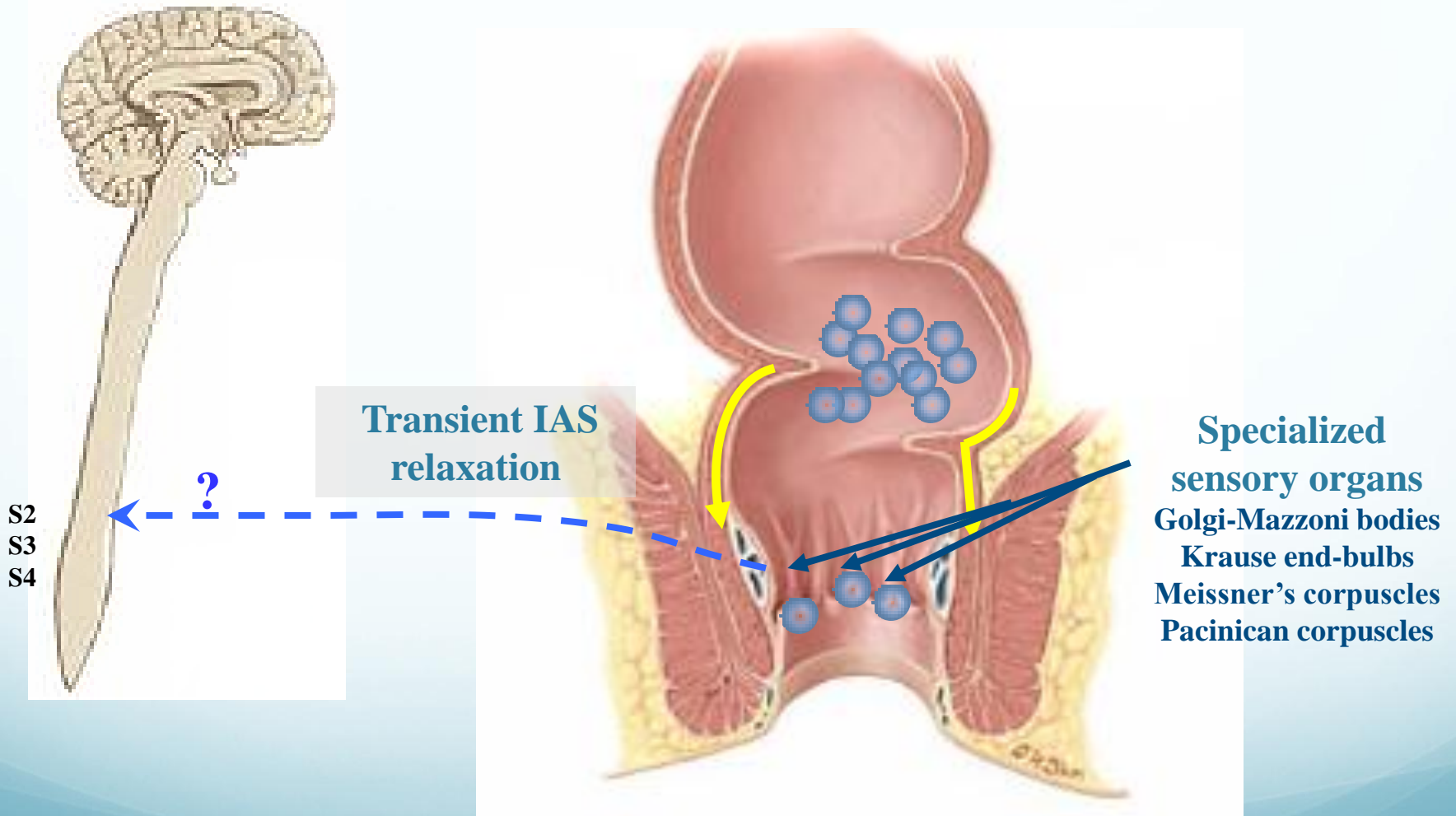
Rectoanal **Sampling** Reflex



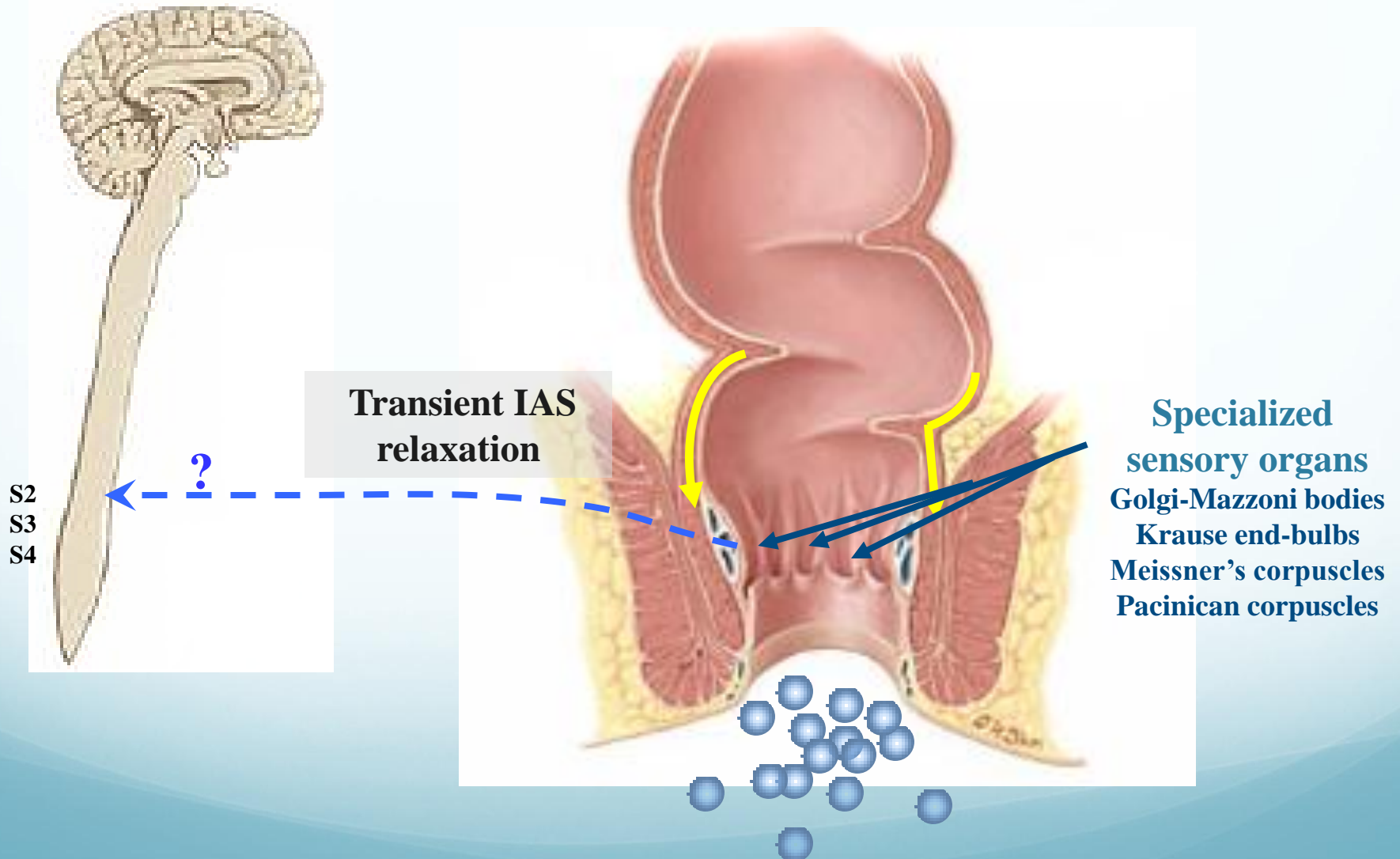
Transient IAS
relaxation



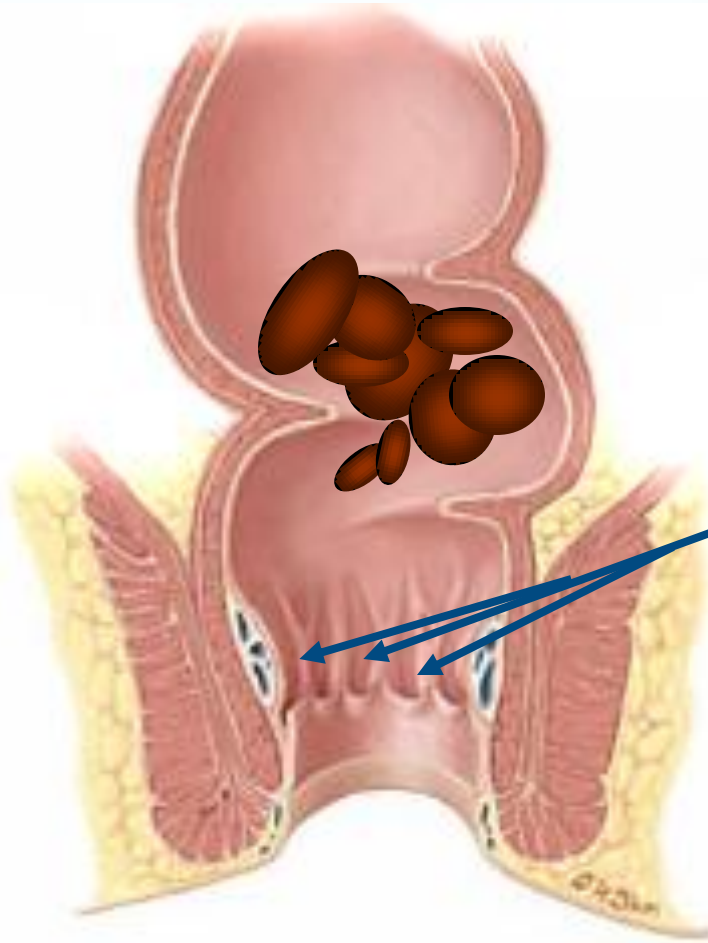
Rectoanal **Sampling** Reflex



Rectoanal **Sampling** Reflex



Rectoanal **Sampling** Reflex

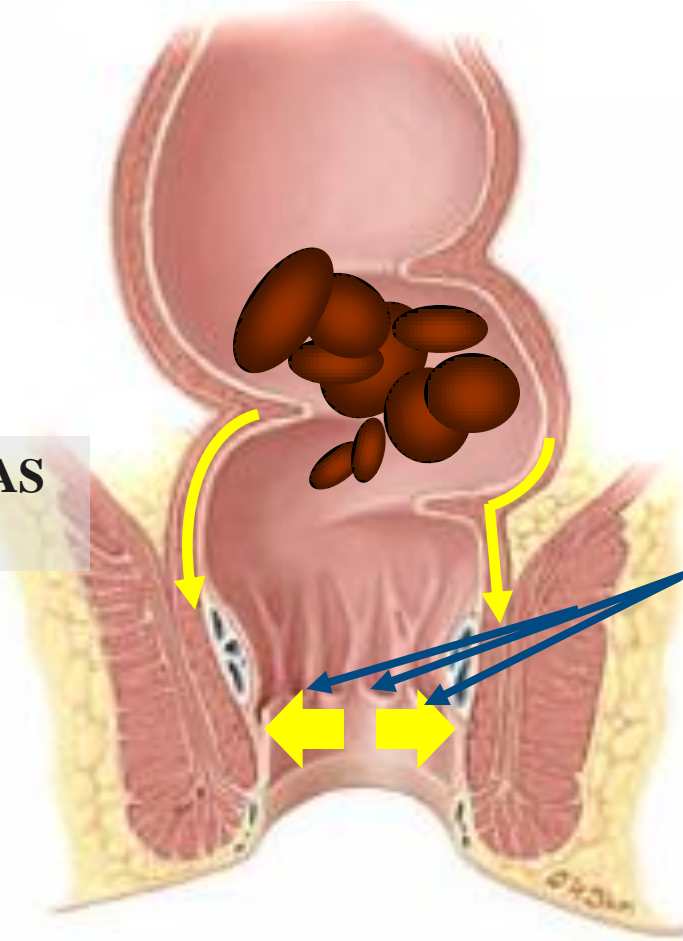


**Specialized
sensory organs**
Golgi-Mazzoni bodies
Krause end-bulbs
Meissner's corpuscles
Pacinic corpuscles

Rectoanal **Sampling** Reflex



**Transient IAS
relaxation**



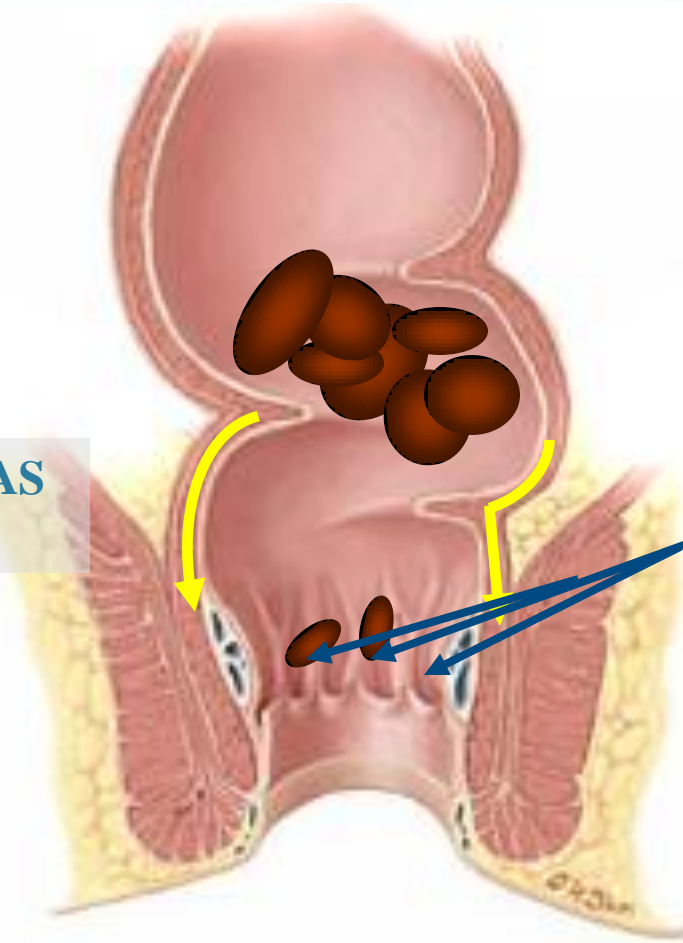
**Specialized
sensory organs**
Golgi-Mazzoni bodies
Krause end-bulbs
Meissner's corpuscles
Pacinian corpuscles

Rectoanal **Sampling** Reflex



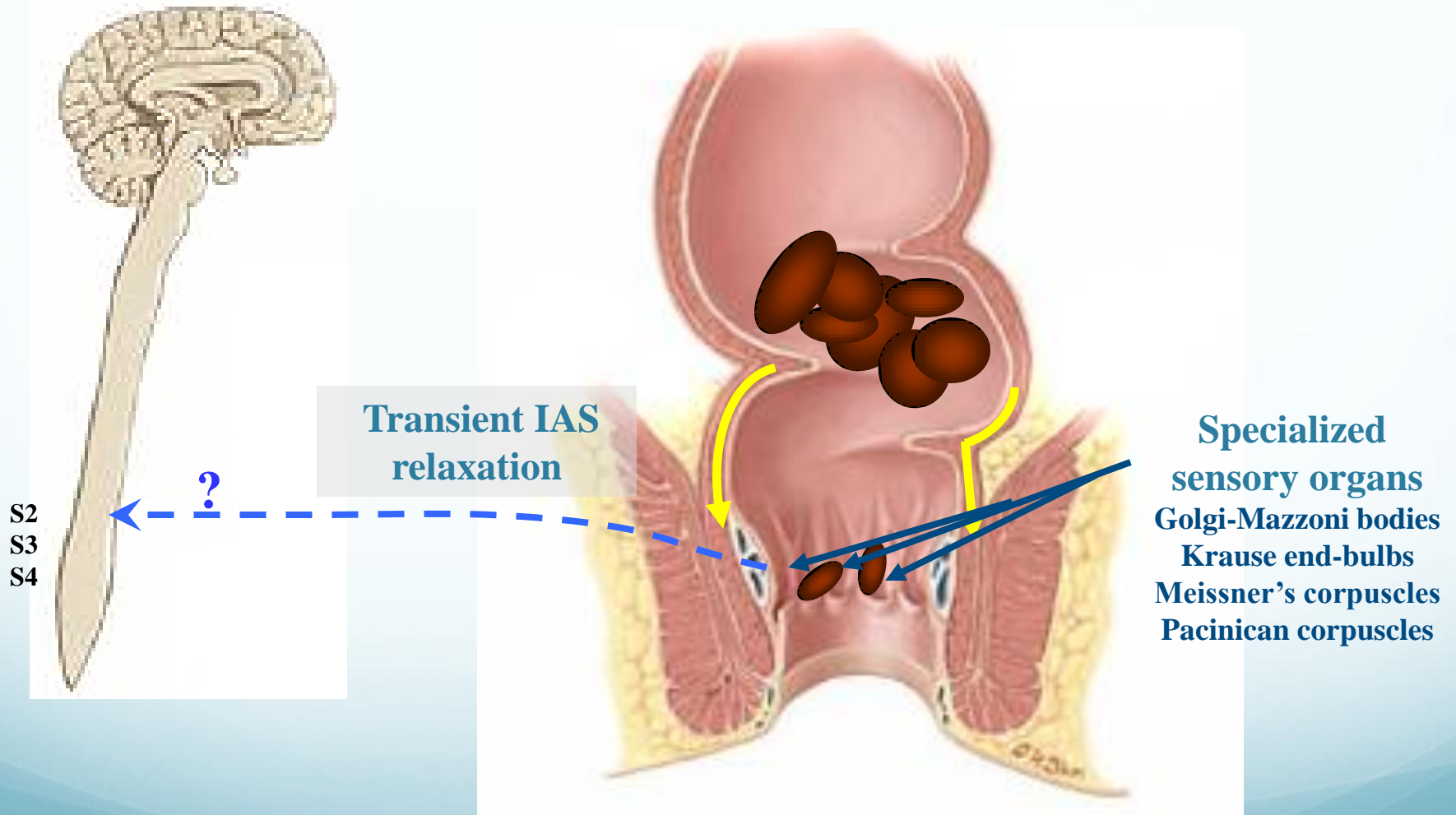
S2
S3
S4

**Transient IAS
relaxation**

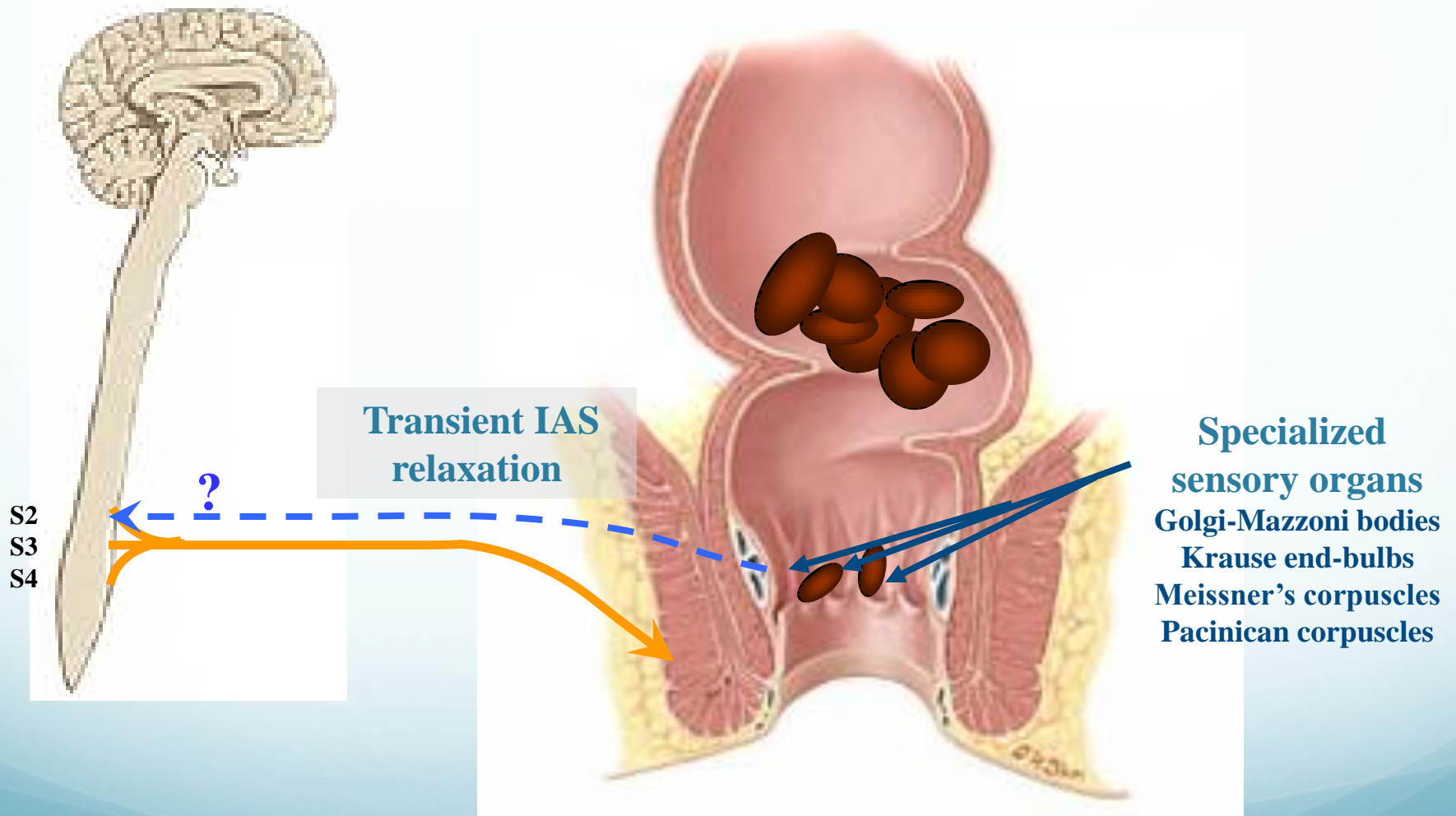


**Specialized
sensory organs**
Golgi-Mazzoni bodies
Krause end-bulbs
Meissner's corpuscles
Pacinian corpuscles

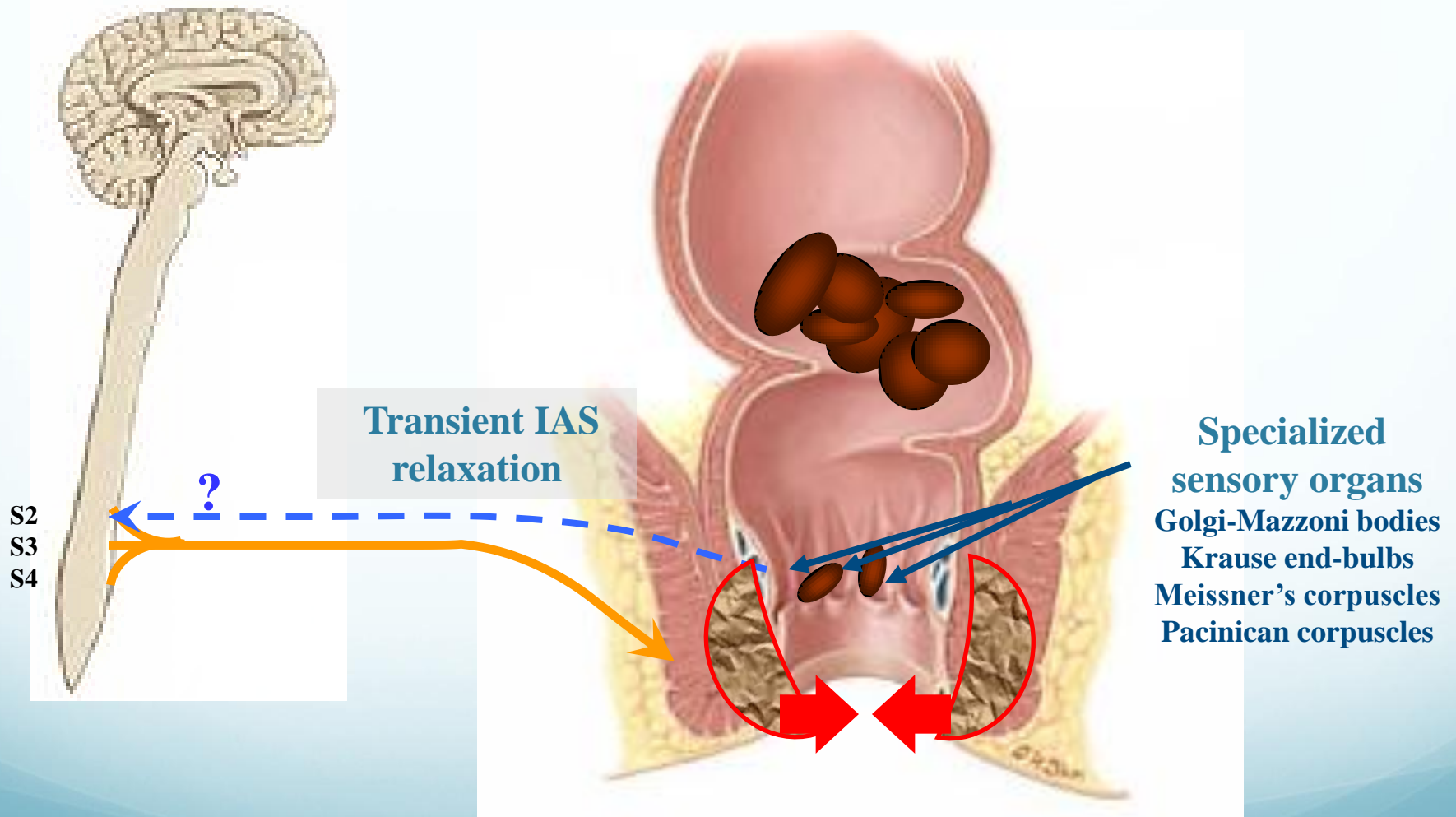
Rectoanal **Sampling** Reflex



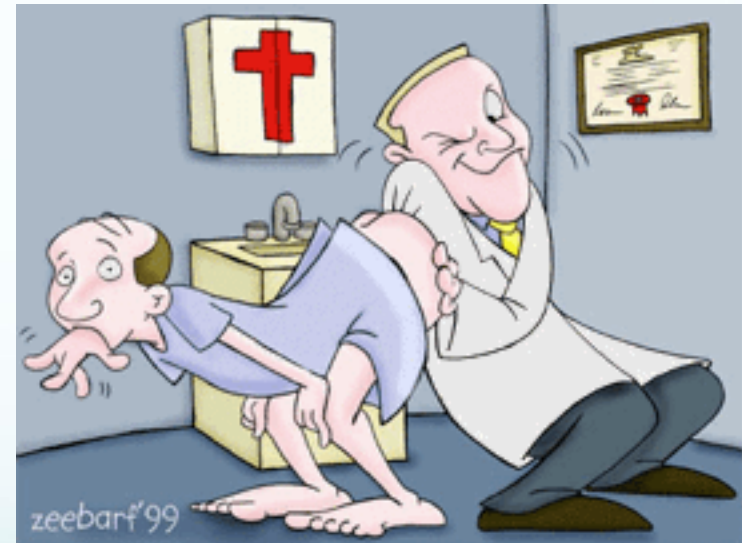
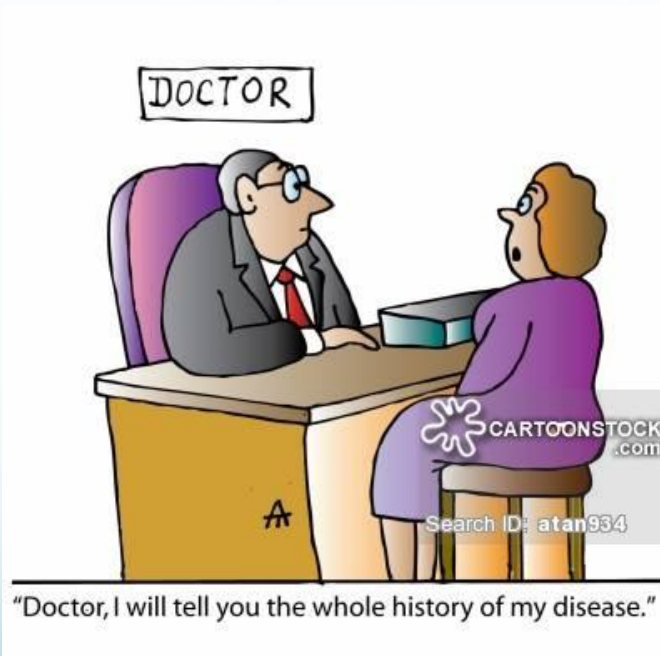
Rectoanal **Sampling** Reflex



Rectoanal **Sampling** Reflex



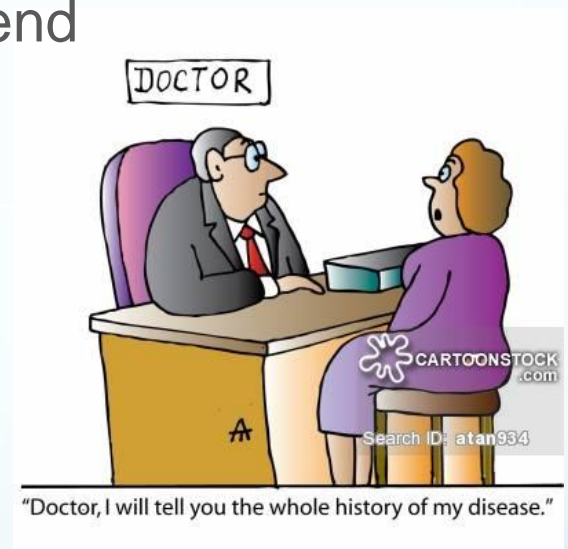
3. Onderzoek



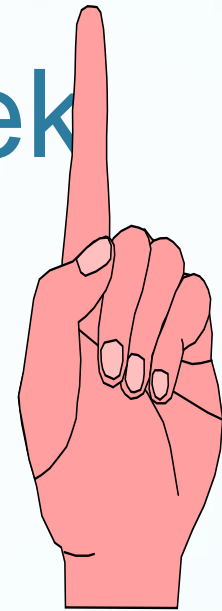
Dr. Archibald was known for his very thorough Proctology exams...

Anamnese

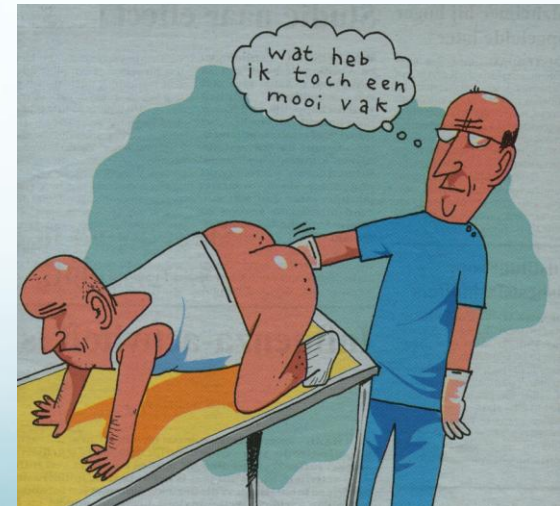
- hoofdklacht,
- duur, wanneer ontstaan, wanneer optredend
- sociale impact
- medicatie
- familiale aandoeningen
- eerdere behandelingen en operaties
- overige klachten
- overige ziekten



Lichamelijk onderzoek



- Inspectie van anus en perineum
 - rust, aanspannen en persen
 - (fistels, fissuur, littekens, hemorroiden, prolaps van slijmvlies of rectum, rectocele 2-3)
- Rectaal toucher
 - rust, aanspannen en persen
 - sfincterdefecten, rectocele
- Vaginaal toucher
- Onderzoek van de buik
- Algemene indruk

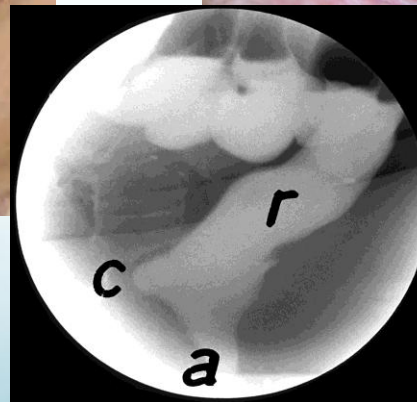
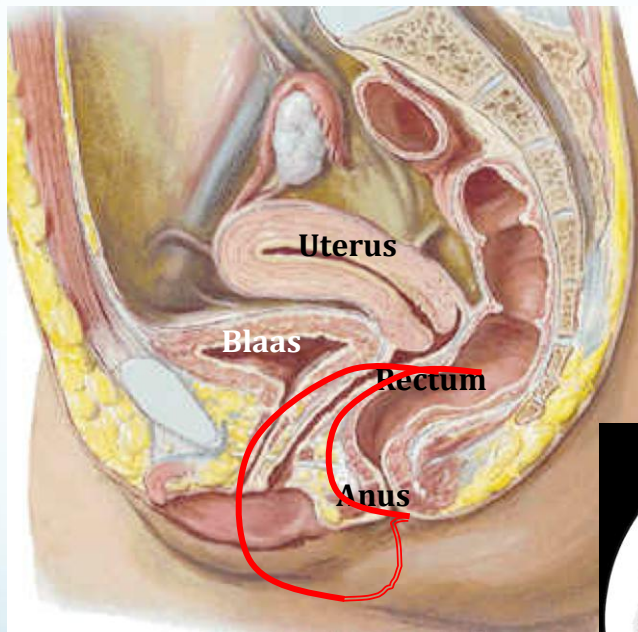


Lichamelijk onderzoek

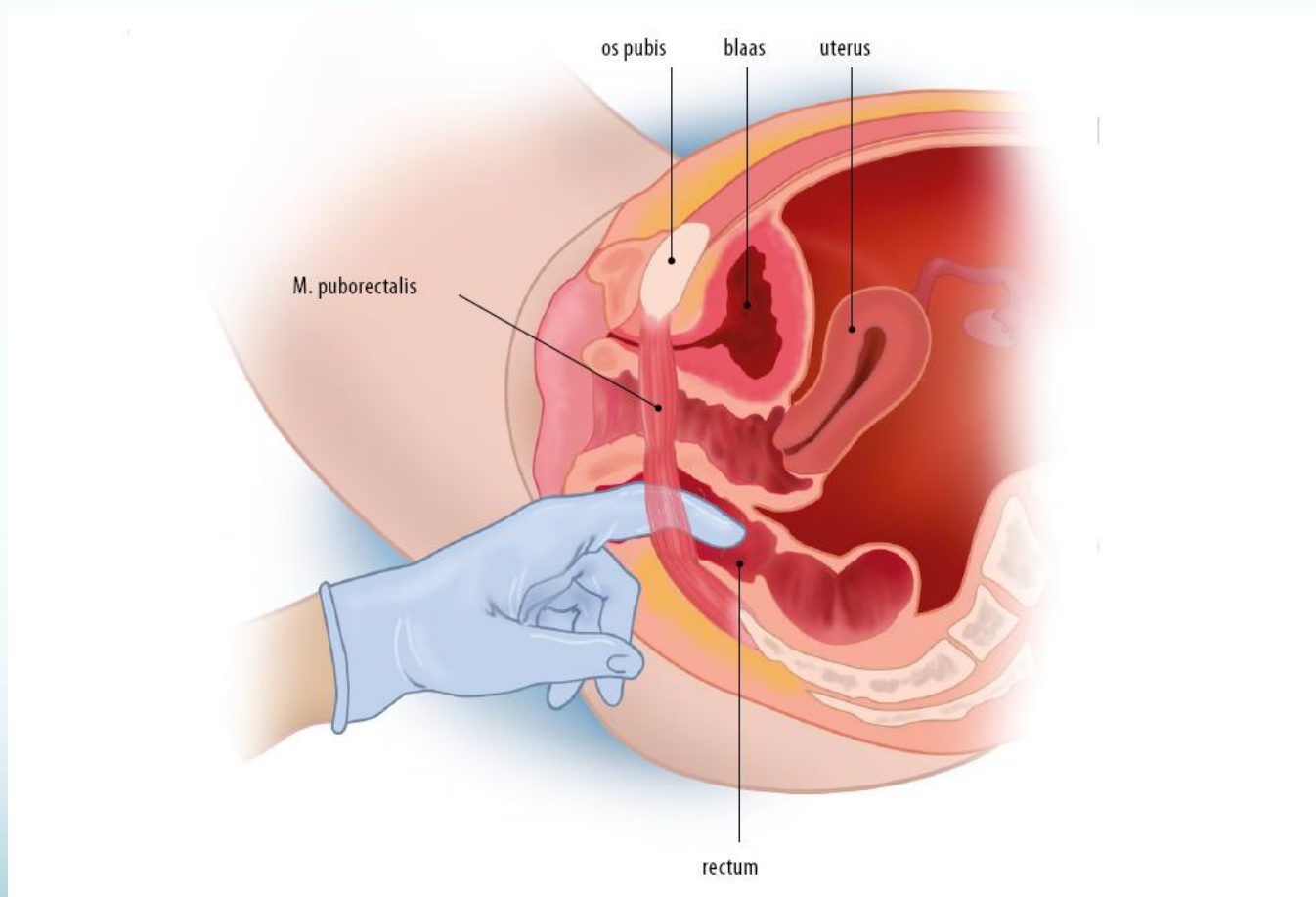


rectumprolaps

Lichamelijk onderzoek



Lichamelijk onderzoek

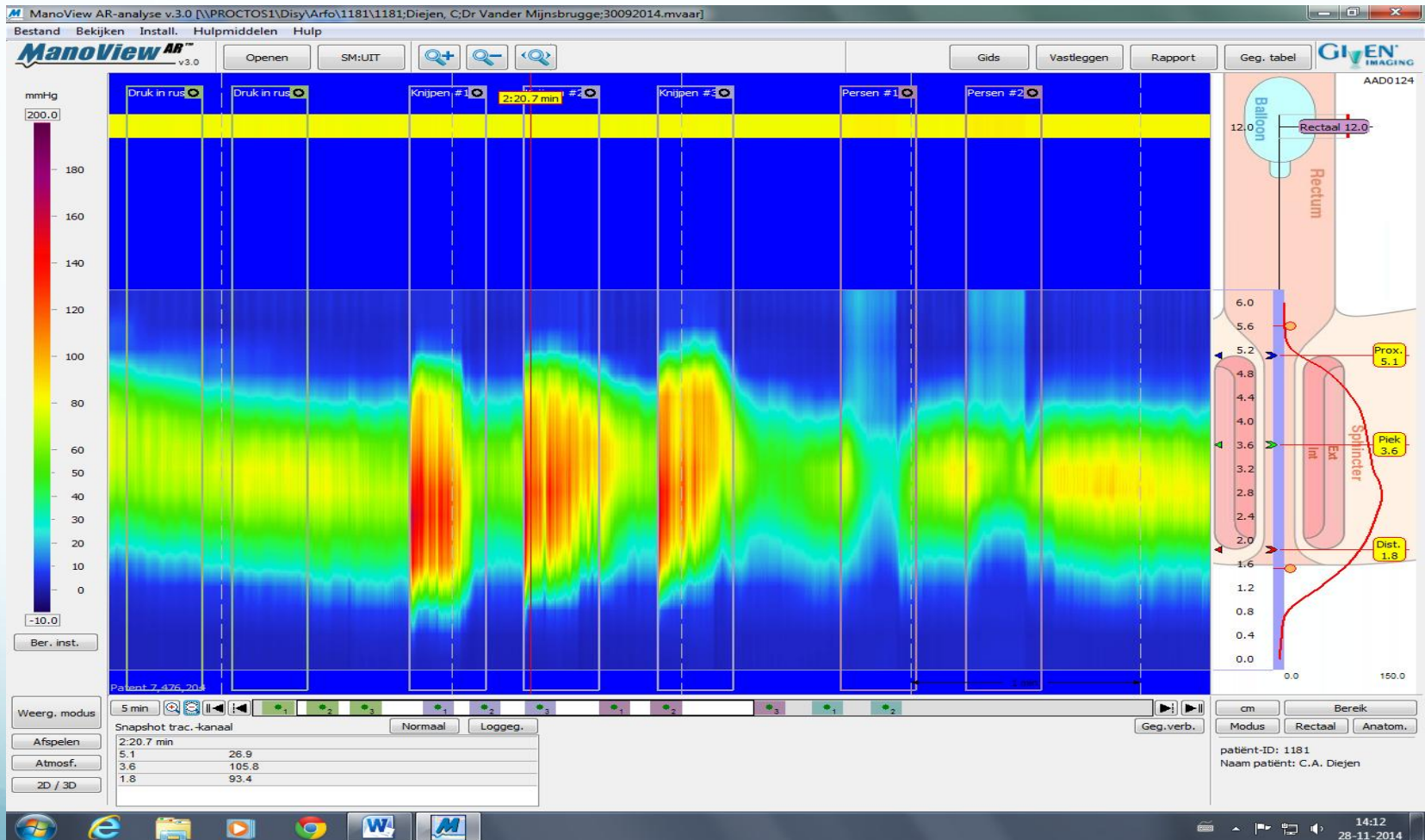


Testen en plaatjes

- Functietesten
 - Anale manometrie
 - Rectale capaciteit
 - (Anale sensibiliteit)
 - (EMG/geleidingstijd n. Pudendus)
- Beeldvorming
 - Anale endoechografie
 - Anale MRI
 - (Defecografie)
 - (Colon passagetijd)



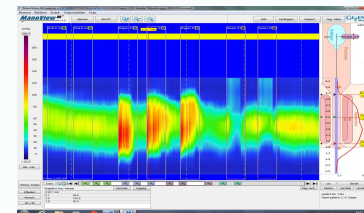
Anale manometrie



Normale rustdruk, knijpkracht en relaxatie

Anale manometrie

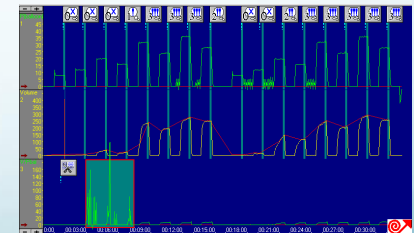
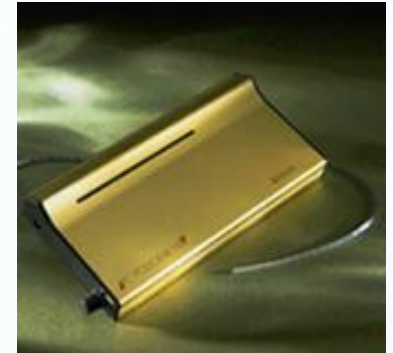
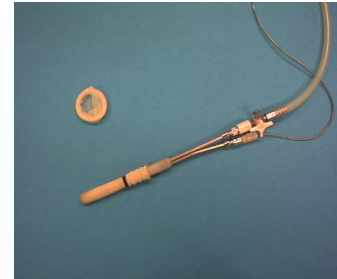
- **Techniek:**
 - HDRAM-(3D) beste (Proctoskliniek)
 - normaalwaarden > vgl oudere techn
- **Klinische interpretatie:**
 - Normaalwaarden grote spreiding
 - Goede reproduceerbaarheid
 - Jonge mannen hogere drukken dan oude vrouwen
 - Incontinentie lagere drukken
 - Andere aandoening wisselend
 - Dyssynergic pelvic floor: geen relaxatie en/of rectale druk opbouw



NVGE do 11.00 Parkzaal

Rectale compliantie

- Verschillende methodes
 - Lucht
 - Water
 - Volume meting
 - Druk meting
 - Barostat (polyethyleen zakje)
- Meting van
 - Eerste aandrang
 - Urge
 - **Maximum tolerabel volume**
 - Compliantie



Rectale compliantie

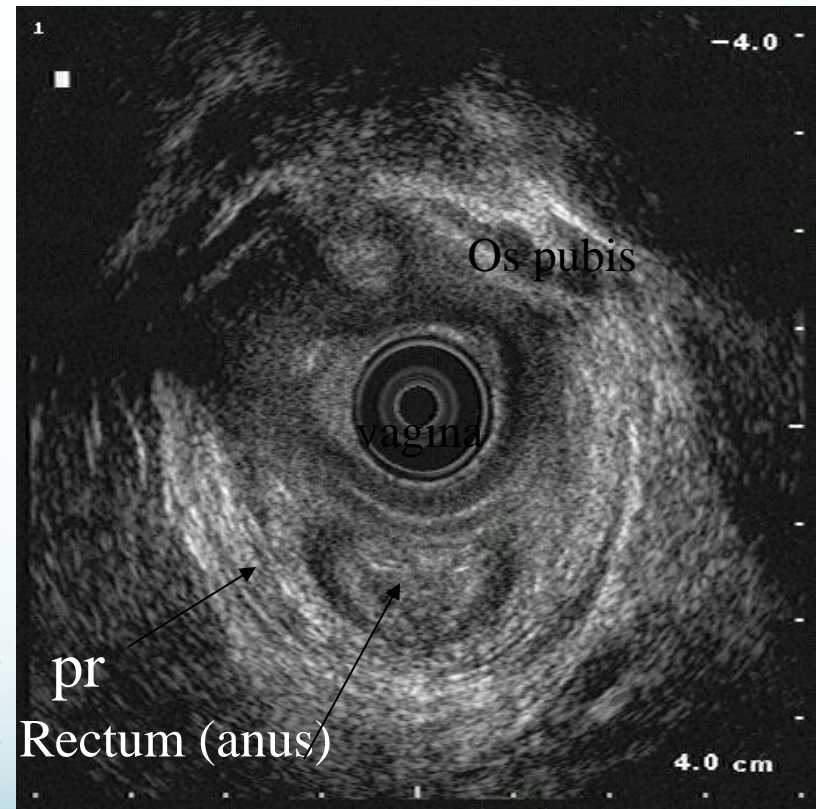
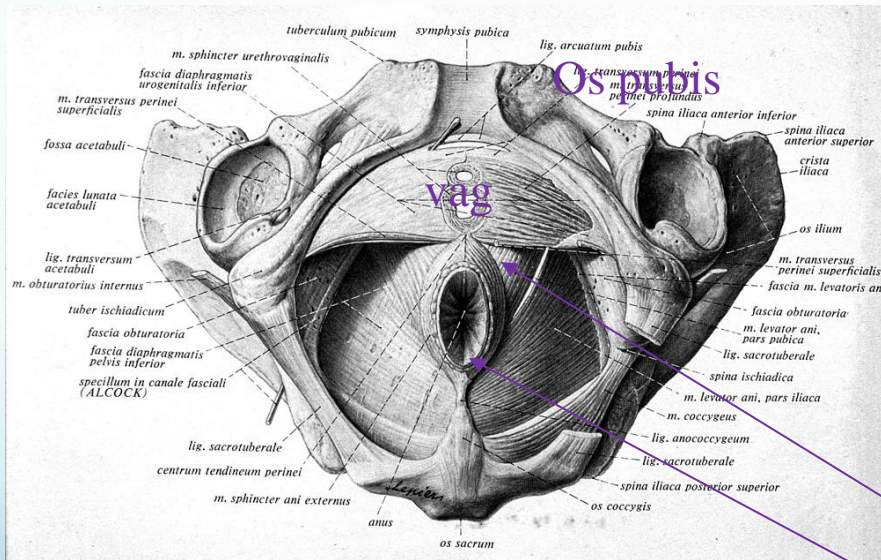
- Normaalwaarden grote spreiding
 - patiënten met proctitis of pouchitis hebben de kleinste RC
 - MTV
 - *< 60 ml altijd fecaal incontinent*
 - *60 < MTV < 100 58% incontinent*
 - MTV > 500 ml altijd bij geobstipeerde patiënten

Felt e.a. DCR 2000

Sloots e.a. NG&M 2000

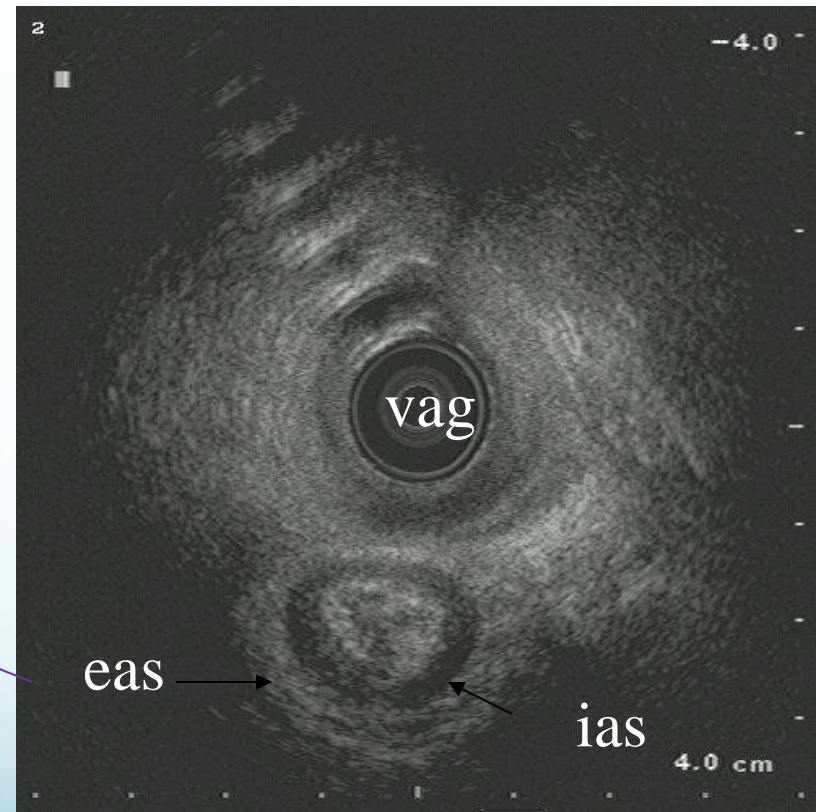
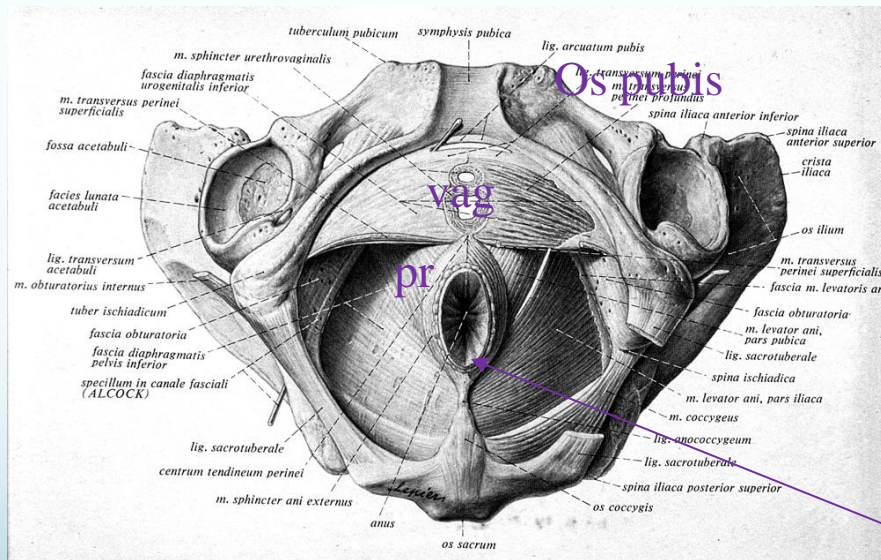
- Patientengroepen
 - IBS < (*Pennings 2001*)
 - Endometriose < (*Issa 2011*)
 - SNS: compliance =, RC > (*Abel-Halim 2011*)
 - Kinderen: geen prognostische factor (*Berg vd 2009*)

Anale endoechografie normaal (transversaal hoog)



- normaal vaginaal beeld
- m. puborectalis

Anale endoechografie *normaal (transversaal laag)*

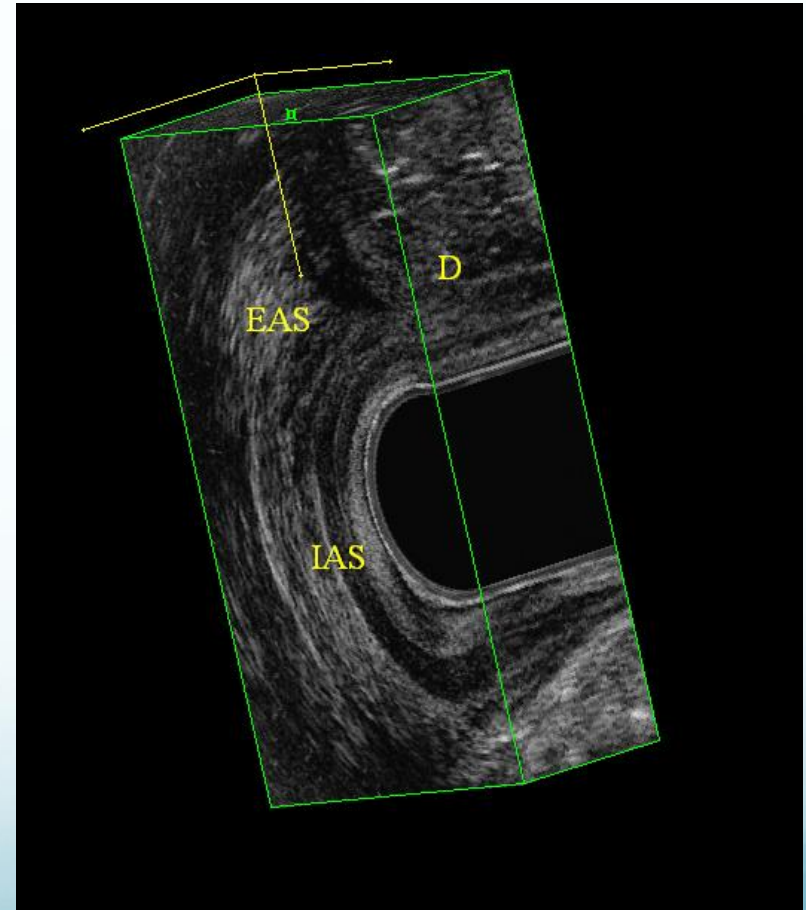
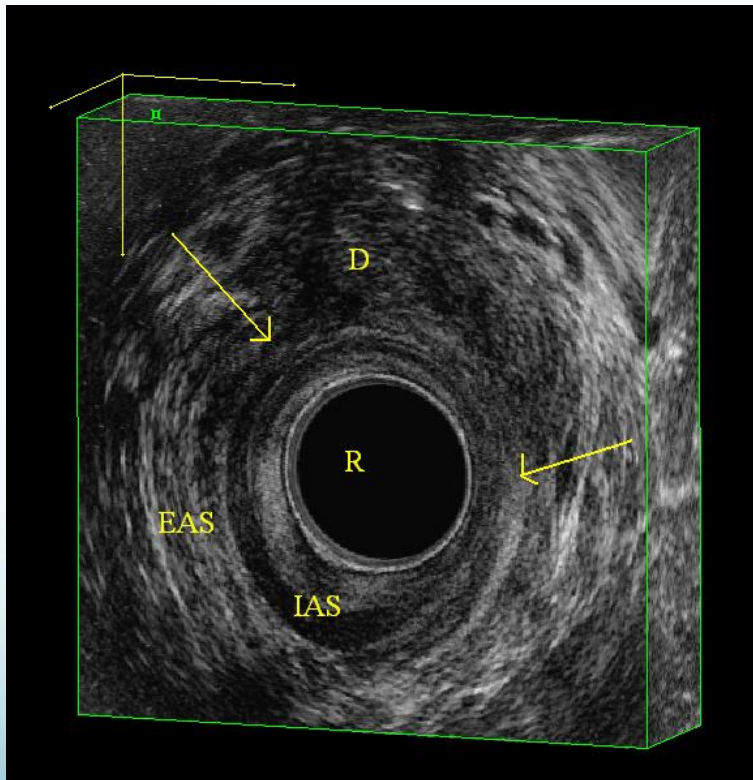


• normaal vaginaal beeld

• 2-3 cm

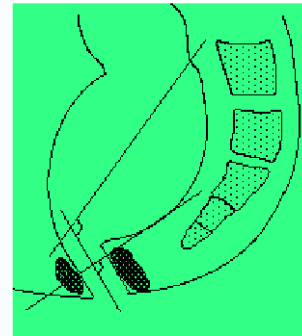
Anale endoechografie

defect EAS & IAS



Defecografie

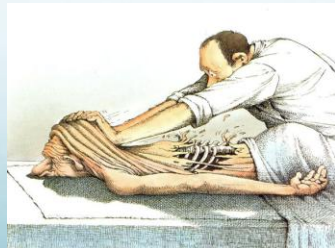
- Techniek
 - barium zetmeel mengsel
rectaal inbrengen
 - 1 h tevoren bariumpap oraal
(dunne darm)
 - meting van
 - ARA
 - contouren (**rectocele**,
intussusceptie)
 - **enterocele**
 - descensus
 - ontlediging



Vraag

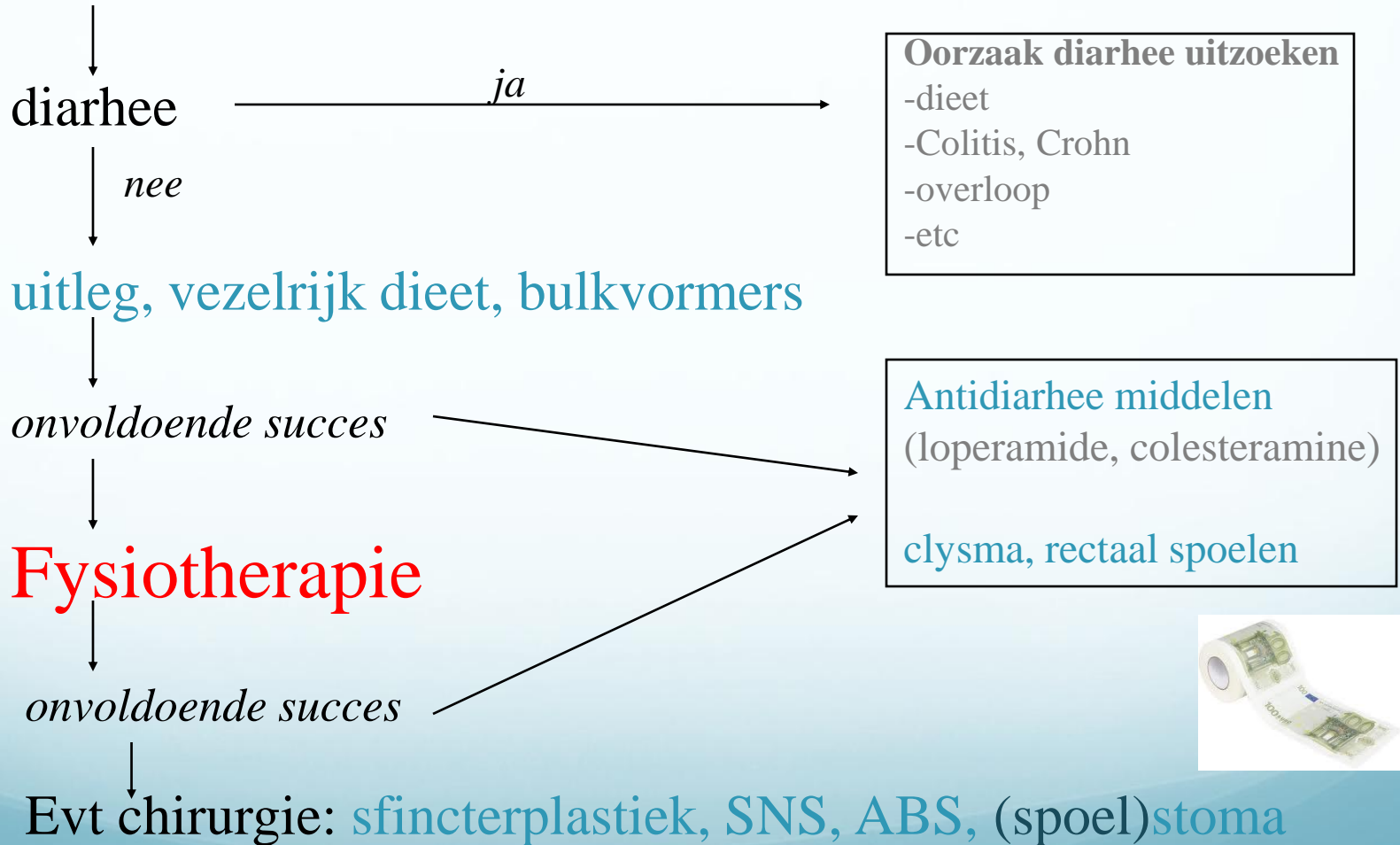
- Een 55 jarige vrouw heeft fecale incontinentie en in de VG een moeilijk partus, met een forse ruptuur
- U overweegt bekkenfysiotherapie
- **VRAAG:** is ARFO/endoech nodig omdat de patiënten met een ruptuur nauwelijks effect hebben van bekkenfysio?

4. Therapie



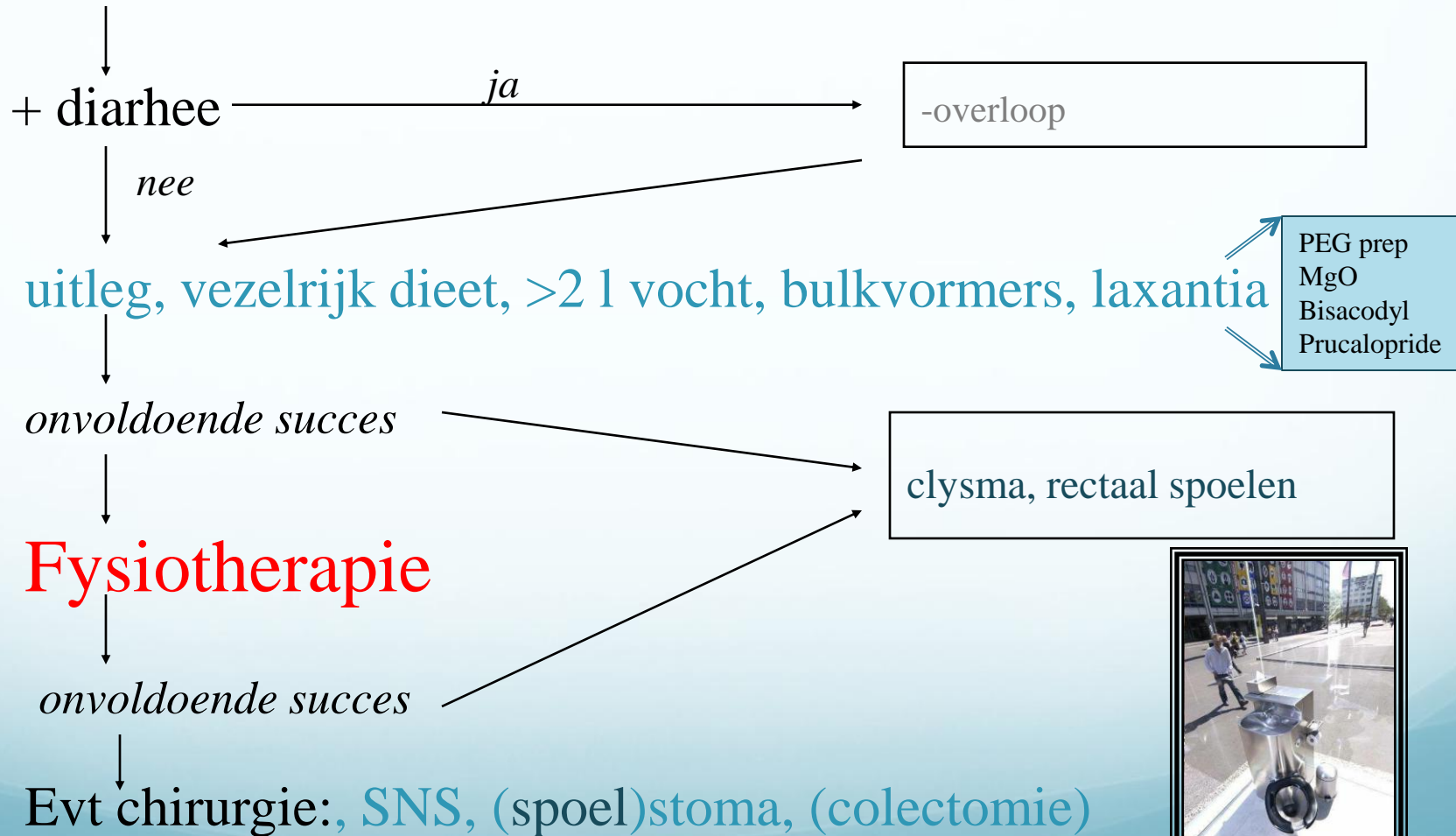
Incontinentie-therapie

incontinentie



Obstipatie-therapie

obstipatie



Conservatief

iedereen eerst

- dieet, vezels, psyllium
- medicatie: loperamide, colesteraamine
- fysiotherapie, biofeedback
- rectale spoelingen
- (anaal tampon)



obstipatie

Conservatief

iedereen eerst

- dieet, vezels, psyllium
- medicatie: **laxantia**
- fysiotherapie, biofeedback
- rectale spoelingen
- (anaal tampon)



Chirurgisch

- sfincterplastiek
 - artificial bowel sphincter (ABS)
 - dynamische gracilis plastiek (DGP)
 - sacrale neuromodulatie (SNS)/PTNS
-
- antegraad spoelen
(*Chait spoelcatheter coecum*)
 - colo stoma



obstipatie

Chirurgisch

- sfincterplastiek
- artificial bowel sphincter (ABS)
- dynamische gracilis plastiek (DGP)
- sacrale neuromodulatie (SNS)/PTNS
- antegraad spoelen
(*Chait spoelcatheter coecum*)
- colo stoma (ileum)



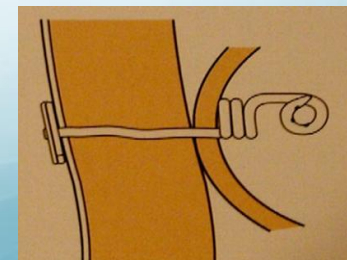
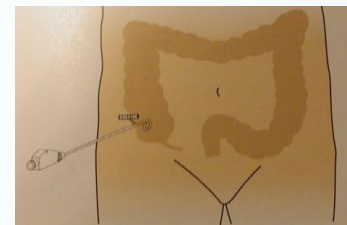
Long-term retrograde **rectal cleansing** in patients with constipation or fecal incontinence is effective in 41%

- 54 patients, 2012-2014
 - 32 (59%) stopped after 6 months
 - 22 (41%) continued for 12 months (range 6-240)
 - No predictors in demography or medical history
- 41 (76%) responded to the questionnaires
 - SF-36 subscale energy and fatigue: 45 continued vs. stopped 30 ($p=0,01$)
- 19 (38%) continued for 18 months



Chait coecostomiecatheter bij pte met slow transit obstipatie: substantial mortality and moderate functional results

- 18 pat, 16 f, leeftijd gem 45 jaar
- 27% morbiditeit, waarvan 5% zeer ernstig
- Follow up 12 mnd
- 7/18 (39%) complicaties, 1 x IC
- Na 2 jaar
 - 8 (44%) re-interventie catheter
 - 6 (32%) recidiveert met aanleg stoma
 - 8/18 goed functioneel resultaat



Bekkenfysiotherapie

- Geïntegreerde aanpak van de problematiek
 1. Life style adviezen (vezels, dieet, vocht)
 2. Medicatie (bulkvormers, loperamide)
 3. Bekkenfysio
 1. Bekkenbodem spiertraining
 - Herhaaldelijk vrijwillig contraheren en relaxeren en coordinatie (pre contractie bij buikdrukverhoging en contractie bij urge) en juist relaxeren.
 2. Biofeedback
 - Visuele of auditieve respons op spieractie (na een stimulus)
 - **Rectale ballontraining (stimulus)**
 - coördinatie
 3. Elektrische stimulatie
 - Pudendusstimulatie, verandering fast switch (type 1) naar slow-twitch (type 2) spiervezels

Bekkenbodempfysio- inc

Biofeedback and/or shincter exercises for the treatment of FI in adults

Norton , Cochrane Syst review 2012

- 21 RCT and semi RCT 1525 pt
- Resultaten
 - Methodologische onvolkomenheden
 - 50% adequate randomisatie
 - 1 studie biof + ES > ES
 - Gecombineerde data 2 studies ES+biof > biof
 - Geen voorkeur voor wijze van BF
- Conclusie:
 - Biofeedback beter dan oefeningen alleen
 - RB mogelijk ook effect

Pelvic floor therapy- inc

*After the Cochrane review
from 2012...*

Bekkenbodempfysio- inc

- **Combination therapy** with biofeedback, loperamide and stool-bulking agent is effective for treatment of FI in women- a RCT
 - *Sjodahl e.a. Scand J G 2015*
 - 64 randomized BF or Lop + Stool bulk, later added other therapy
 - 57 completed, comb > then single (50%)
- Supplementary **home biofeedback** improves QOL in younger patients with fecal incontinence
 - *Barlett e.a. J Clin Gastro 2015*
 - 75 inc patienten, Jongeren>ouderen

Bekkenfysio- obstipatie

- Biofeedback for treatment of chronic idiopathic constipation
 - *Woodward, Norton & Chiarelli (Cochrane Rev 2014)*
 - 17 studies, 931 pte
 - Heterogeniteit in patiënten en uitkomstmaten
 - EMG vaker gebruikt, niet superieur
 - ***Zwak bewijs dat BF superieur is dan diazepam, sham BF en laxeermiddelen***
 - Vergelijken met chirurgische procedures: geen of enige verbetering, maar hoge kans bijwerkingen

Pelvic floor therapy- const

*After the Cochrane review
from 2014...*

Bekkenfysio- obstipatie

Abdominal Symptoms Are Common and Benefit from Biofeedback Therapy in Patients with Dyssynergic Defecation

Baker J, e.a. Clin Transl Gastroenterol. 2015

PAC-SYM van 48% verbetering

Factors Associated With Efficacy of **Nurse-led Bowel Training** of Patients With Chronic Constipation

Iqbal F, Vaizey CJ e.a. Clin Gastroenterol Hepatol. 2015

leeftijd, aantal sessies en non-irrigation > succes PAC-QoL (63%)

The impact of anorectal biofeedback therapy on the **quality of life** of patients with dyssynergic defecation.

Şahin e.a. Turk J Gastroenterol. 2015

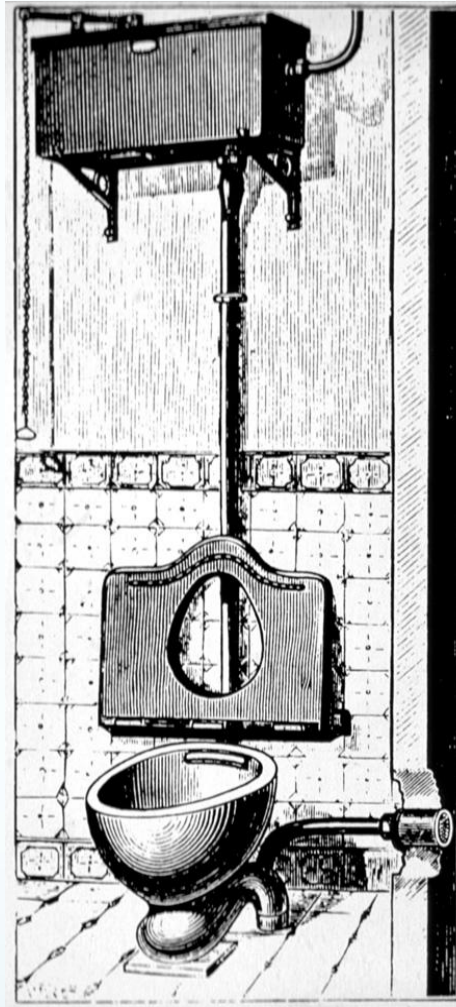
Pelvic floor therapy- *rectal carcinoma*

- Pelvic floor rehabilitation to improve functional outcome after a **low anterior resection**: a systematic review
 - Visser e.a Ann Coloproctol 2014*
 - 5 studies, 321 patients, 186 (89%) biofeedback
 - 3 studies Low ant res syndrome, 3 prospective cohort, Wexner, FIQL
 - **PFR useful, No real prove**
- Pelvic floor muscle training for bowel dysfunction following **rectal cancer**: A systematic review
 - Lin Neurol Urodyn 2014*
 - 8 studies, 6 prospective non-RCT
 - **Improvement, lack of long term follow up**
- Improvement of FI-QOL by electrical stimulation and biofeedback for patients with **low rectal cancer** after intersphincteric resection in 32 pt
 - Kuo Arch Phys Med Rehab 2015*

Conclusion

1. Pelvic floor (physio)therapy (biofeedback)
 - Combination of several techniques
2. For motivated persons with
 - weak pelvic floor
 - or dyssynergia
 - or coordination problems
3. Be aware of the causes and the local anatomy
4. Biofeedback is effective in 50-60% longterm
 - Anorectal function tests not predictive
 - Adequate training program, motivation Pt and PhT
 - Age, longstanding / severe FI poor prognosis





Einde