

KING'S
College
LONDON
Founded 1829



Cosmetic Genital Surgery

Linda Cardozo

**Professor of Urogynaecology,
Kings College Hospital, London.**

The Rise of Consumer Demand in Gynaecological Practice

- Increased access to information
 - popular media
 - internet
- Society becoming more egalitarian
- Delivery of healthcare becoming partnership between patient-consumer's 'wishes' and doctors 'professional opinion'

The Rise of Consumer Demand in Gynaecological Practice

- Most gynaecological disorders are not lethal
- Impact on Quality of Life
- ‘Bothersomeness’ of a condition is perceived by patient within their own psychosocial context
- May be different from ‘doctor-centred’ view of condition

Searches

Professional vs Popular

The PubMed logo, featuring the word "PubMed" in a blue, sans-serif font. The letter "M" is stylized with a white outline and a blue shadow, giving it a 3D appearance.The National Library of Medicine (NLM) logo, consisting of the text "National Library of Medicine" in a black, serif font, with the acronym "NLM" in a blue, sans-serif font below it. To the right is a blue square icon with a white, stylized sunburst or book symbol.

'designer vagina'
<100 items found
'laser labiaplasty'
33 items found

The Google logo, featuring the word "Google" in its characteristic multi-colored font (blue, red, yellow, blue, green, red) with a small "TM" trademark symbol at the end.

'designer vagina'
>37,000 items found
'laser labiaplasty'
378 items found

Evidence vs Consumer Demand

- No reliable evidence on cosmetic gynaecological surgery to guide management
- Relatively little evidence in the more 'mainstream' management of vaginal laxity and prolapse

Where Is The Evidence ?

Anterior wall prolapse

Carcinoma of the cervix

Lifetime risk 11.1%

Lifetime risk 0.8-1.2%

Medline Search

1973-2004

207 articles

Medline Search

1973-2004

78,647 articles

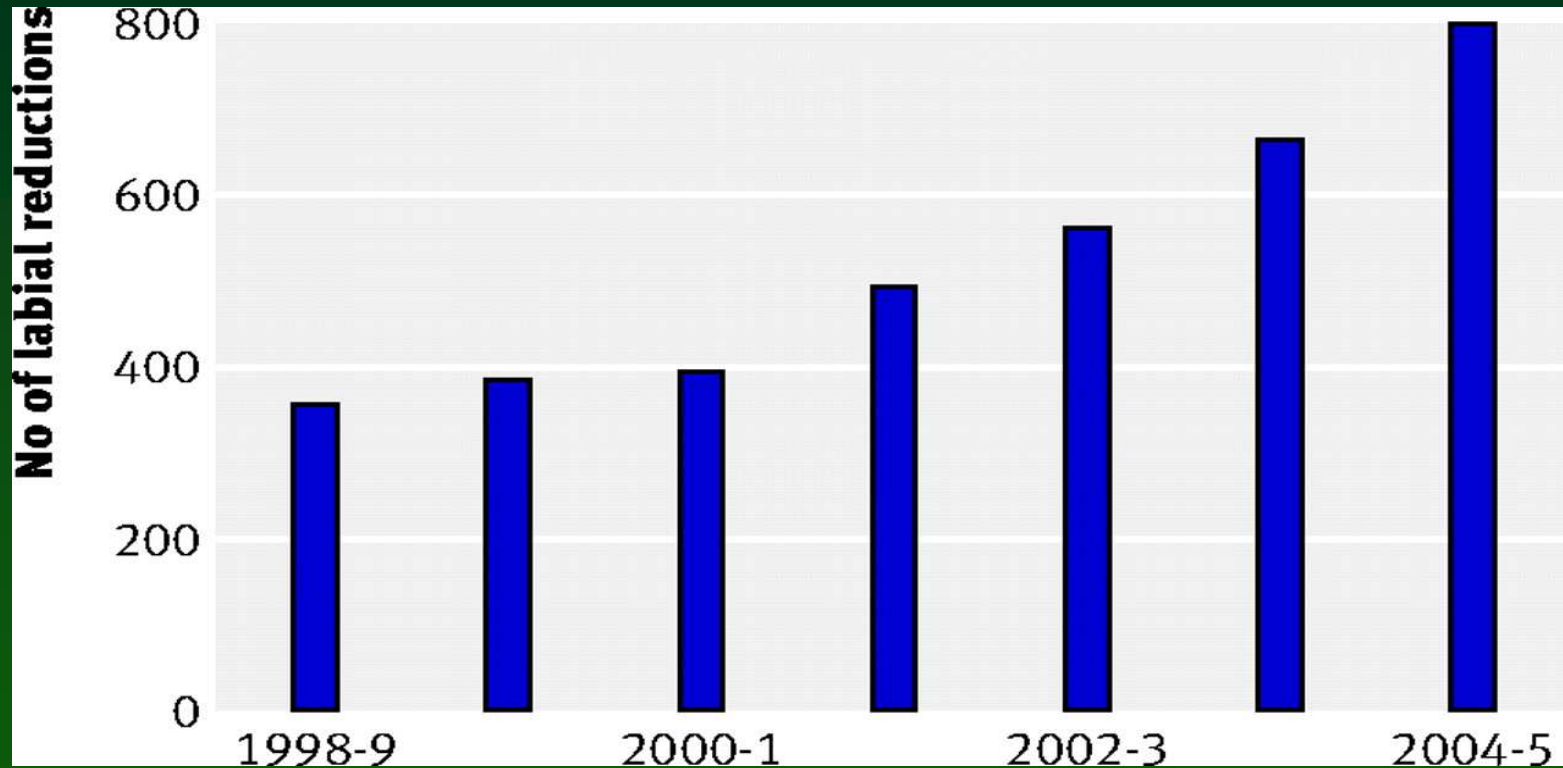
Research Based Evidence on Pelvic Floor Dysfunction

- Observational not interventional
- Subjective
- No randomisation
- ‘doctor-orientated’ outcomes
- Different grading systems used
- ‘patient-centred’ Quality of life measures rarely assessed

Despite This, Public Interest in This Type of Surgery Is Increasing

More people watched the channel 4 documentary *'Designer Vaginas'* when it was shown on 26/1/03 than watched *'News at Ten'*

Number of labial reductions in the NHS



Liao, L. M. et al. 2007;334:1090-1092

The Rise of Consumer Demand in Gynaecological Practice

- 70% increase in the number of women requesting labiaplasty in NHS
 - 404 procedures in 2006
 - 1118 procedures in 2008

Liao et al, 2009

- More than 5000 enquiries regarding cosmetic genital surgery in 2010
 - 65% for labial reduction
 - 35% for tightening and reshaping

Harley Medical Group

Aesthetic Genital Surgery

Cosmetic Vaginal Surgery

LASER VAGINAL REJUVENATION®

Laser Vaginal Rejuvenation® for the enhancement of sexual gratification.

Laser Vaginal Rejuvenation® for the correction of stress urinary incontinence.

DESIGNER LASER VAGINOPLASTY®

Laser Reduction Labioplasty of the labia minora.

Aesthetic Reconstruction and Enhancement of the Vulvar structures

Laser Perineoplasty for the aesthetic rejuvenation

Laser Hymenoplasty for restoration of the hymen.

Aesthetic Augmentation Labioplasty

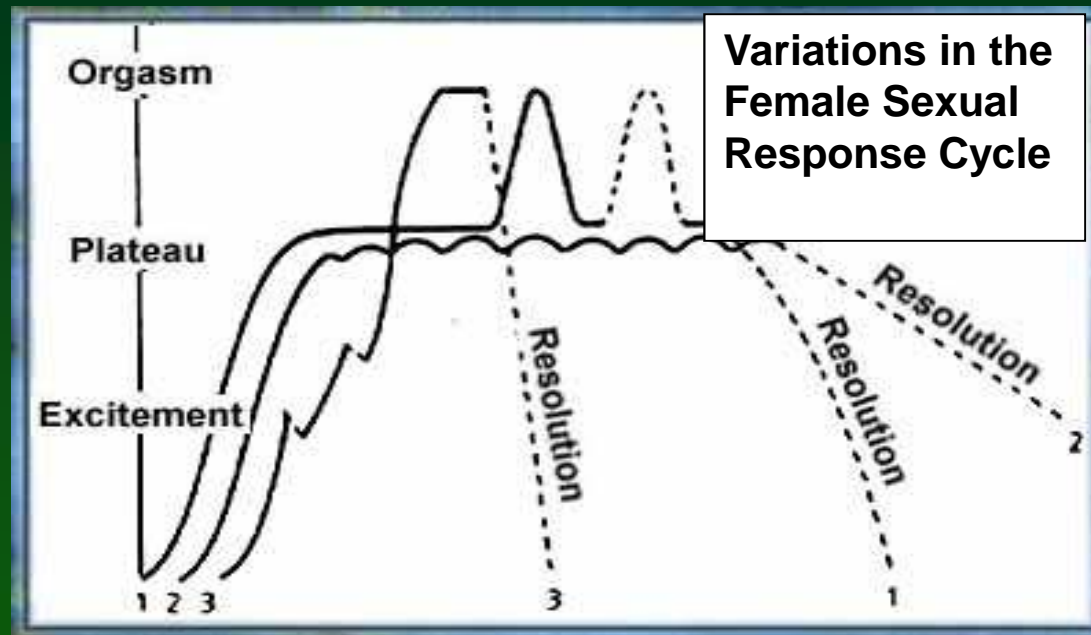
Liposculpturing

Claims Made for Cosmetic Vaginal Surgery

- **Enhanced aesthetic appearance**
Possibly
- **Increased sexual gratification**
No evidence to support this

Female Sexual Function

Claims made for vaginal rejuvenation surgery



“Laser vaginal rejuvenation is designed to enhance sexual gratification..... through reconstruction of the orgasmic platform”

Psychosexual Function

Models

- Classical four phase cycle of excitement, plateau, orgasm and resolution

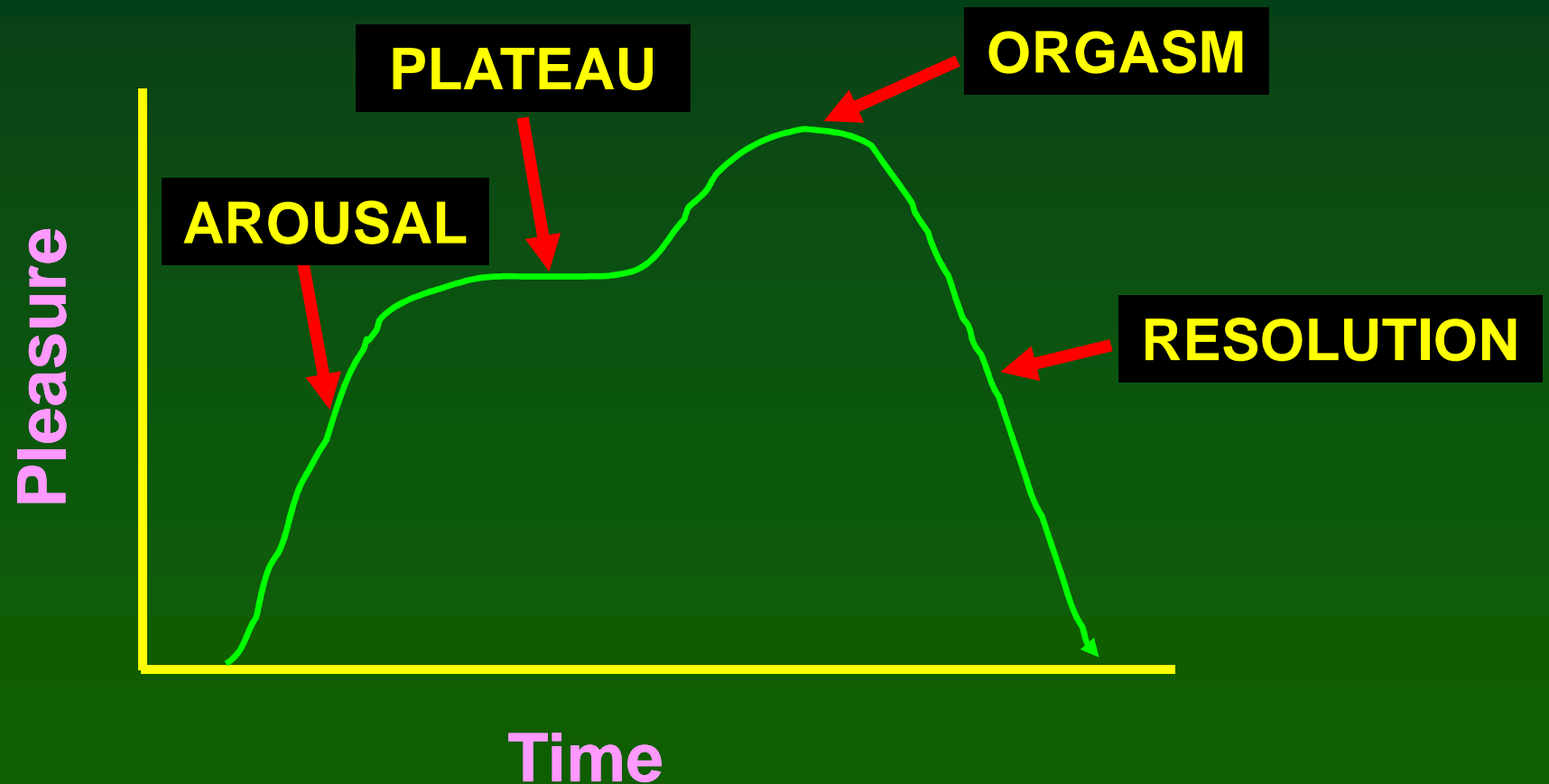
Masters and Johnson 1970

- More recent theories stress the role of desire leading to arousal, triggered by sexual stimulus and modified by situational variables

Janssen et al 2000

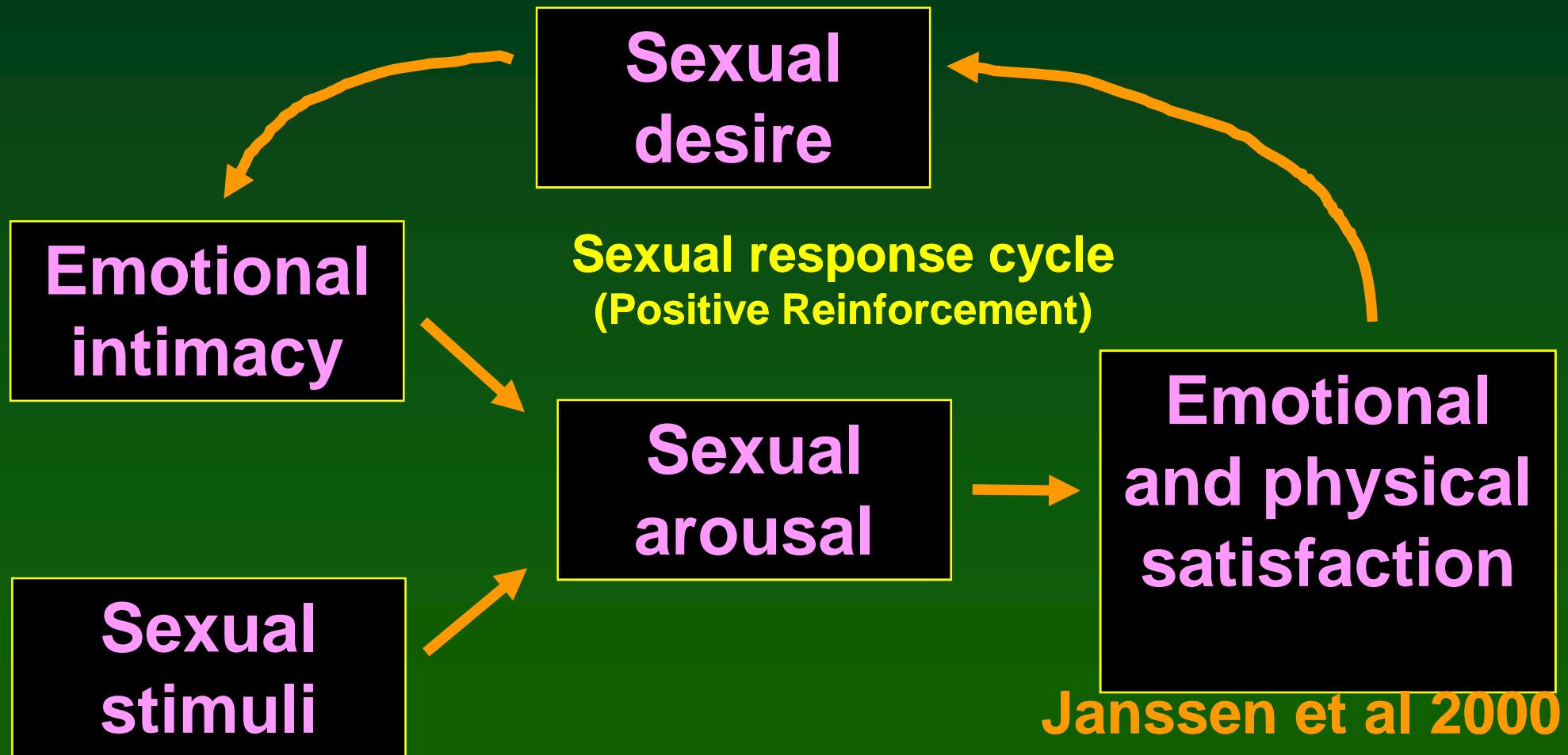
Normal Female Sexual Function

Masters and Johnson sexual response curve



Female Sexual Function

Desire may be early stage of arousal, triggered by sexual stimulus, modified by situational variables



Janssen et al 2000

Chance Remarks

Often a completely normal woman requests 'vaginal rejuvenation'

- because a partner has commented that her vagina is not the same as 'other women' or since she has had children
- she rarely responds that he is not the same since he reached 50

Male Sexual Function

There must be some foundation in the joke that a man over 50 should not

- Pass a toilet
- Risk a fart
- Or waste an erection

Underlying Psychosexual Problems

- Dyspareunia
- Vaginismus
- Lack of libido (HSDD)
- Orgasmic dysfunction

Controversy about true prevalence of Female Sexual Dysfunction (FSD).

Area of interest to Pharmaceutical industry

Copyright 2002 by Randy Glasbergen.
www.glasbergen.com



**“Frankly I wouldn’t mind the insomnia at all
if I hadn’t lost my libido at the same time!”**

Perception

What Is The “Normal” Anatomy of the Vagina and Vulva?

- 50 nulliparous premenopausal women having procedure not involving the external genitalia
- Measured
 - Clitoral size
 - Labial length / width
 - Colour
 - Rugosity
 - TVL
 - Perineal length
- Found enormous natural variation in topographical features

Lloyd et al 2005

What is the “normal” anatomy of the vulva and vagina?

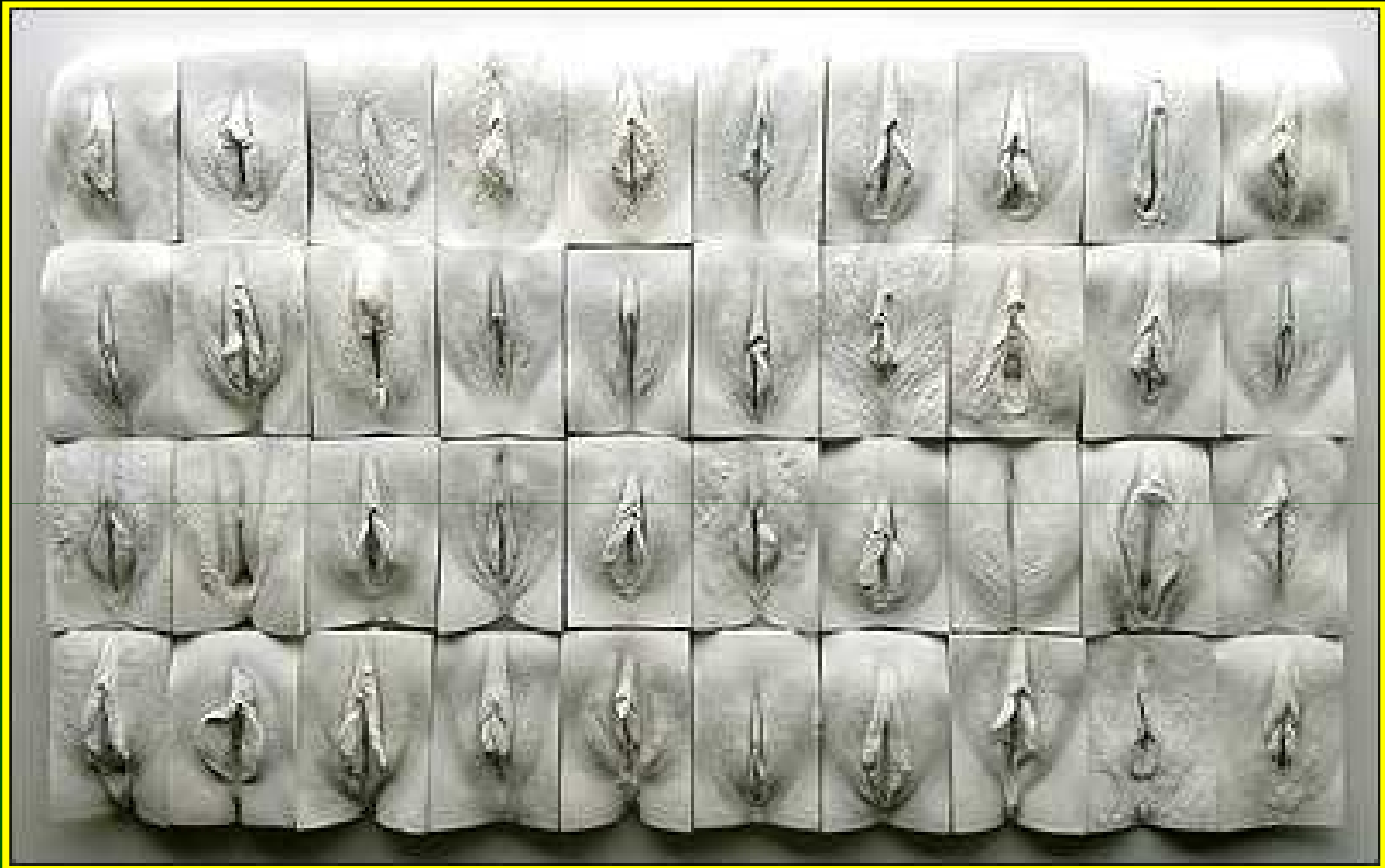
Measurements of genitalia

	Range	Mean
Clitoral length (mm)	5-35	19.1
Clitoris to urethra (mm)	16-45	28.5
Labia minora length (mm)	20-100	60.6
Labia minora width (mm)	7-50	21.8
Perineum length (mm)	15-55	31.3
Vaginal length (cm)	6.5-12.5	9.6

Rugosity of labia (n)	Smooth	14
	Moderate	34
	Marked	2

Wide natural variation in all these features

Lloyd et al 2005



The Great Wall of Vagina – Jamie McCartney 2010

What is the “normal” anatomy of the vulva and vagina?

- 3 studies explore the shape of the vagina when filled with dental putty
- 5 distinct vaginal shapes: “Parallel sides”, “conical”, “heart shape”, “pumpkin seed”, and “slug”
- Again found wide variation in length and width
- Comparing women with and without children: much larger variation between individuals than between groups



Pendergrass et al 1996, 2000, 2003

Vaginal Anatomy and Sexual Function

- 104 women attending for routine gynaecological check-up, average age 55.8
- Sexual function questionnaire and measurement of vaginal length and calibre
- 73/104 sexually active. 30 complained of occasional dyspareunia or vaginal dryness
- Vaginal anatomy no different between women not sexually active, active with no sexual difficulties, active with sexual difficulties

Weber et al. 1997

‘Pornification’ drives rise in genital surgery

The Observer, March 2011

- **Increased access to pornography**
- **Altering perceptions as to ‘normality’**
- **Desire to emulate what is perceived as being ‘attractive’**
- **Consumer demand driven by:
Women or Men?**

Cosmetic Genital Surgery

- Labioplasty first described in 3 case reports
Hodgkinson and Hait, 1984
- Series of 163 labioplasties reported (12-67 yrs)
89% satisfied with aesthetic result
93% satisfied with functional outcome
Rouzier et al, 2000
- Laser labioplasty described in 55 women (10 – 55 yrs)
- Results
91% very satisfied 9% satisfied
Pardo et al, 2006

Cosmetic Genital Surgery

- 53 women complaining of vaginal laxity
- All underwent colpoperineoplasty
- At 6 months;
 - 94% experienced a tighter vagina and said they were able to achieve orgasm
 - 74% of patients felt surgery fulfilled their expectations
- 5% felt that surgery did not meet their expectations
- 4% regretted surgery

Pardo et al, 2006

Why do women seek cosmetic surgery?

- Series from one centre
- Retrospective review of 131 patients over 27 months

Aesthetic Reasons	37%
Functional Reasons	32%
Aesthetic and Functional Reasons	31%

Miklos and Moore 2008

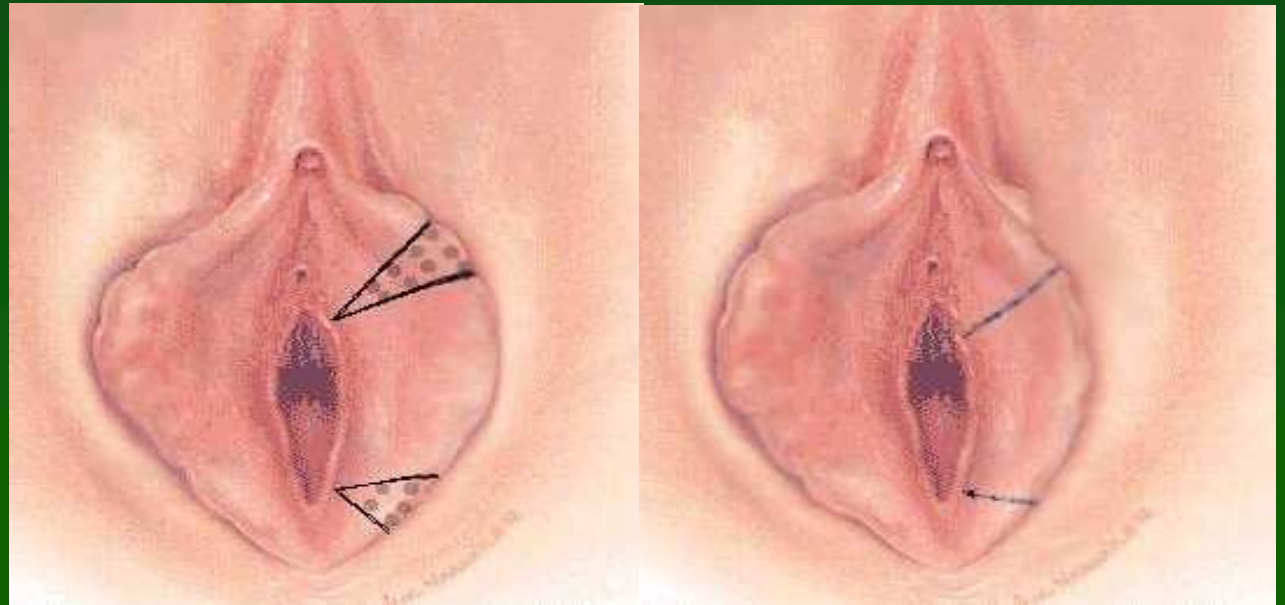
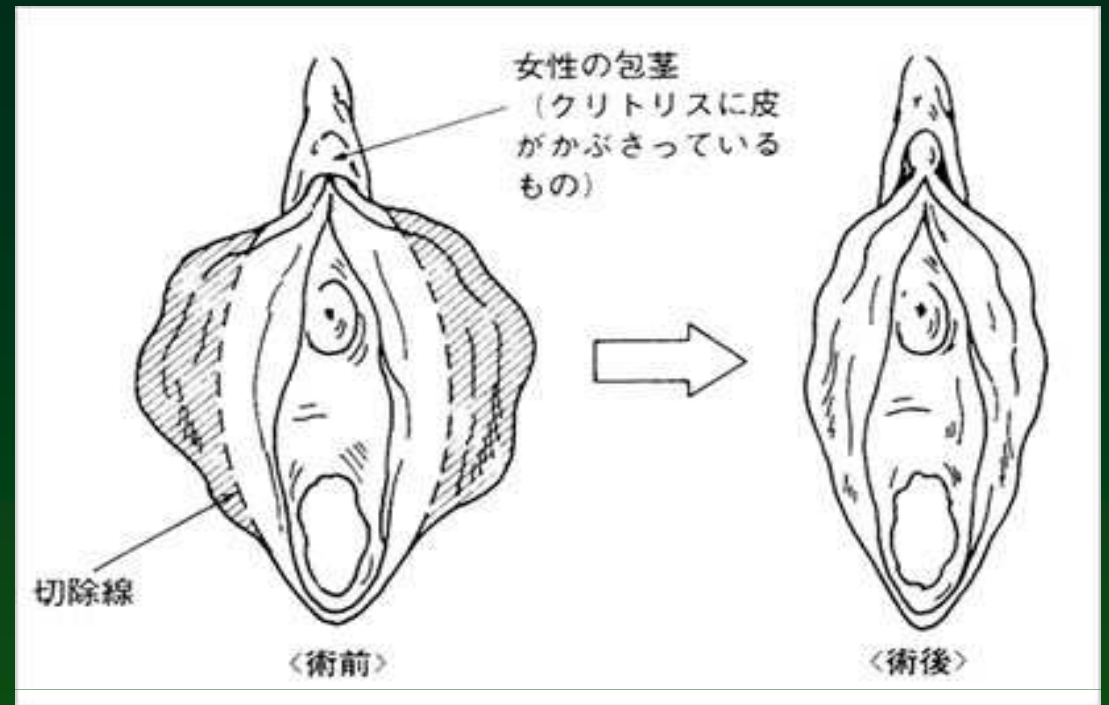
Cosmetic Genital Surgery

- Review of labial surgery for well women
- 1950 – 2009
- 40 published articles; 18 including patient data
- No prospective randomised or controlled trials
- All claimed high success and patient satisfaction
- No data on clinical effectiveness

Liao et al, 2009

Reduction Labiaplasty

- Many different techniques
- No data comparing types
- No QoL / sexual function outcome data





V-wedge with revision prepuce



Redundant prepuce

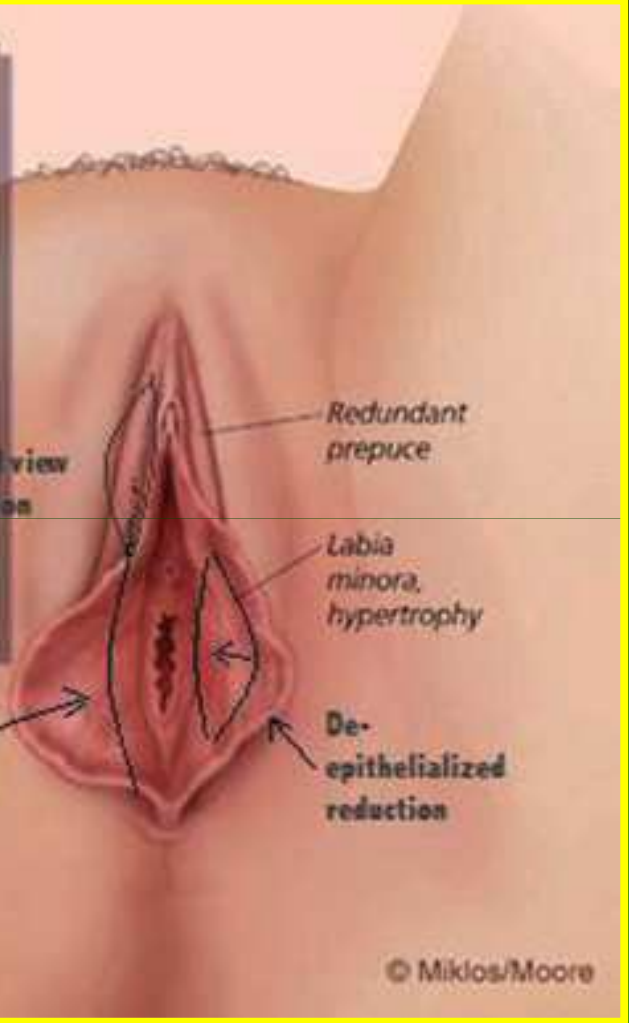
Labia minora, hypertrophy

Modified V-wedge

Z-Plasty



Lateral view reduction



Redundant prepuce

Labia minora, hypertrophy

Sculpted linear excision

De-epithelialized reduction



Genital Plastic Surgery

- Retrospective cross-sectional North American study
- 12 centres; 258 women; 341 procedures
 - 104 labial reductions
 - 34 clitoral hood reductions
 - 49 combined labial/clitoral hood reductions
 - 47 vaginoplasties/perineoplasties
 - 34 combined procedures
- Reasons for procedure
- Sexual function
- Satisfaction rates

Why do women want surgery?

Reasons for surgery	Chi-squared (<i>P</i> value)	Labiaplasty and/or reduction clitoral hood (N = 177) N (%)	Vaginoplasty and/or perineoplasty (N = 47) N (%)	Labiaplasty with vaginoplasty/perineoplasty with or without reduction of hood (N = 34) N (%)
"To look better"	30.47 (<0.0001)	94 (53.1)	6 (12.5) [†]	23 (67.6) [*]
"To enhance self-esteem"	5.08 (0.0788)	58 (32.7) ^{**†}	12 (25) [†]	17 (50.0) [*]
"To feel more normal"	6.14 (0.0464)	55 (31.1) [†]	11 (22.9) [†]	17 (50.0) [*]
"Discomfort (with sex, sports, clothes, etc.); chafing"	72.00 (<0.0001)	134 (75.7) [*]	5 (10.4) [†]	25 (73.5) [*]
"Feel loose, large, etc. with or without incontinence"	27.61 (<0.0001)	31 (16.9) [†]	25 (52.1) [*]	15 (44.1) [*]
"To increase friction and enhance sexual pleasure"	39.42 (<0.0001)	32 (18.1) [†]	27 (58.3) [*]	19 (56.8) [*]
"To increase partner's sexual pleasure"	71.47 (<0.0001)	8 (4.5) [‡]	25 (54.2) [*]	8 (23.5) [†]
"Done at urging of sexual partner"	0.33 (0.8480)	9 (5.0) [*]	2 (4.2) [*]	2 (5.8) [*]

Chi squared statistics test the equality of proportions across all three groups. The superscripted symbols indicate the significant pairwise differences among groups within a given row of the table. When two groups have no symbols in common, then the corresponding percentages differ significantly at the 0.05 level.

Why do we think women want surgery?

Reasons for surgery	Chi-squared (<i>P</i> value)	Labiaplasty and/or reduction clitoral hood (N = 177) N (%)	Vaginoplasty and/or perineoplasty (N = 47) N (%)	Labiaplasty with vaginoplasty/perineoplasty with or without reduction of hood (N = 34) N (%)
Look better	25.75 (<0.0001)	82 (46.3) [*]	4 (8.5) [†]	8 (23.5) [†]
Enhance self-esteem; feel more "normal"	18.82 (<0.0001)	54 (30.5) [*]	0 (0) [†]	9 (26.5) [*]
Functional (discomfort; dyspareunia, etc.)	47.68 (<0.0001)	108 (61.0) [*]	1 (0.5) [†]	9 (26.5) [†]
Feel loose, "open"	74.88 (<0.0001)	15 (8.5) [†]	28 (59.6) [*]	19 (55.9) [*]
Enhance sexual pleasure	22.22 (<0.0001)	29 (16.4) [†]	22 (46.8) [*]	13 (38.2) [*]
Enhance partner's sexual pleasure	37.53 (<0.0001)	5 (2.8) [‡]	15 (31.9) [*]	4 (11.8) [†]

Chi-squared statistics test the equality of proportions across all three groups. The superscripted symbols indicate the significant pairwise differences among groups within a given row of the table. When two groups have no symbols in common, then the corresponding percentages differ significantly at the 0.05 level.

Outcome: Patient Satisfaction

Outcome (patient estimate)	Chi squared (<i>P</i> value)	Labiaplasty and/or reduction clitoral hood N (%)	Vaginoplasty and/or perineoplasty N (%)	Labiaplasty and vaginoplasty/perineoplasty with or without reduction clitoral hood N (%)
Overall satisfaction	13.91 (0.0010)	(N = 177)	(N = 47)	(N = 34)
"Yes, satisfied"		172 (97.2)*	39 (83.0)†	31 (91.2)**†
"No, not satisfied"		5 (2.8)	8 (17.0)	3 (8.8)
Effect of surgery on my sexual satisfaction	9.70 (0.0078)	(N = 164)	(N = 45)**†	(N = 28)*
Negative effect		5 (3.0)	1 (2.2)	0 (0)
No effect		53 (32.3)	5 (11.1)	2 (7.1)
Negative/no effect		58 (35.3)	6 (13.3)	2 (7.1)
Mild–moderate enhancement		40 (24.4)	16 (35.5)	9 (32.1)
Significant enhancement		66 (40.3)	23 (51.1)	17 (60.7)
Mild/significant enhancement		106 (64.7)†	43 (86.6)*	26 (92.8)*
Effect of surgery on my partner's sexual satisfaction	44.00 (<0.0001)	(N = 168)†	(N = 45)*	(N = 28)*
Negative effect		2 (1.2)	1 (2.2)	0 (0)
No effect		106 (63.1)	7 (15.6)	5 (17.9)
Negative/no effect		108 (64.3)	8 (17.8)	5 (17.8)
Mild–moderate enhancement		29 (17.3)	12 (26.7)	9 (32.2)
Significant enhancement		31 (18.5)	25 (55.5)	14 (50.0)
Mild/significant enhancement		60 (35.7)†	37 (82.2)*	23 (82.2)*

Goodman et al, 2009

Outcome: Physician Perspective

Outcome (Physician estimate)	Chi squared (<i>P</i> value)	Labiaplasty and/or reduction clitoral hood (N = 177) N (%)	Vaginoplasty and/or Perineoplasty (N = 47) N (%)	Labiaplasty with vaginoplasty/perineoplasty with or without reduction clitoral hood (N = 34) N (%)
Estimate of overall results				
Excellent	2.52 (0.2835)	77 (43.5)*	24 (51.1)*	17 (50.0)*
Good		94 (53.1)*	19 (40.4)†	15 (44.1)†
Excellent/good		171 (96.6)*	43 (91.5)*	32 (97.0)*
Fair		2 (1.1)	3 (6.4)	1 (2.9)
Poor		4 (2.3)	1 (2.1)	0 (0)
Unknown				1 (2.9)
Fair/poor		6 (3.4)	4 (8.5)	1 (3.0)
Total complications:				
None	12.79 (0.0017)	164 (92.7)*	35 (74.5)*	28 (82.4)**
Yes		13 (7.3)†	12 (25.5)*	6 (17.6)**
Intraoperative complications				
None	0.78 (0.6762)	175 (98.9)*	46 (97.9)*	34 (100)*
Yes		2 (1.1)*	1 (2.1)*	0*
Intraoperative skin burn requiring revision		1		
Introital narrowing requiring revision		1		
Rectal perforation with repair			1	
Postoperative complications				
None	13.21 (0.0014)	166 (93.8)†	36 (76.6)*	28 (82.4)*
Yes		11 (6.2)†	11 (23.4)*	6 (17.6)**

Goodman et al, 2009

True Customer Satisfaction !

“I felt plagued by the size of my labia ever since I was a little girl.....

It's so nice to look in the mirror now and see a more beautiful me. And the best part is, my inner beauty is beginning to shine through and THAT makes life wonderful”

**Website of the Laser Vaginal
Rejuvenation™ Institute of Los Angeles**

G Shot

- The G-SHOT® is a simple, nonsurgical, physician-administered treatment that can temporarily augment the Grafenburg spot (G-Spot)
- Invented and developed by a gynecologist David Matlock
- In a pilot study, 87% of women surveyed after receiving the G-Shot reported enhanced sexual arousal and gratification. Results do vary

thegshot.com

Does the G Spot Exist?

- Study of 1804 female twins aged 22-83 yrs
- Questionnaire about absence or presence of G spot
- Genetic and environmental factors investigated
- 56% of women reported having a G spot
- Incidence decreased with age
- No detectable genetic influence
- Evidence would suggest that it is a secondary pseudo-phenomenon
- No physiological or physical basis

Burn et al, 2010

Hymen repair (Hymenorraphy)

- Predominantly women of African and Mediterranean origin
- The suggestion of premarital sex places women from these cultures at risk of violence or being ostracised

Does this make it morally more justified than purely cosmetic surgery ?

Cosmetic Genital Surgery

- 'hymenoplasty is an attack on women's dignity which perpetuates the culture of repression of women'

Collège National des Gynécologues et Obstétriciens Français, 2007

- any decision to provide cosmetic genital surgery should be based entirely on clinical grounds

Royal College of Obstetricians and Gynaecologists, 2009

- In the UK it is an offence to;

'excise, infibulate or otherwise mutilate the whole or any part of a woman's labia majora, labia minora or clitoris, whether the women has consented or not'

Female Genital Mutilation Act, 2003



Every year, two million girls suffer the pain of genital mutilation - a clear violation of their human rights. No government should continue to ignore this crime. Help us to stop violence against women. Give your support at www.amnesty.se



amnesty



Every year, two million girls suffer the pain of genital mutilation - a clear violation of their human rights. No government should continue to ignore this crime. Help us to stop violence against women. Give your support at www.amnesty.se



amnesty

Female Genital Mutilation

- **WHO definition**
- **All procedures involving partial or total removal of the external female genitalia or other injury to the female genital organs whether for cultural, religious, or other non-therapeutic reasons**

Female Genital Mutilation

- **Affects 130 million women worldwide**
- **Mostly from 28 African countries**
- **2 million girls at risk each year**
- **Consent not given. Constitutes assault in developed world**

**A Less Fashionable But
More Pragmatic Approach
to Vaginal Laxity and
Lesser Degrees of
Urogenital Prolapse**



Prolapse Epidemiology

- Retrospective cohort of 149 000 women
- Lifetime risk of operation for prolapse by 80 years – 11.1%
- Re-operation rate – 29%

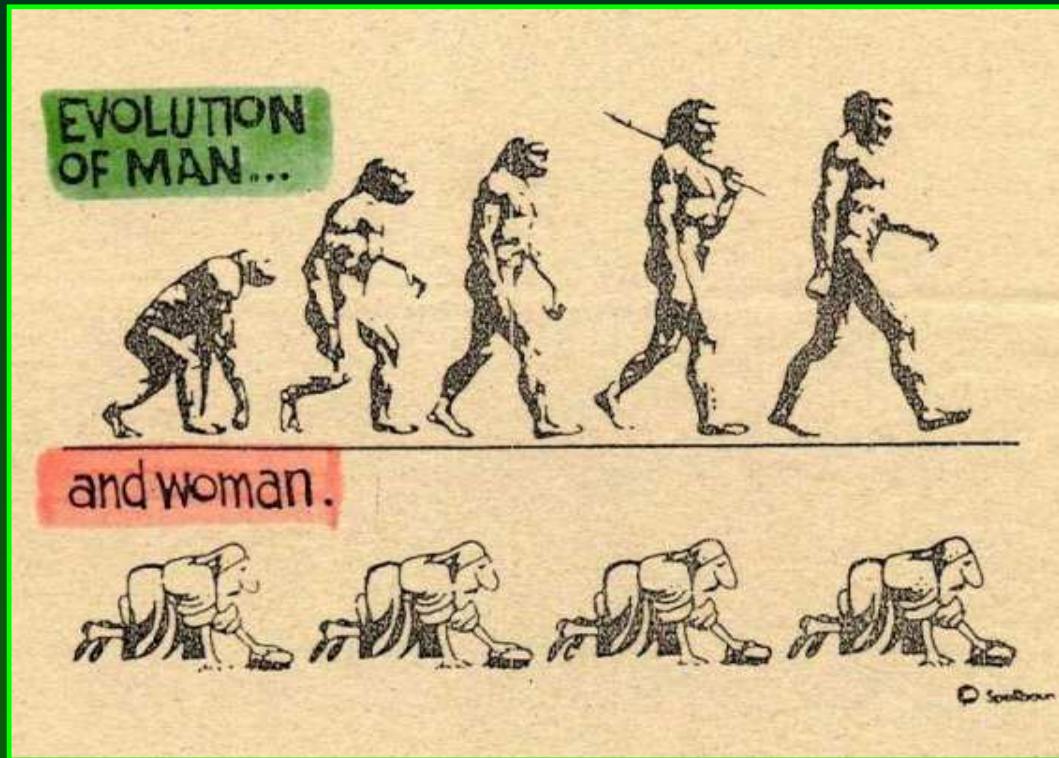
Olsen et al 1997

**Why is prolapse so
common ?**

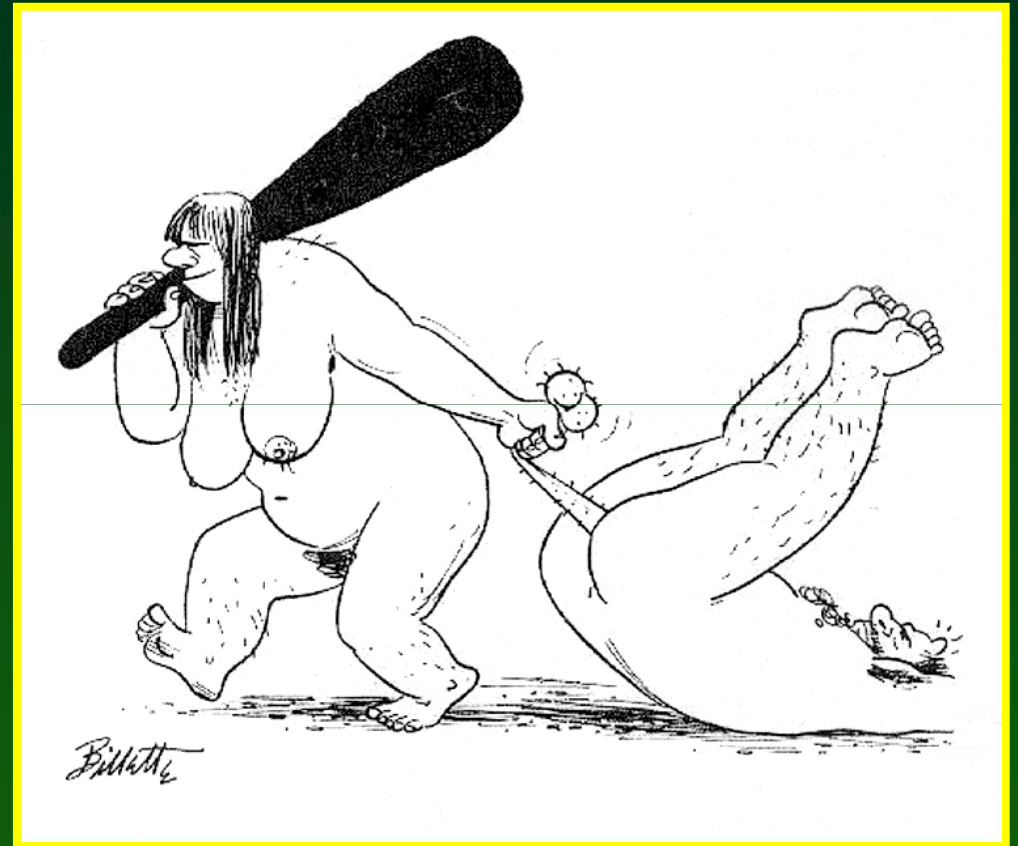
Evolution of the Pelvic floor

- Original function of levator ani complex was tail-wagging
- Primary function in bipeds is support of pelvic organs and maintaining continence
- Gradual evolution from muscle to connective tissue
- Major component of the pelvic floor became ligamentous

Two Views of Evolution



Some claim that women were never designed as bipeds



I don't subscribe to this view !

Vaginal Laxity

Common Complaints

- **Discomfort and symptoms of prolapse**
- **Tampons fall out**
- **Lack of friction during intercourse**
- **Penis falls out during intercourse**
- **Vaginal wind**
- **Bathwater entrapment**

Vaginal Laxity

How should It Be Managed ?

- Evaluate symptoms – patient perspective
- Consider function of all 3 pelvic compartments
- Sexual dysfunction ? ‘hidden agenda’
- QoL
- Hormonal status
- Family complete?
- Examination with prolapse grading

Management of Prolapse

- Improve Quality of Life
- Individualise management depending upon presenting symptoms and life-style
- General Aims
 - Relieve symptoms
 - Maintain or restore bladder/bowel function
 - Maintain (or improve) sexual function

Don't jump straight in to surgery



- **Seek advice of specialist who is able to assess problem in context of overall pelvic function**
- **Consider conservative measures first**

Conservative management

- Pelvic floor muscle training
- Vaginal devices eg. Perineometer (biofeedback)
- Electrical stimulation
- Bowel and fluid management
- Low-dose vaginal oestrogens
- ? Weight loss
- Avoid unnecessary lifting and curtail excessive high-impact training

Reduction Of Physical Forces

Although moderate cardiovascular exercise promotes general health and weight loss...

Not all exercise is good for your pelvic floor !

- heavy lifting predisposes to prolapse and incontinence

Jorgensen 1994

- Traumatic exercise may cause incontinence

Davis & Goodman 1996

Urogenital prolapse

Surgical Approach

- **Should only be considered after failure of conservative measures after full discussion and counselling when family is complete**
- **Limitations and benefits of surgery should be discussed**
- **Risk of dyspareunia**

What Are We Trying to Achieve?

- Improved cosmetic appearance only ?
- Improved support of pelvic viscera ?
- Improved function also ?

Cosmetic Vaginal Surgery

- 53 women complaining of vaginal laxity
- All underwent colpoperineoplasty
- At 6 months;
 - 94% experienced a tighter vagina and said they were able to achieve orgasm
 - 74% of patients felt surgery fulfilled their expectations
- 5% felt that surgery did not meet their expectations
- 4% regretted surgery

Pardo et al, 2006


Cosmetic Genital Surgery

- Vaginal rejuvenation", "designer vaginoplasty", "revirgination", and "G-spot amplification" are vaginal surgical procedures offered by some practitioners
- These procedures are not medically indicated, and the safety and effectiveness of these procedures has not been documented
- Women should be informed about the lack of data and their potential complications, including infection, altered sensation, dyspareunia, adhesions, and scarring

ACOG Committee Opinion, 2007

Who should be doing this surgery ?

- Cosmetic / Plastic surgeons
- General Gynaecologists
- Urogynaecologists - Pelvic Reconstructive Surgeons
- General Surgeons specialising in 'pelvic' surgery

? What training is required 
Special skill
Subspecialisation

Conclusions

- Underlying desire for cosmetic genital surgery needs to be explored – it may be quite reasonable
- Labiaplasty is the most commonly performed procedure
- Main indications are functional and cosmetic
- Important to recognise sexual problems as surgery may make them worse
- There is little evidence to support surgical techniques and outcomes
- Further research is required into all aspects of this type of surgery