Beckenboden des alten Menschen

Beckenbodendeszensus bei der Frau

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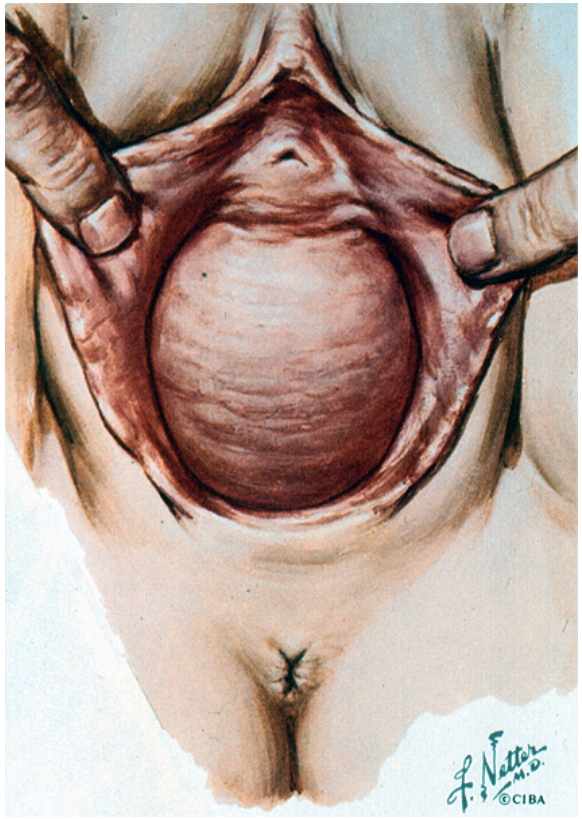
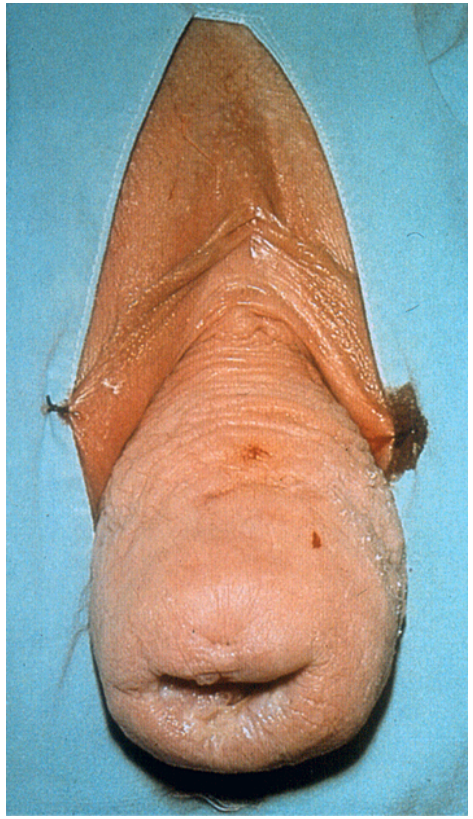
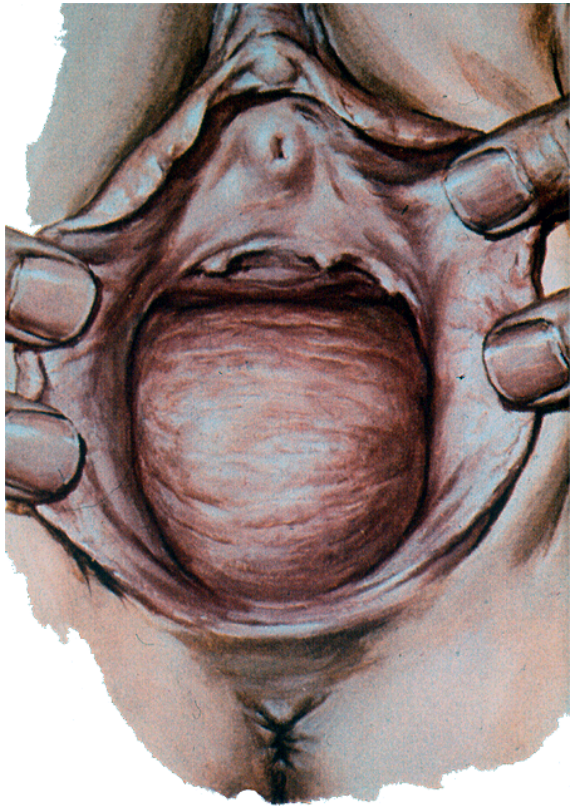
Genitaldeszensus



Zystozele



Uterusprolaps



Rektozele

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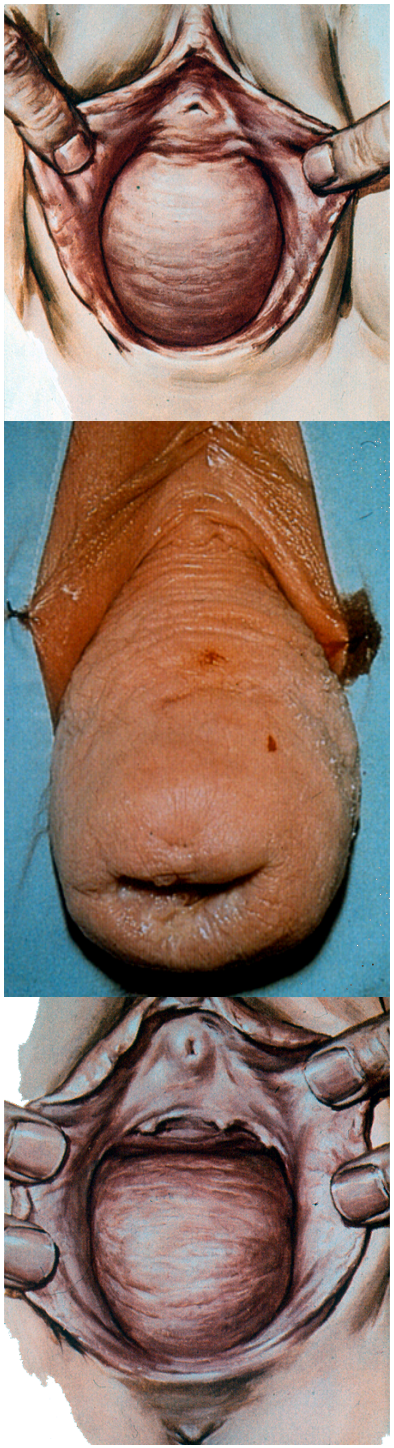

Symptome

- Vaginales Druck- oder Fremdkörpergefühl
- Urininkontinenz
- Blasenentleerungsstörungen
- Tampons fallen raus.
- *Mein Inneres kehrt sich nach aussen.*
- Unterbauchbeschwerden (bessern im Liegen)
- Dyspareunie oder kein Gefühl während Sex
- Harn- oder Stuhlinkontinenz beim Sex
- Verstopfung, Defäkationsbeschwerden
- Rektale Schmerzen oder Druckgefühl

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Epidemiologie

- Prävalenz 2.9 – 31%

  [Nygaard JAMA 2008, Tegerstedt IUJ 2005, Rortveit Ob Gyn 2007; Samuelsson. AJOG 1999]

  – *Do you experience bulging or something falling out you can see or feel in the vaginal area?*

- Routinesprechstunde (mean 44 J., range 18 – 82): POP-Q
  [Swift. AJOG 2000]

  – 50 % Stadium ≥ 2

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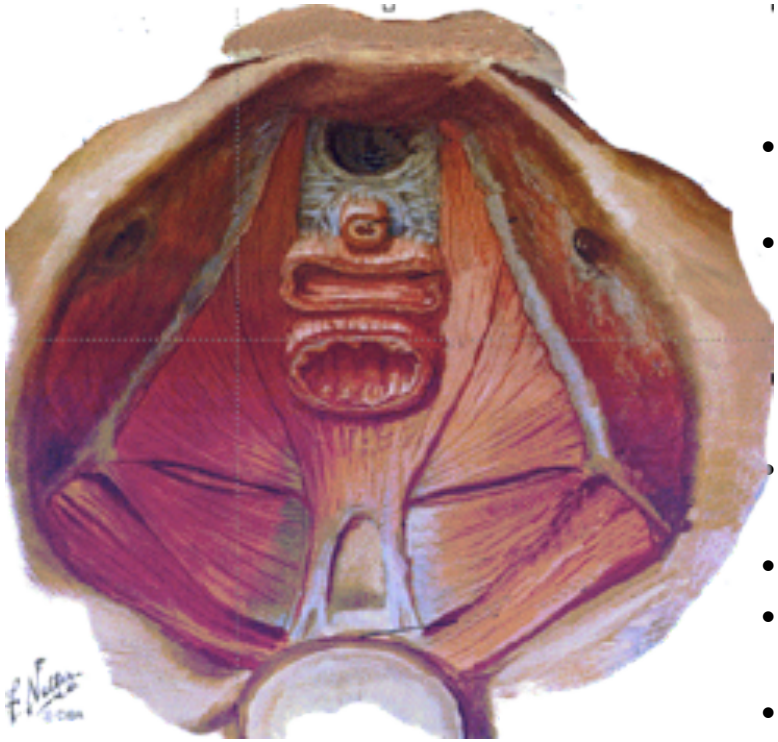
Physiologische Lücke – Hiatus urogenitalis



- **Adipositas**
  - **BMI >25 → doppeltes Risiko** [Swift. AJOG 2005]
  - Gewichtsreduktion hilft nicht in PMP. [Kudish. Ob Gyn 2009]
  - Rückgang nach bariatrischer Chirurgie? [Daucher. Female Pelv Med & Reconstr Surg 2010]
- **Hysterektomie**
  - Risiko für Stumpfdeszensus [Forsgren IUJ 2012]
- **Herkunft**
  - Weniger Deszensus bei Afroamerikaner? [Rortveit. Ob Gyn 2007; Hendrix. AJOG 2002; Whitcomb. Ob Gyn 2009]
  - Kontrovers [Nygaard. JAMA 2008; Sears. J Urol 2009]
- **Chronische Obstipation**
  - [Weber. AJOG 1998; Spence-Jones. Br J Ob Gyn 1994]
- **COPD**
- **Beruf** (Gewicht heben) kontrovers
  - [Swift. AJOG 2005; Jørgensen. Occup Med 1994]
- **Bindegewebe** (Ehlers-Danlos-Syndrom), kongenital
  - [Carley. AJOG 2000; Muir. IUJ 2004; McIntosh. J Soc Gynecol Investig 1995]
- **Genetische** Komponente
  - [Hundley. AJOG 2008; Kluivers. IUJ 2009]

בעצב תלדי בנים

mit Schmerzen sollst du Kinder gebären

(Genesis 3:16)

Negev-Wüste, Israel.
Gebärende, 1000 BC

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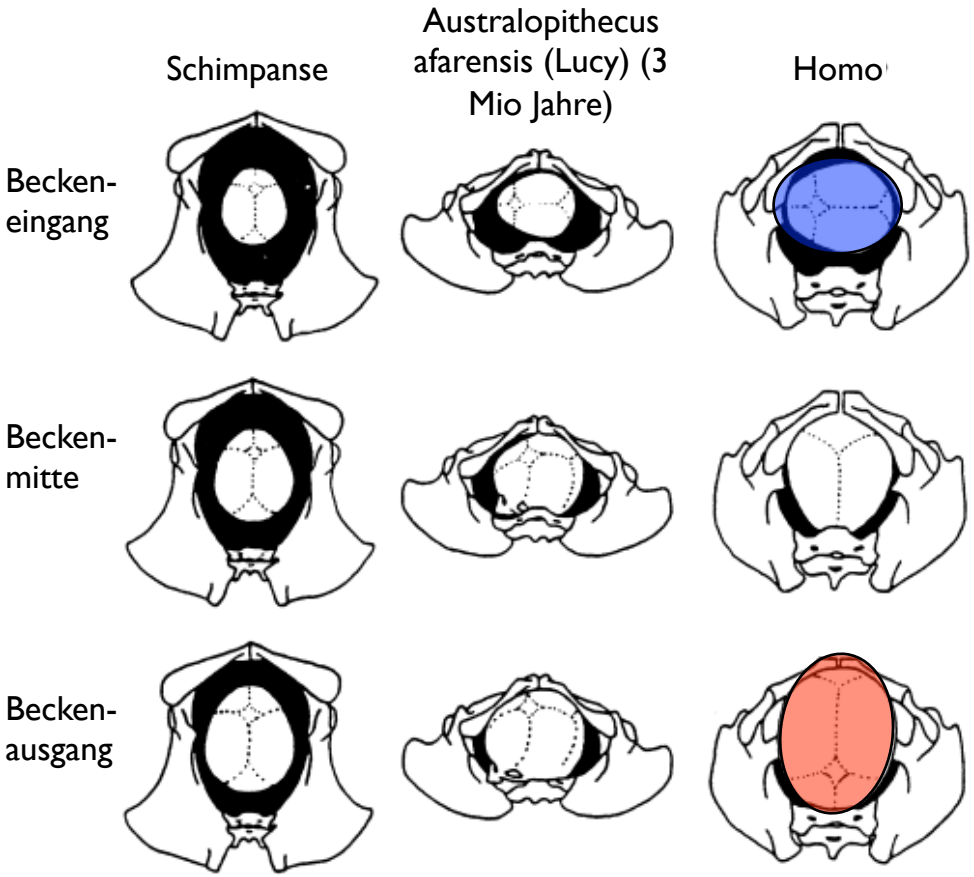
Komplexe Geburtsmechanik



Rosenberg und Trevathan, Br J Ob Gyn 2002

- 3.5 Mio J. **AUFRECHTER GANG**
  - Horizonterweiterung
  - Kopf weniger sonnenexponiert
  - Hände frei
  - Engeres Becken → Rennen
- 1 Mio-100‘000 J. **Hirn** 500cc→>1000cc
- Grosser fetaler Kopf und breite Schultern
  - Querovaler Beckeneingang
  - Längsovaler Beckenausgang
  - Komplexe Rotation → Hebamme!
- “Frühgeburt”
- Geburt dauert 11 Stunden.

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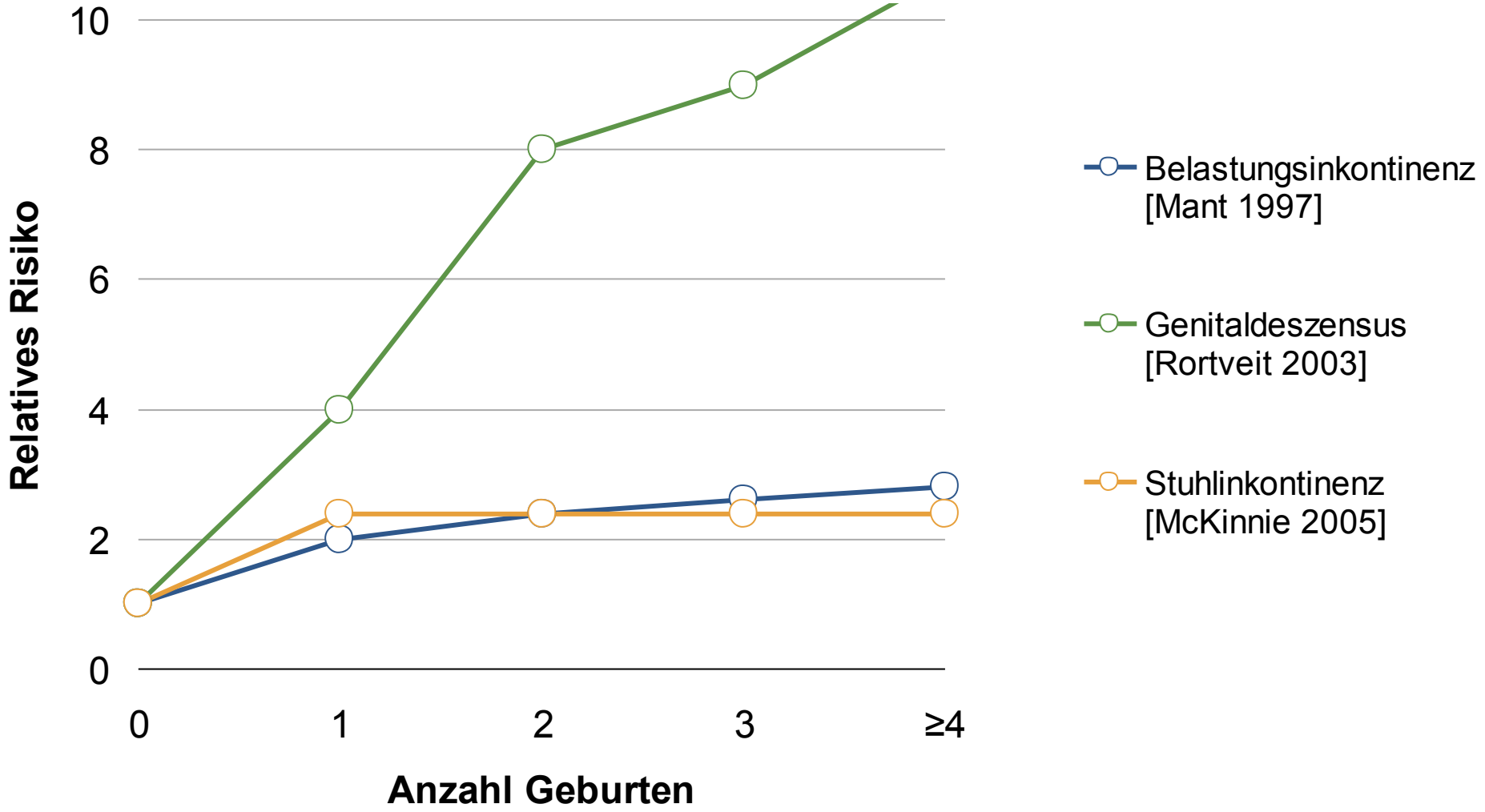
Geburt schädigt **Nerven**.

Schädigung der Innervation der Schliessmuskeln am Beckenboden sub partu
[Snooks. Lancet 1984]

- 3D Computersimulation: [Lien. AJOG 2005]
  - **N. pudendus** bei vag. Geburt um bis 34% gedehnt!
  - **Ab 15% irreversible** Schädigungen (Tiermodel)
- Lig. pubourethrale und sacrouterinum
- Arcus tendineus fascia pelvis
- **Levator ani** [Lien 2004]
  - pubococcygeus 3.26
  - iliococcygeus 2.73
  - pubococcygeus 2.5
  - puborectalis 2.28
- Gefässkompression

Parente. ICS 2008

Geburt als akutes Trauma



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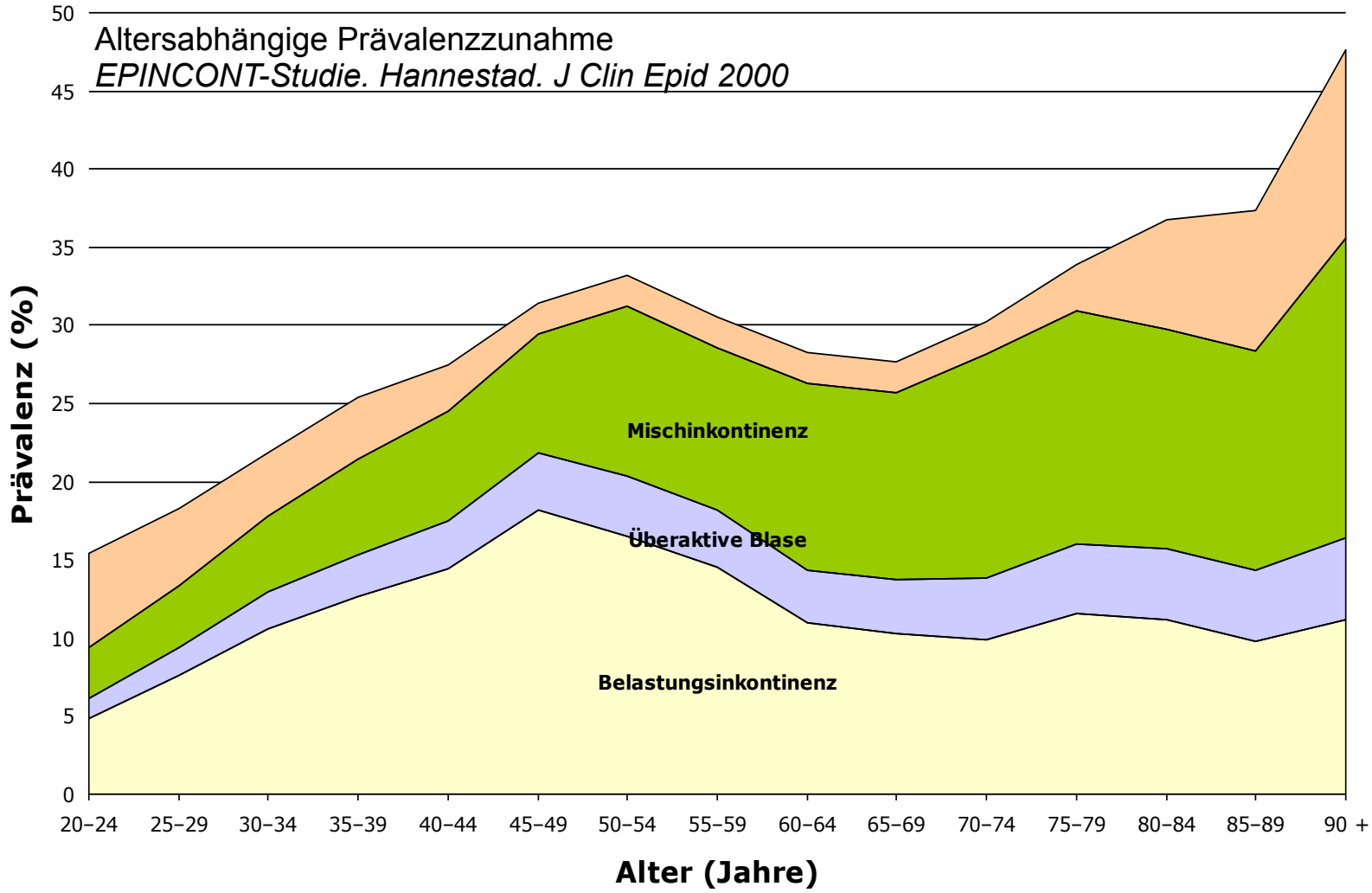
Harninkontinenz



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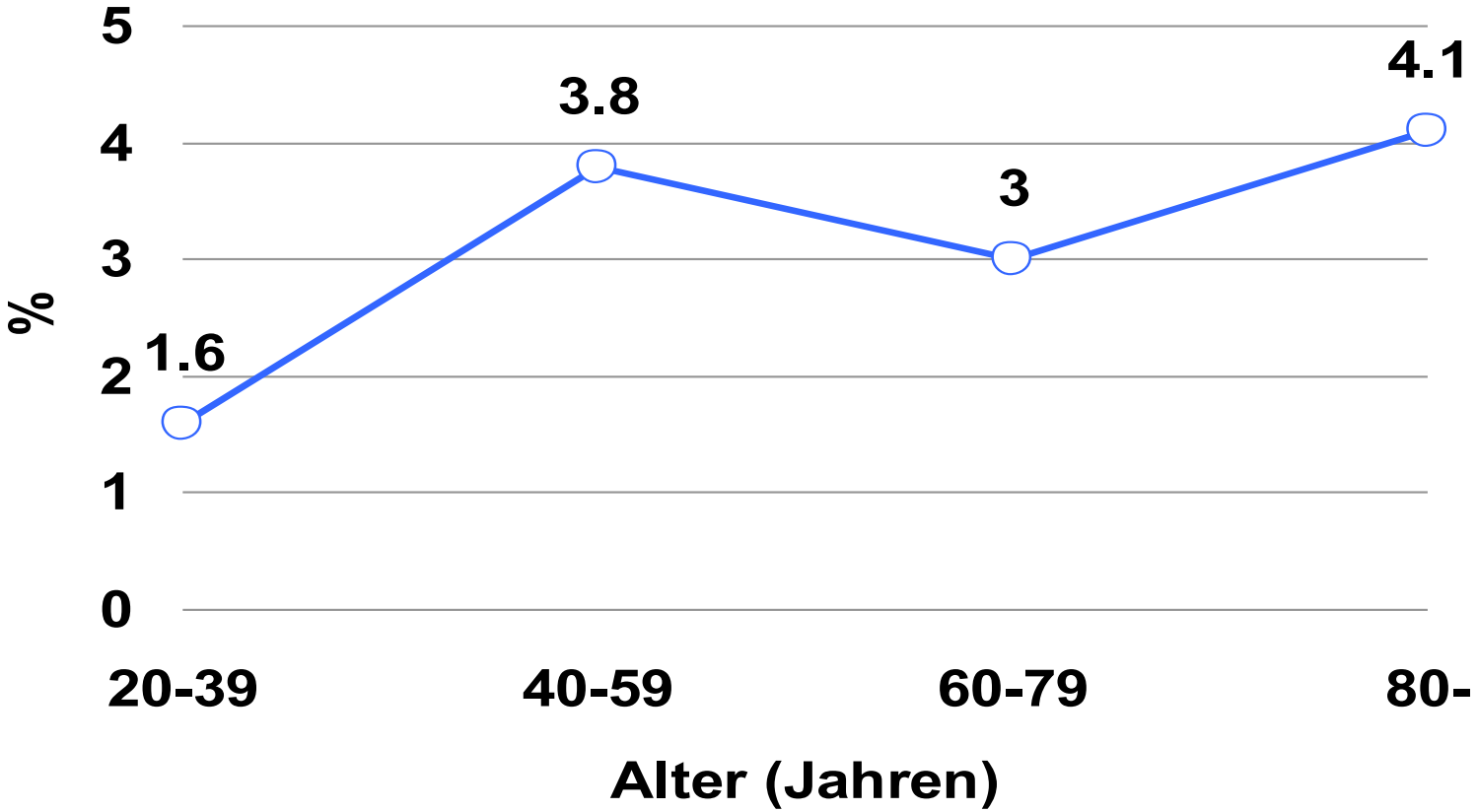
Prävalenz Genitaldeszensus



Nygaard. JAMA 2008. N=1961 U.S. noninstitutionalized nonpregnant women (age ≥20 years) in 2005-2006. Pelvic organ prolapse (*seeing/feeling a bulge in or outside the vagina*) symptoms were assessed.

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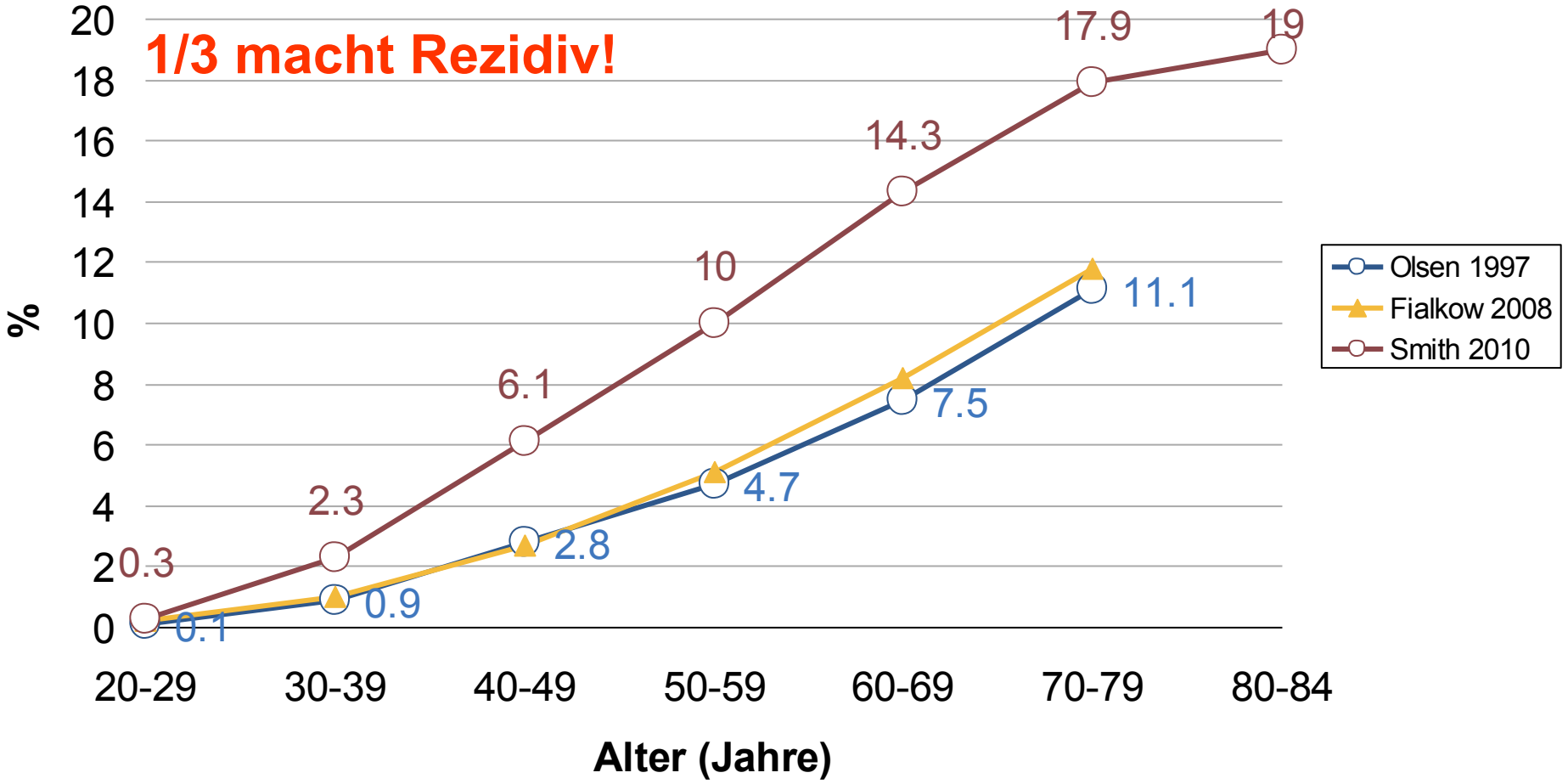
Lifetime Risk / Kumulative Inzidenz für Operation wegen Inkontinenz oder Deszensus



Prolapse or incontinence surgery, USA 1995 [Olson 1997]

Prolapse or incontinence surgery, USA 1993 [Fialkow 2008]

Prolapse surgery, Western Australia 2001-2005 [Smith 2010]

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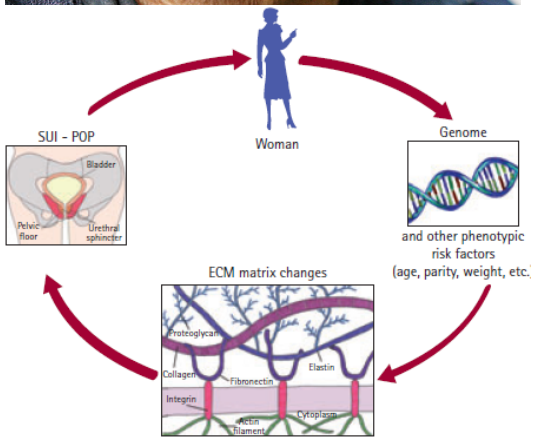
Alterungsprozess
Komplexes Spektrum von Ereignissen



- Molekulare Schäden (Proteine, DNA)
- Zellen
- Organismus
- Freie Radikale (Oxidation)
- Nicht-enzymatische Glykosylierung
- Apoptose
- Zellteilung ↓ und Wachstum ↓
- Stressantwort ↓ und Homöostase ↓
- Erkrankungen ↑
- Fett ↓ , MMP ↑ , extrazelluläre Matrix ↓
  (Kollagen und Elastin) → Hautfalten
- Nervendegeneration: Geistiger Abbau bis Demenz
- Tod als letzte Konsequenz

RF: Ernährung, Nikotin, Alkohol, Stress…

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Östrogenmangel

Östrogenrezeptoren

- Plattenepithel Urethra (proximal und distal), Vagina, Trigonum
- M. pubococcygeus…

WHI (Women‘s Health Initiative) [Hendrix. JAMA 2005]

- 27‘347 Frauen

Pz vs CEE+MPA vs CEE+MPA

- RR 1.87 (95%CI 1.61-2.18) für SUI bei CEE+MPA
- RR 2.15 (95%CI 1.77-2.62) für SUI bei CEE

HERS (Heart Estrogen/progestin Replacement Study) [Steinauer. Ob Gyn 2005]

- 1‘208 Frauen ohne UI

Pz vs CEE+MPA

- Inkontinenz bei 64% mit HRT vs 49% ohne HRT
- OR 1.5 (95%CI 1.2-1.8) für Dranginkontinenz
- OR 1.7 (95%CI 1.5-2.1) für Belastungsinkontinenz

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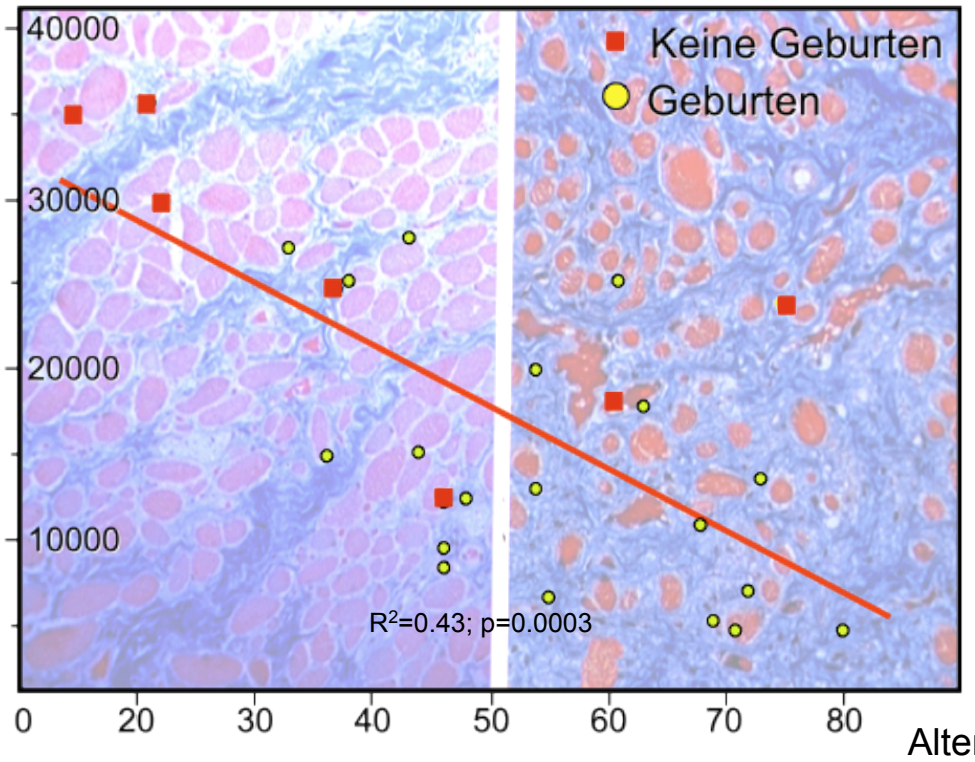
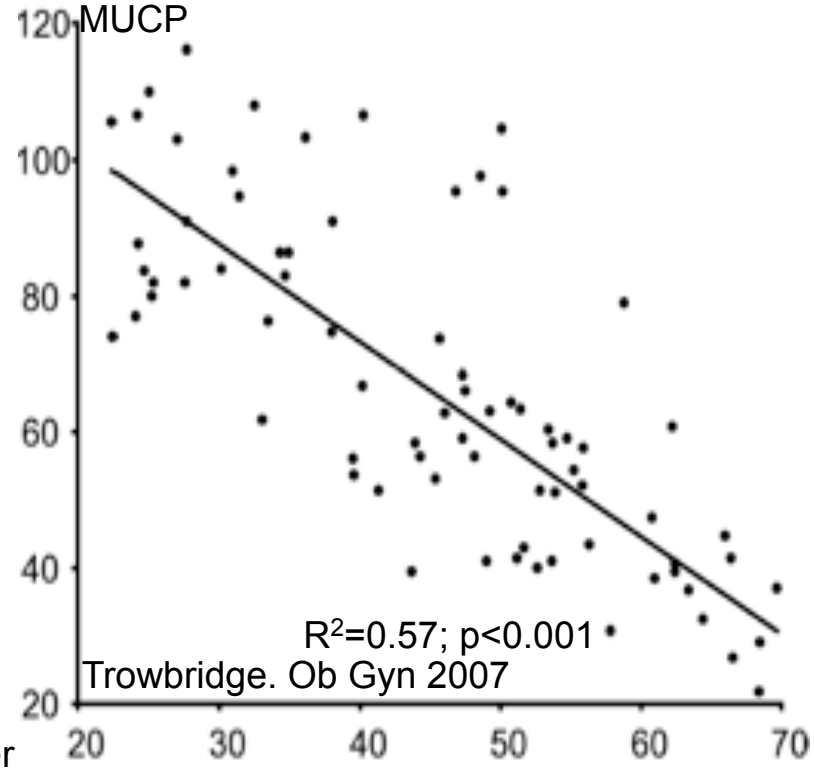
Sphinkter urethrae nimmt ab.

Histomorphologie



1 Faser geht pro Tag verlustig.
Perucchini. AJOG 2002

Funktion



MUCP = 100 − Alter
Rud. Acta Ob Gyn Scand 1980

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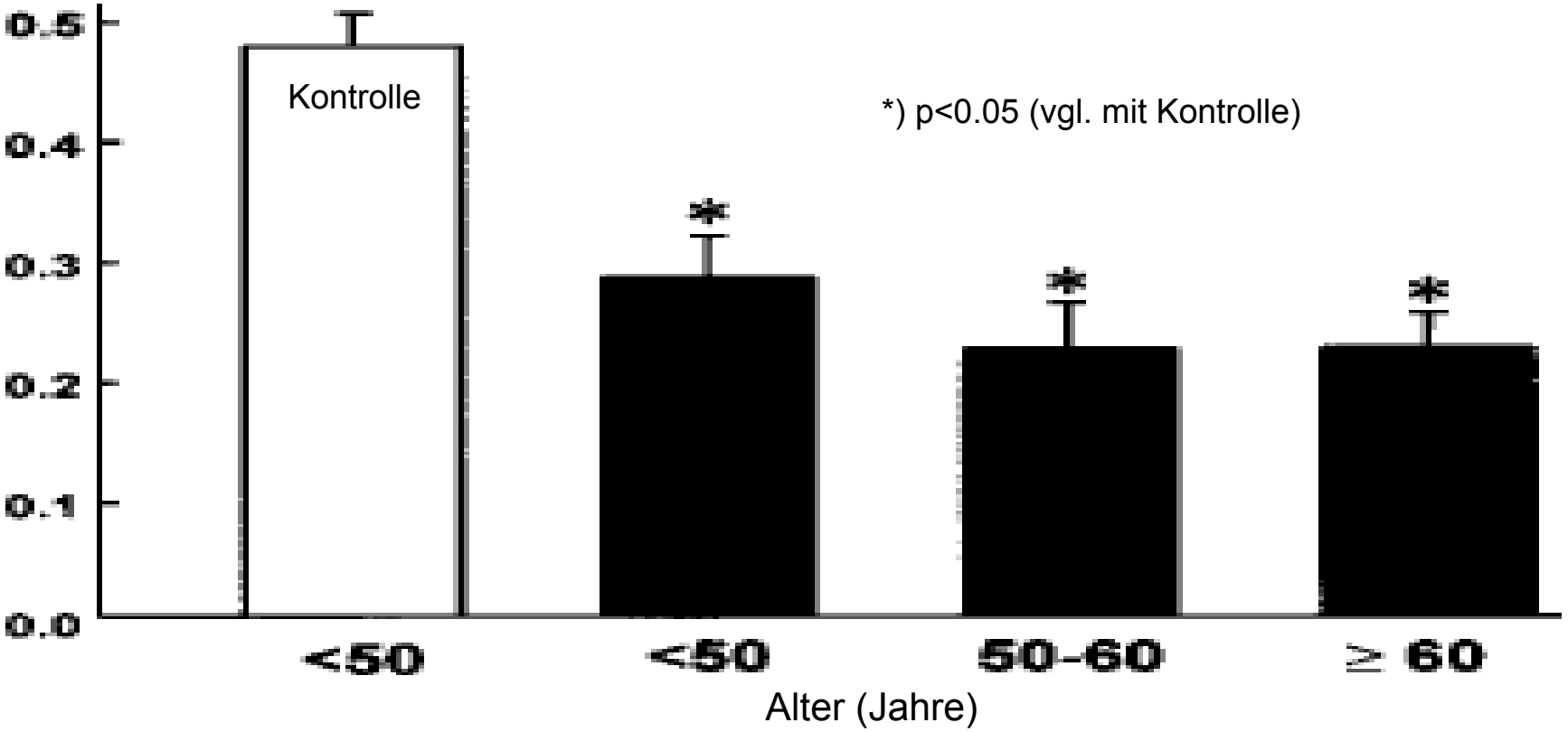
Abnahme der Muskulatur im Alter im vorderen Kompartiment



Alter und glatte Muskulatur: mit und ohne Prolaps
Boreham et al. AJOG 2002

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Neurologische Veränderungen im Alter

	N. pudendus Latenz (msec)	Perineal Aktionspotential (µV)
Alle (n=42)	1.94 (1.55 - 2.54)	100.9 (20.0 - 260.0)
<40-jährig (n=20)	**1.91** (1.64 - 2.35)	**118.8** (24.7 - 260.0)
40-59 (n=16)	**1.93** (1.55 - 2.54)	**87.4** (20.0 - 210.0)
≥60 (n=6)	**2.10** (1.90 - 2.30)	**79.7** (60.0 - 115.0)

Aktionspotentiale als f(Alter, Geburt) [Olsen. AJOG 2003]

- EMG-Aktivität↓ [Aukee. Maturitas 2003]
- Denervation↑ nach Geburt [Allen. BJOG 1990]

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Therapie

- Urogynäkologische Abklärung (Larvierte Inkontinenz?)
- Lokale Östrogenisierung
- Beckenbodenrehabilitation
- Pessartherapie
- Operativ

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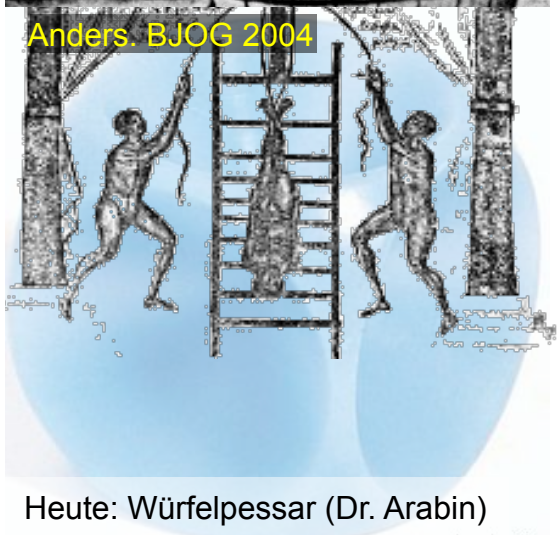

Heute: Würfelpessar (Dr. Arabin)

Eine kurze Geschichte der Therapie bei POP

-1550	Honig, Wachs und Kohle	Eber Papyrus
-25	Pessare aus Bronze	Aurelius Cornelius Celsus
100	Hysterektomie (Prolaps)	Soranos von Ephesos
1831	Vordere Plastik	Heming
1888	Vordere und hintere Plastik	Olshausen, Schröder
1896	Vordere Kolporrhaphie	Schauta
1949	Abd. Kolposuspension	Marshall, Marchetti, Krantz
1963	Vag. sakrospinale Fixation	Richter
1986	Abd. *paravaginal repair*	Richardson
1990	Arabin-Pessare	
2004	Spannungsfreies vag. Netz	Debodinance

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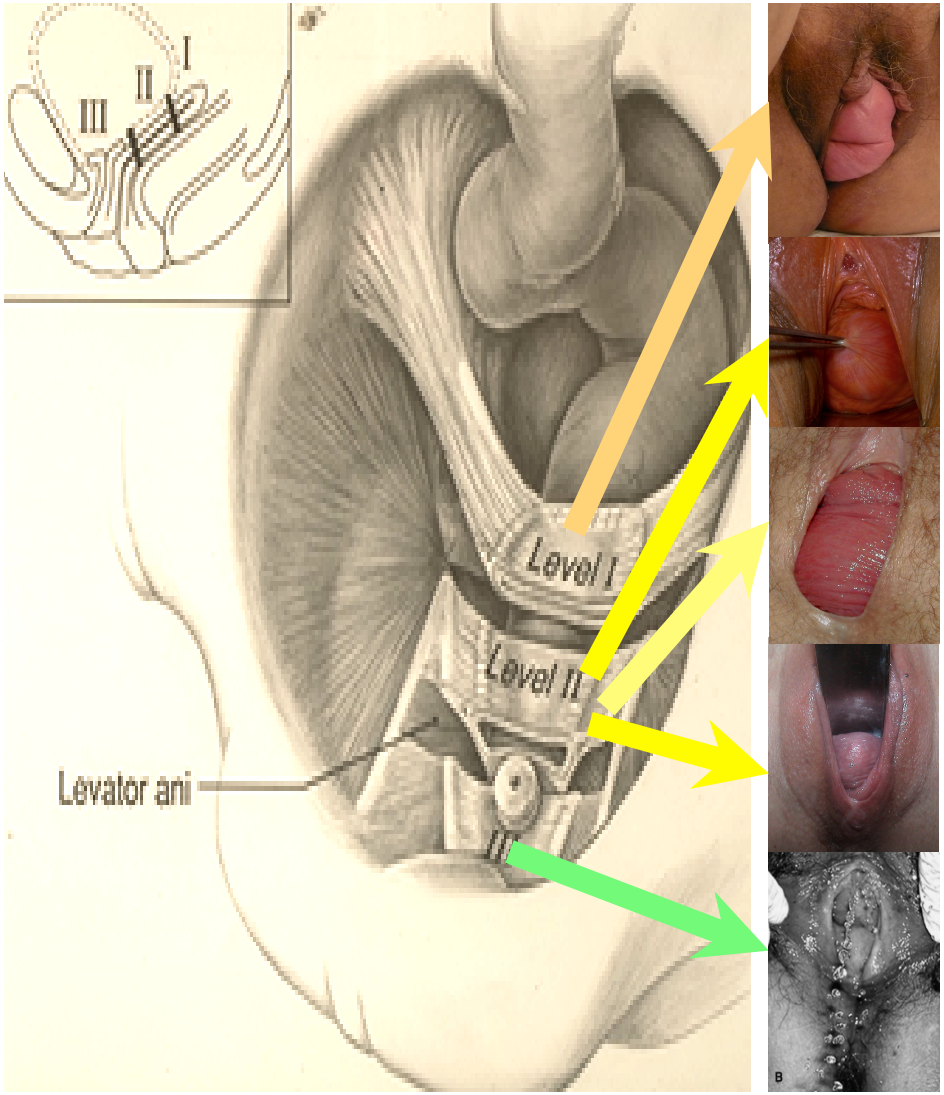
Anatomischer Defekt

Wei JT, De Lancey JOL. Clin Ob Gyn 2004



Level	Struktur und Klinik	Chirurgie Traditionel	Chirurgie Mesh
I	**Lig. sakrouterinum** Scheidenstumpf-/ Uterusdeszensus	Vag. Sakro-spinale Fixation nach Amreich-Richter	Abd. Sakro-kolpopexie
II	**Pubovesikale Faszie** Zentraler Defekt: Pulsionszystozele	Diaphragma-plastik	(transobtu-ratorisches) anteriores Mesh
	Paravaginaler / lateraler Defekt: Traktionszystozele	Abd. paravaginal repair	
II	**Puborektale Faszie** Rektozele	Kolpoperineo-plastik	Hinteres Mesh
III	**Lig. pubourethrale** Inkontinenz	Abd. Kolpo-suspension nach Burch	Spannungs-freie Vaginal-schlinge (TVT)

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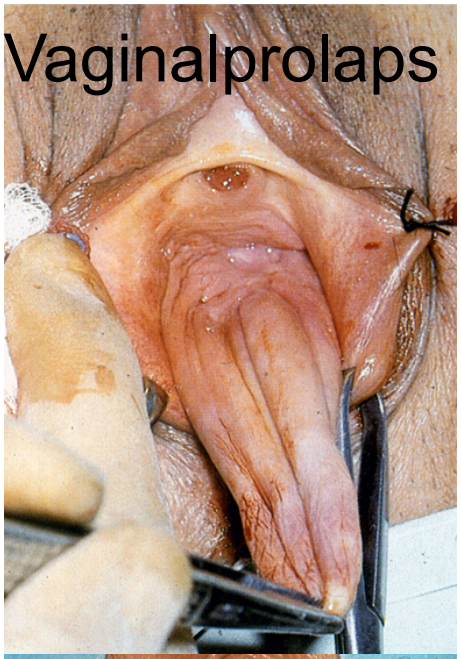
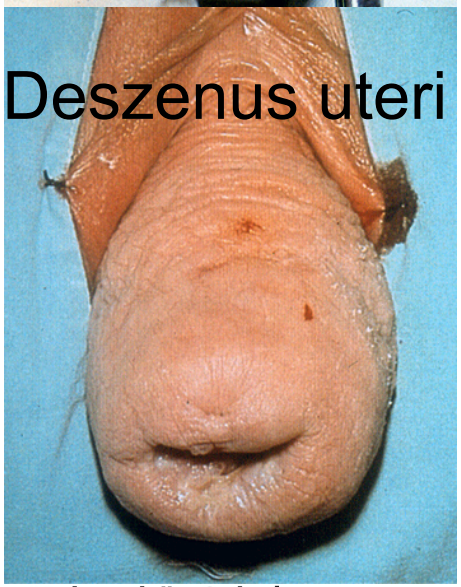
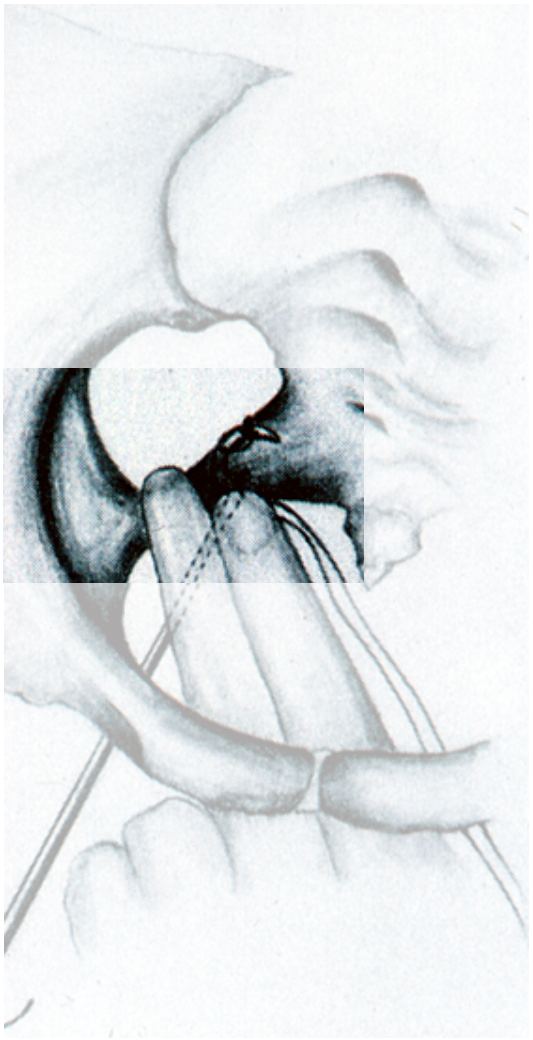
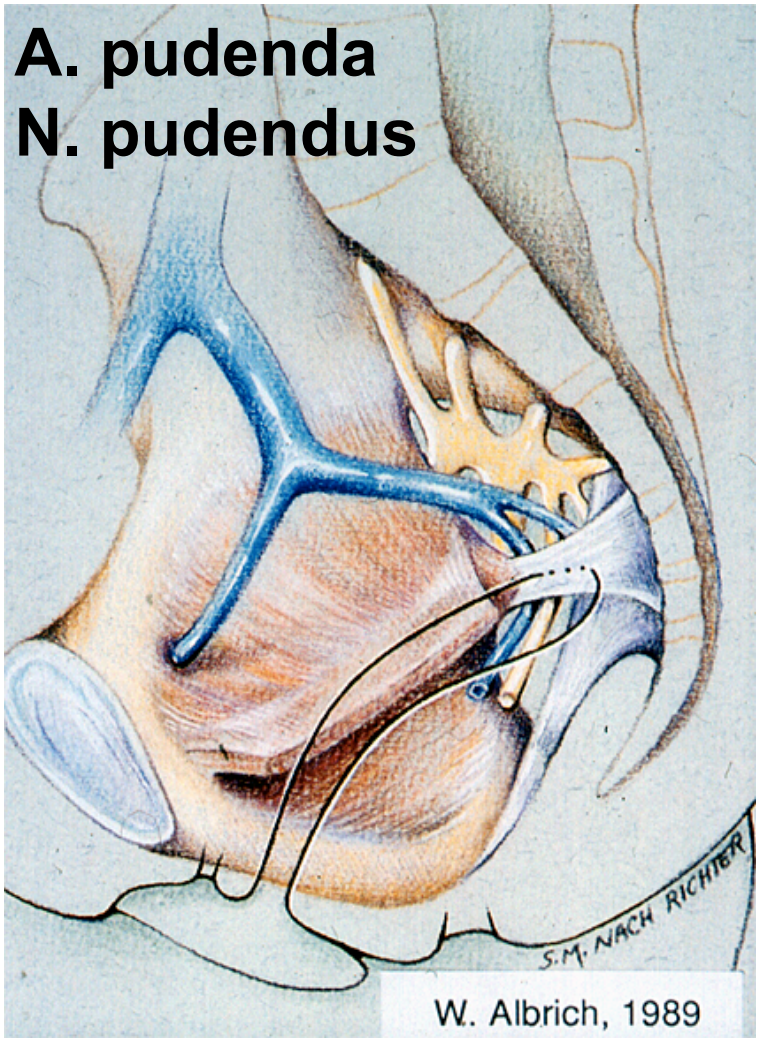
Level I - Sakrospinale Fixation nach Richter









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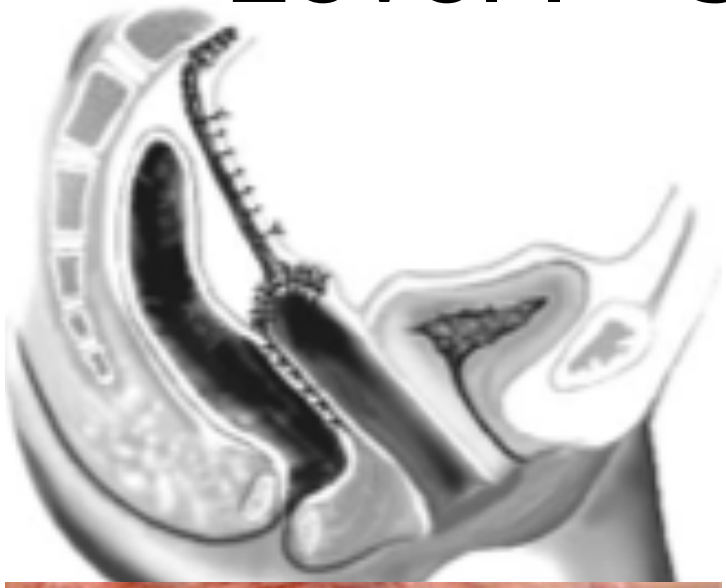
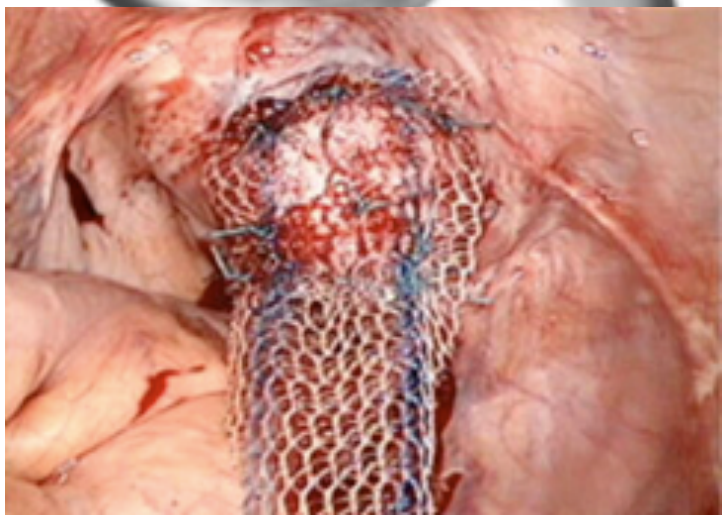
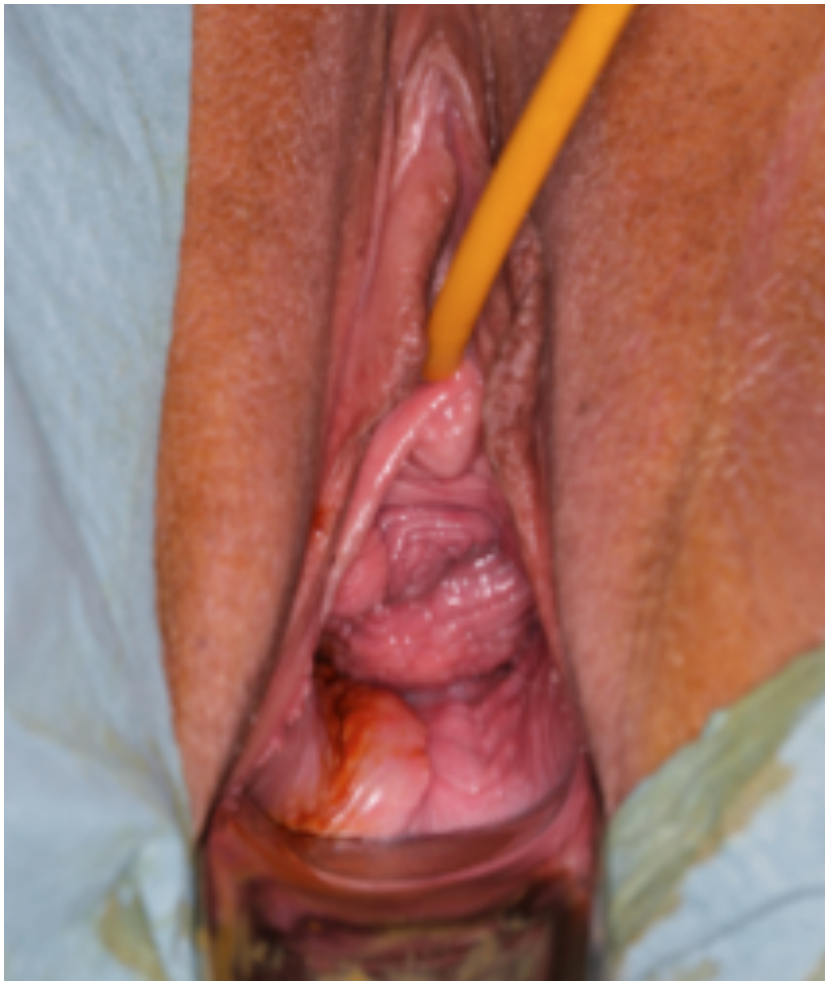
Level I - Sakrokolpopexie





Paraiso MF et al. Am J Obstet Gynecol 2005



- 4-7 % Rezidive
- Geringe Dyspareunierate

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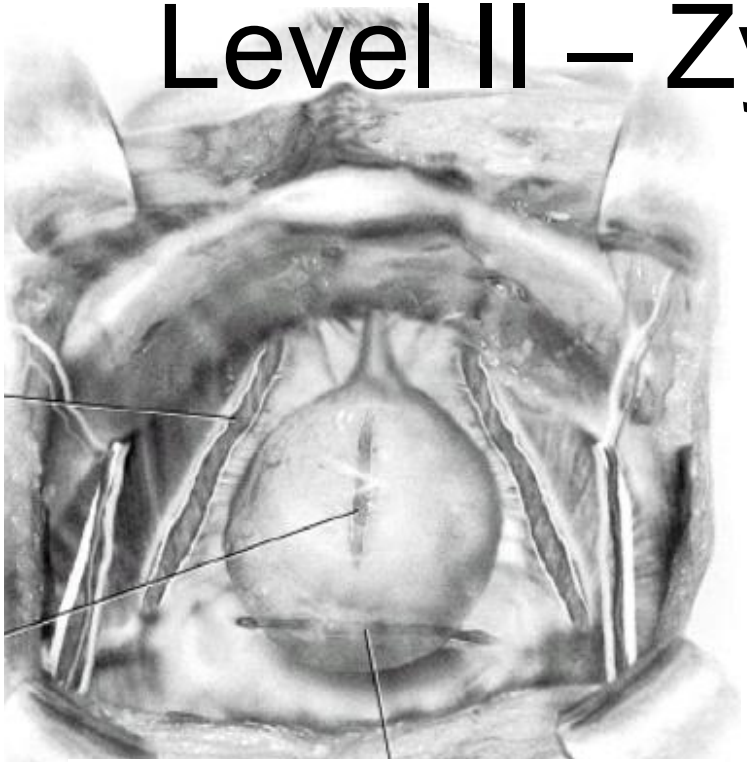
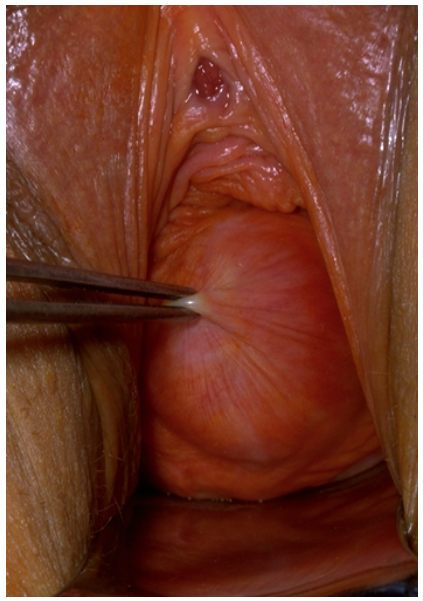
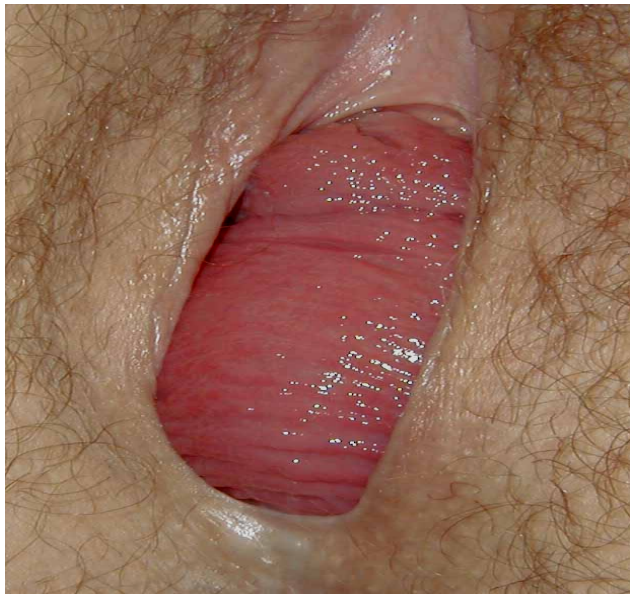
Level II – Zysto- und Rektozele



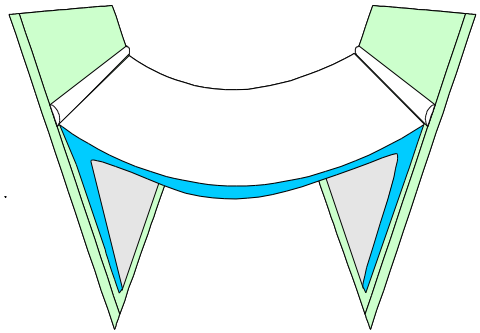
Karram 2001. Atlas of pelvic anatomy and gynecologic surgery

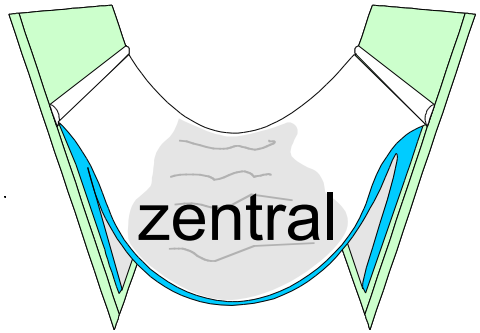


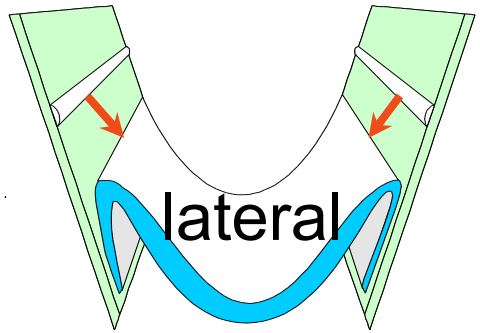
Pulsationszystozele



Traktionszystozele







DeLancey. Am J Obset Gynecol 2002

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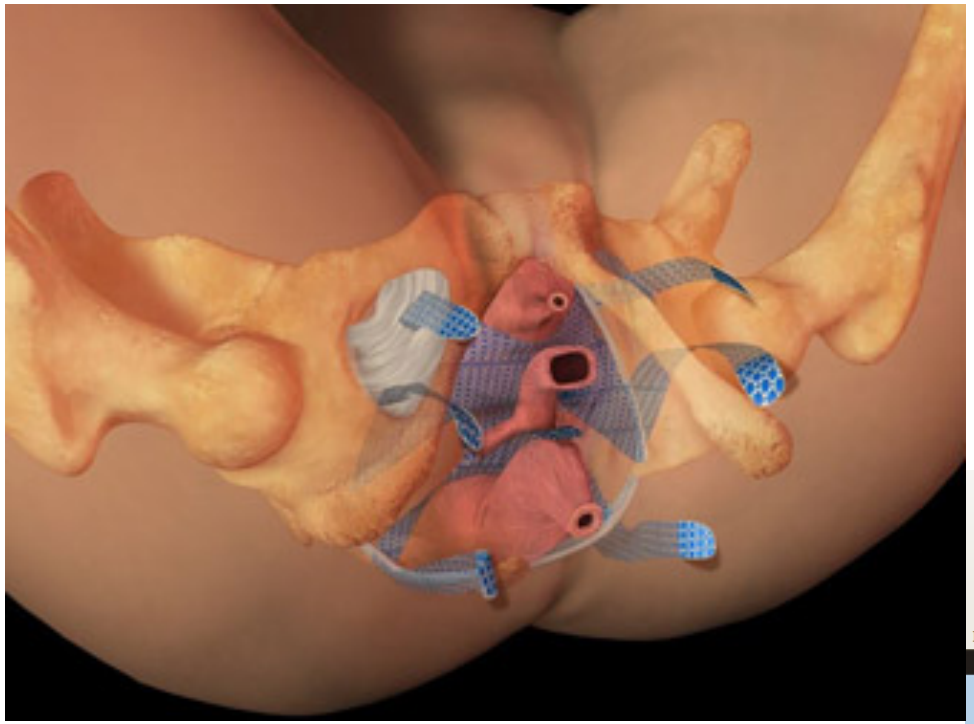
Meshes in der Deszensuschirurgie



- Wiederherstellung Anatomie
- Vag. ↔ abd. ↔ LSC
- Pro: weniger Rezidive
- Con: Erosion, Dyspareunie

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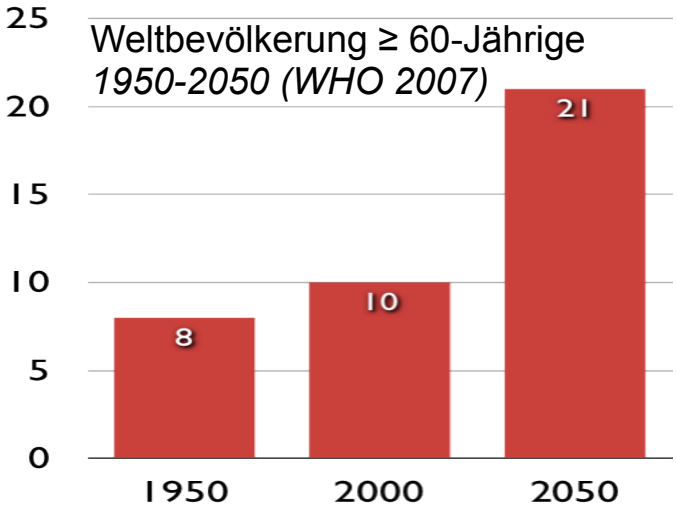
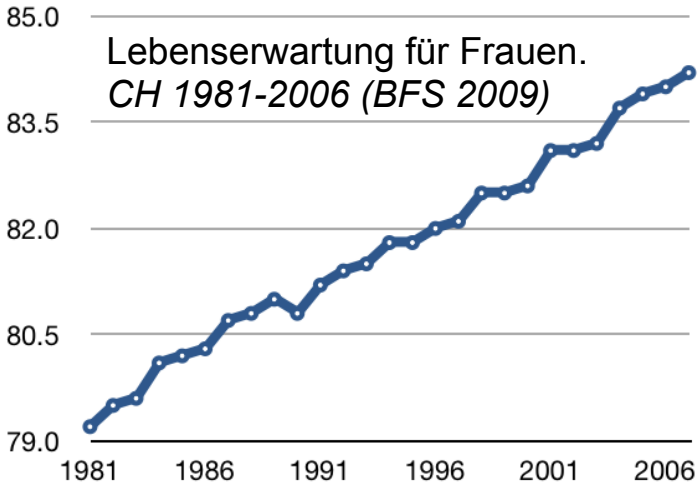
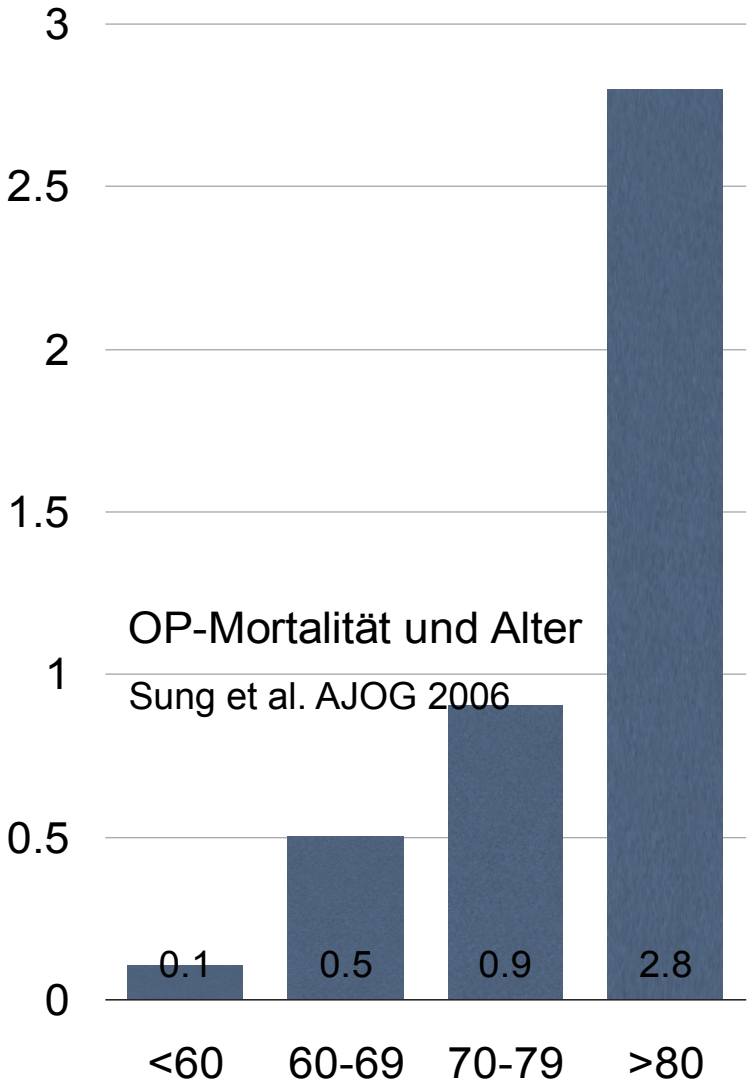
Alter und OP-Mortalität







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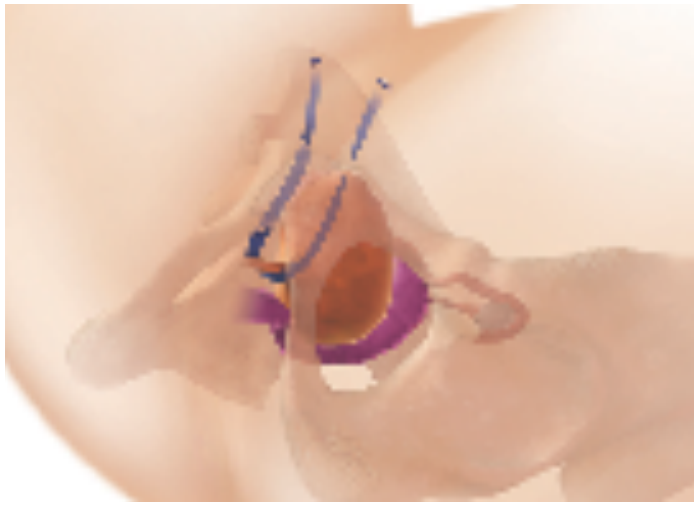
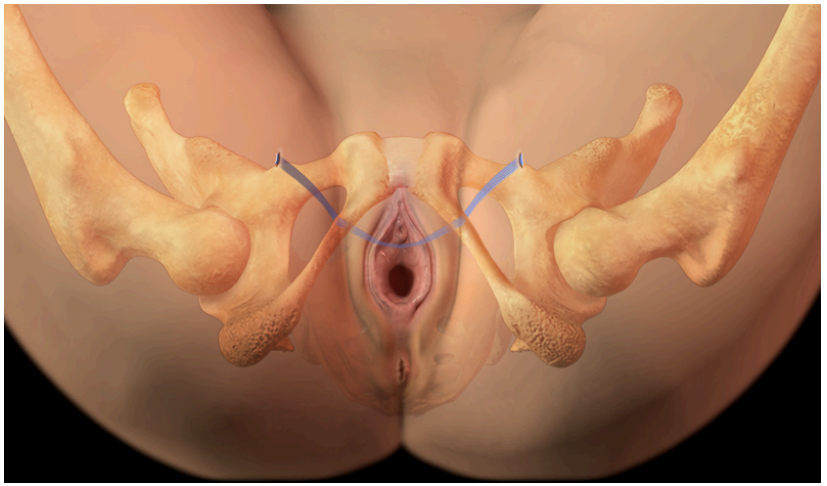
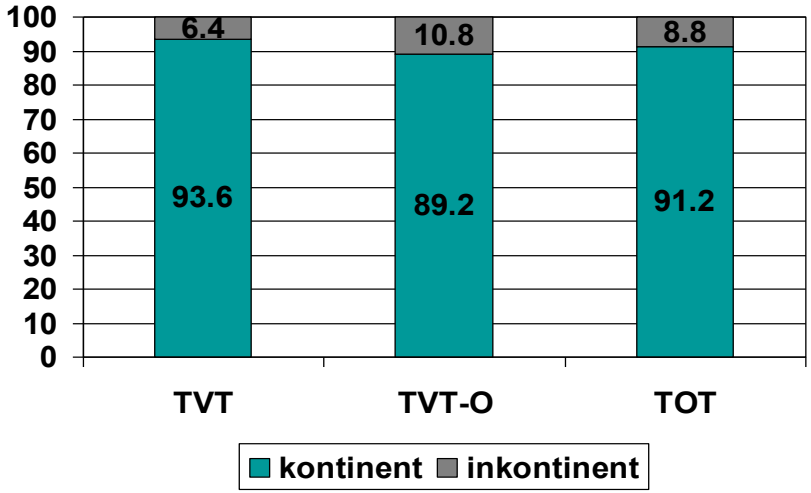
Level III - Schlingenoperation



Retropubisches TVT



Transobturatorische Schlingen



- Goldstandard
- bei Belastungsinkontinenz
- Kurzstationär (3 Tage)
- Lokalanästhesie
- Wenig Komplikationen

Scheiner. IUJ 2011. *RCT retropubische vs transobturatorische Schlingen*

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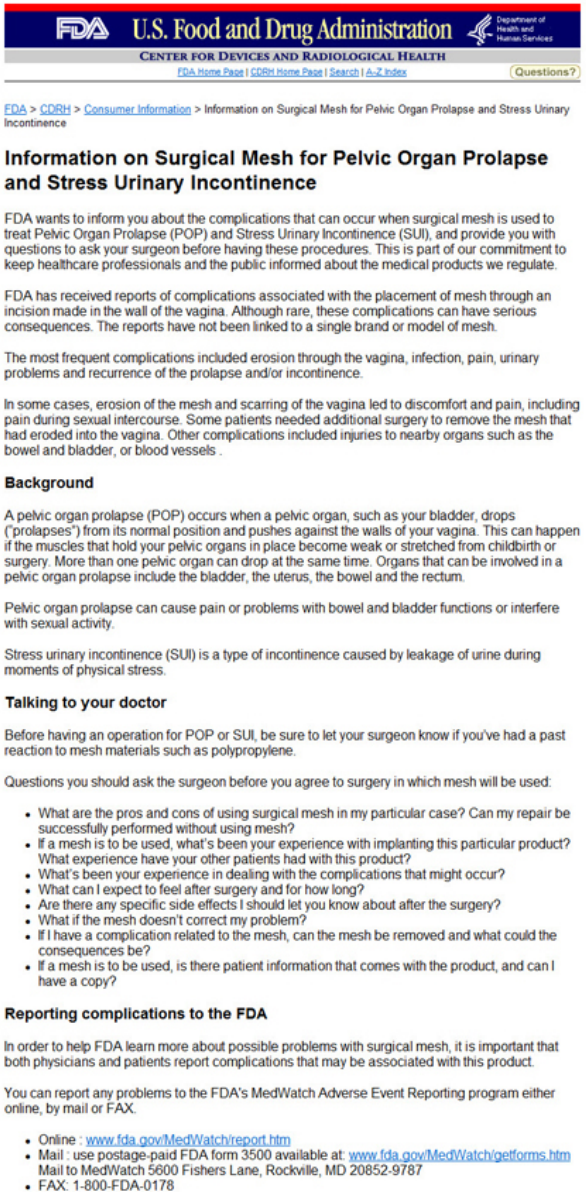
Zusammenfassung



U.S. Food and Drug Administration

Department of Health and Human Services

CENTER FOR DEVICES AND RADIOLOGICAL HEALTH

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FDA > CDRH > Consumer Information > Information on Surgical Mesh for Pelvic Organ Prolapse and Stress Urinary Incontinence

Information on Surgical Mesh for Pelvic Organ Prolapse and Stress Urinary Incontinence

FDA wants to inform you about the complications that can occur when surgical mesh is used to treat Pelvic Organ Prolapse (POP) and Stress Urinary Incontinence (SUI), and provide you with questions to ask your surgeon before having these procedures. This is part of our commitment to keep healthcare professionals and the public informed about the medical products we regulate.

FDA has received reports of complications associated with the placement of mesh through an incision made in the wall of the vagina. Although rare, these complications can have serious consequences. The reports have not been linked to a single brand or model of mesh.

The most frequent complications included erosion through the vagina, infection, pain, urinary problems and recurrence of the prolapse and/or incontinence.

In some cases, erosion of the mesh and scarring of the vagina led to discomfort and pain, including pain during sexual intercourse. Some patients needed additional surgery to remove the mesh that had eroded into the vagina. Other complications included injuries to nearby organs such as the bowel and bladder, or blood vessels .

Background

A pelvic organ prolapse (POP) occurs when a pelvic organ, such as your bladder, drops ("prolapses") from its normal position and pushes against the walls of your vagina. This can happen if the muscles that hold your pelvic organs in place become weak or stretched from childbirth or surgery. More than one pelvic organ can drop at the same time. Organs that can be involved in a pelvic organ prolapse include the bladder, the uterus, the bowel and the rectum.

Pelvic organ prolapse can cause pain or problems with bowel and bladder functions or interfere with sexual activity.

Stress urinary incontinence (SUI) is a type of incontinence caused by leakage of urine during moments of physical stress.

Talking to your doctor

Before having an operation for POP or SUI, be sure to let your surgeon know if you've had a past reaction to mesh materials such as polypropylene.

Questions you should ask the surgeon before you agree to surgery in which mesh will be used:

- What are the pros and cons of using surgical mesh in my particular case? Can my repair be successfully performed without using mesh?
- If a mesh is to be used, what's been your experience with implanting this particular product? What experience have your other patients had with this product?
- What's been your experience in dealing with the complications that might occur?
- What can I expect to feel after surgery and for how long?
- Are there any specific side effects I should let you know about after the surgery?
- What if the mesh doesn't correct my problem?
- If I have a complication related to the mesh, can the mesh be removed and what could the consequences be?
- If a mesh is to be used, is there patient information that comes with the product, and can I have a copy?

Reporting complications to the FDA

In order to help FDA learn more about possible problems with surgical mesh, it is important that both physicians and patients report complications that may be associated with this product.

You can report any problems to the FDA's MedWatch Adverse Event Reporting program either online, by mail or FAX.

- Online : www.fda.gov/MedWatch/report.htm
- Mail : use postage-paid FDA form 3500 available at: www.fda.gov/MedWatch/getforms.htm Mail to MedWatch 5600 Fishers Lane, Rockville, MD 20852-9787
- FAX: 1-800-FDA-0178

- 10% der Frauen werden wegen Inkontinenz oder Deszensus operiert.
- Alter, Schwangerschaft und Geburten sowie chronische Belastung und (uro)gyn. Voroperationen sind Risikofaktoren für die Entwicklung eines Genitaldeszensus.
- Pessare und Physiotherapie sind konservative Behandlungsoptionen.
- Therapie der Wahl ist die operative Korrektur.
- Der Einsatz von Meshes wird diskutiert.

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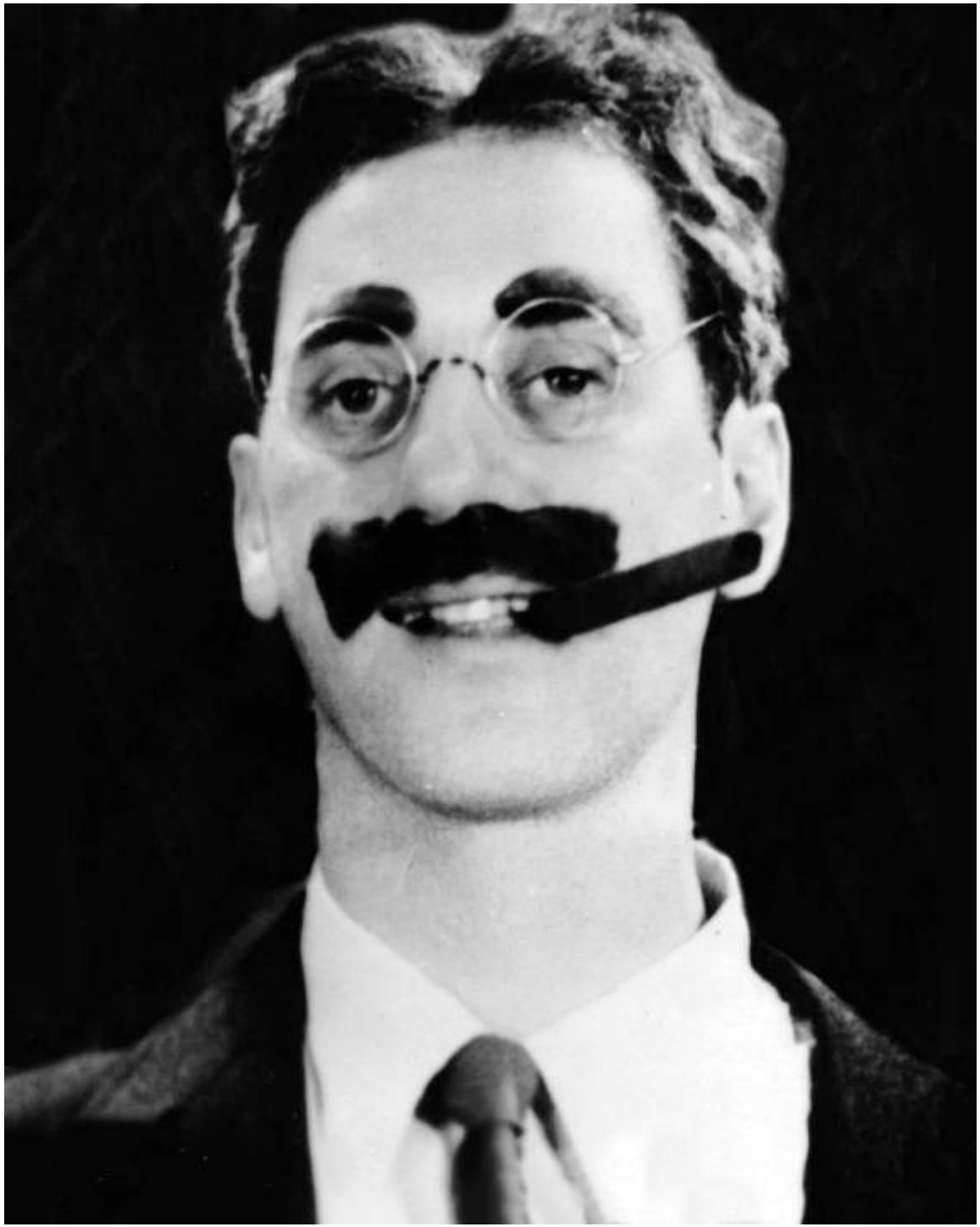

Age is not a particularly interesting subject.

Anyone can get old.

All you have to do is live long enough.

Groucho Marx, 1890 - 1977