

Minimally invasive erbium laser
treatment in gynecology

Fotona symposium, MIPS 2015 Ljubljana, Slovenia

LASER VAGINAL TIGHTENING FOR IMPROVEMENT OF SEXUAL FUNCTION

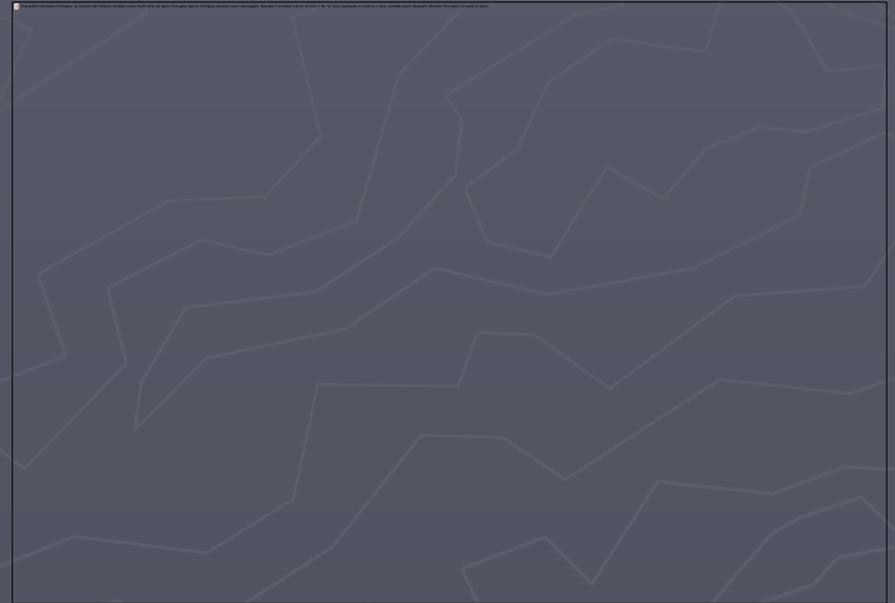
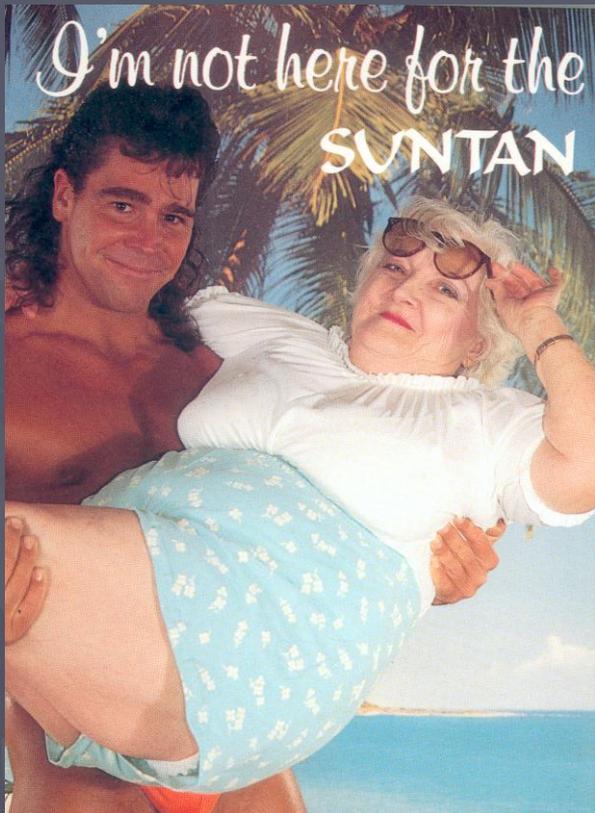
Prof.dr. Adolf Lukanovič, dr.med., svetnik

Department of Obstetrics and Gynecology University Medical Center

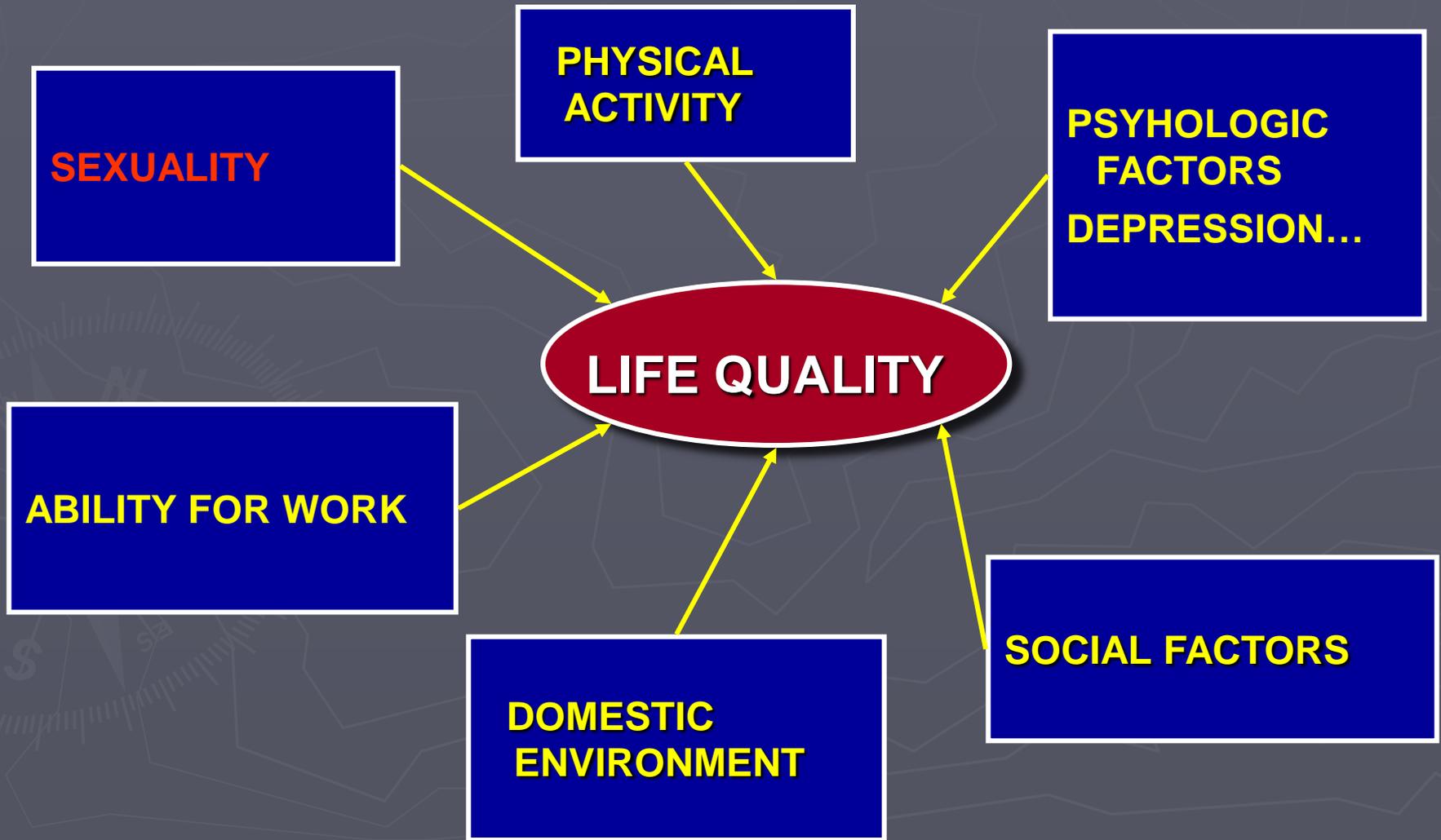
Ljubljana, Slovenija



The main goal of any human
being is **life quality**

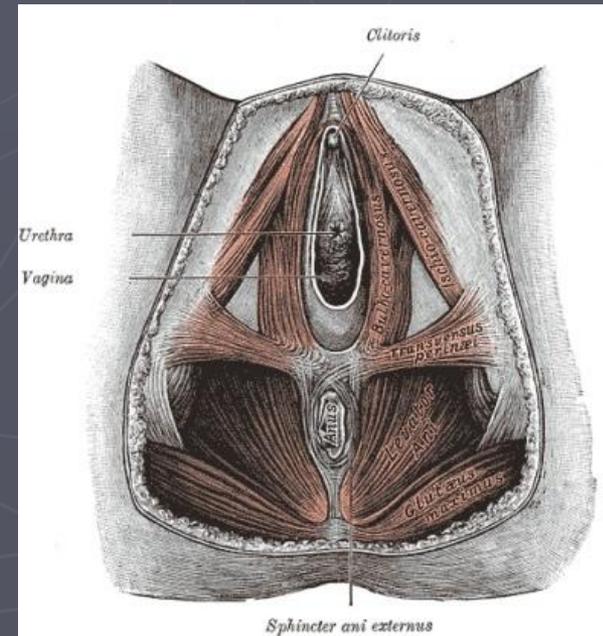
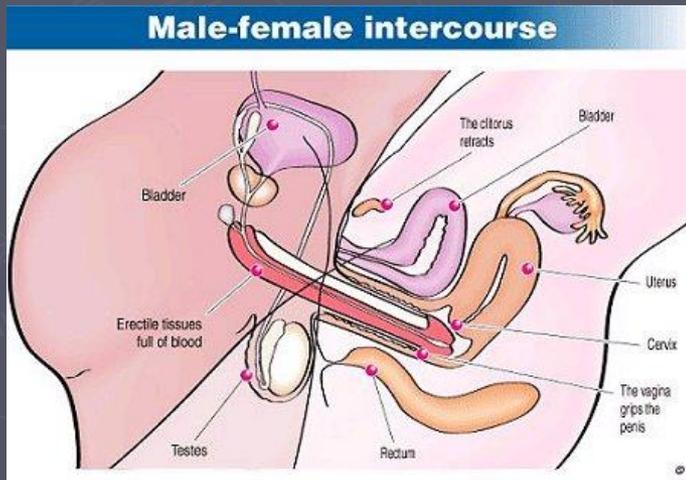


PELVIC FLOOR DYSFUNCTION AND QUALITY OF LIFE



PELVIC FLOOR FUNCTION

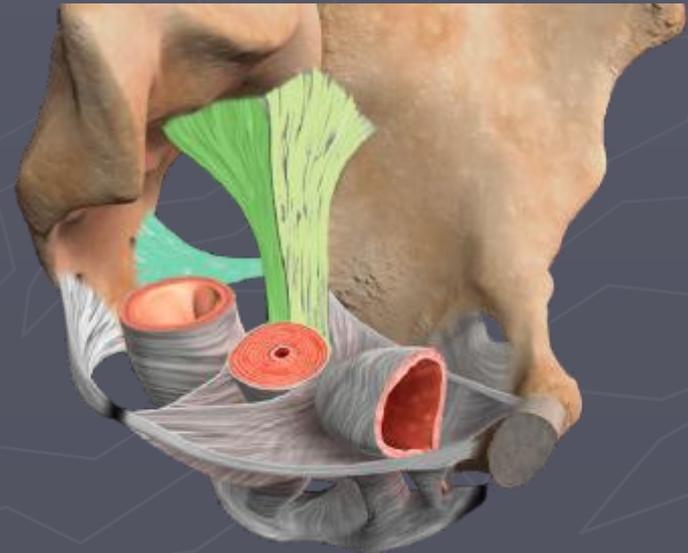
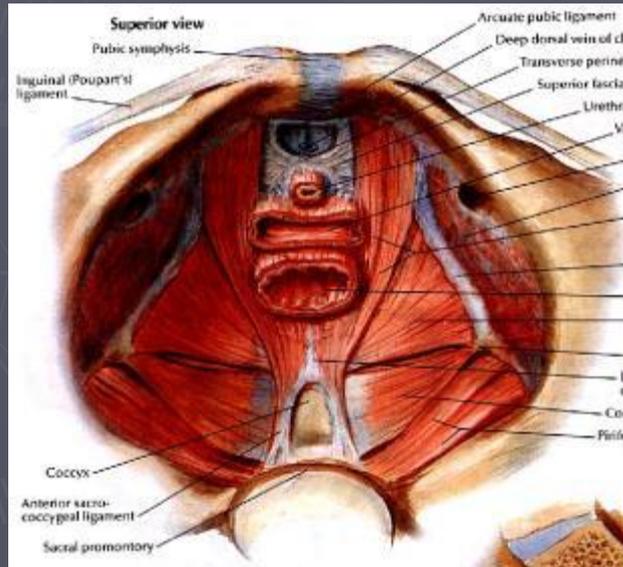
- ▶ Pelvic organ support
- ▶ Enabling urinary continence
- ▶ Enabling fecal incontinence
- ▶ Enabling sexual satisfaction



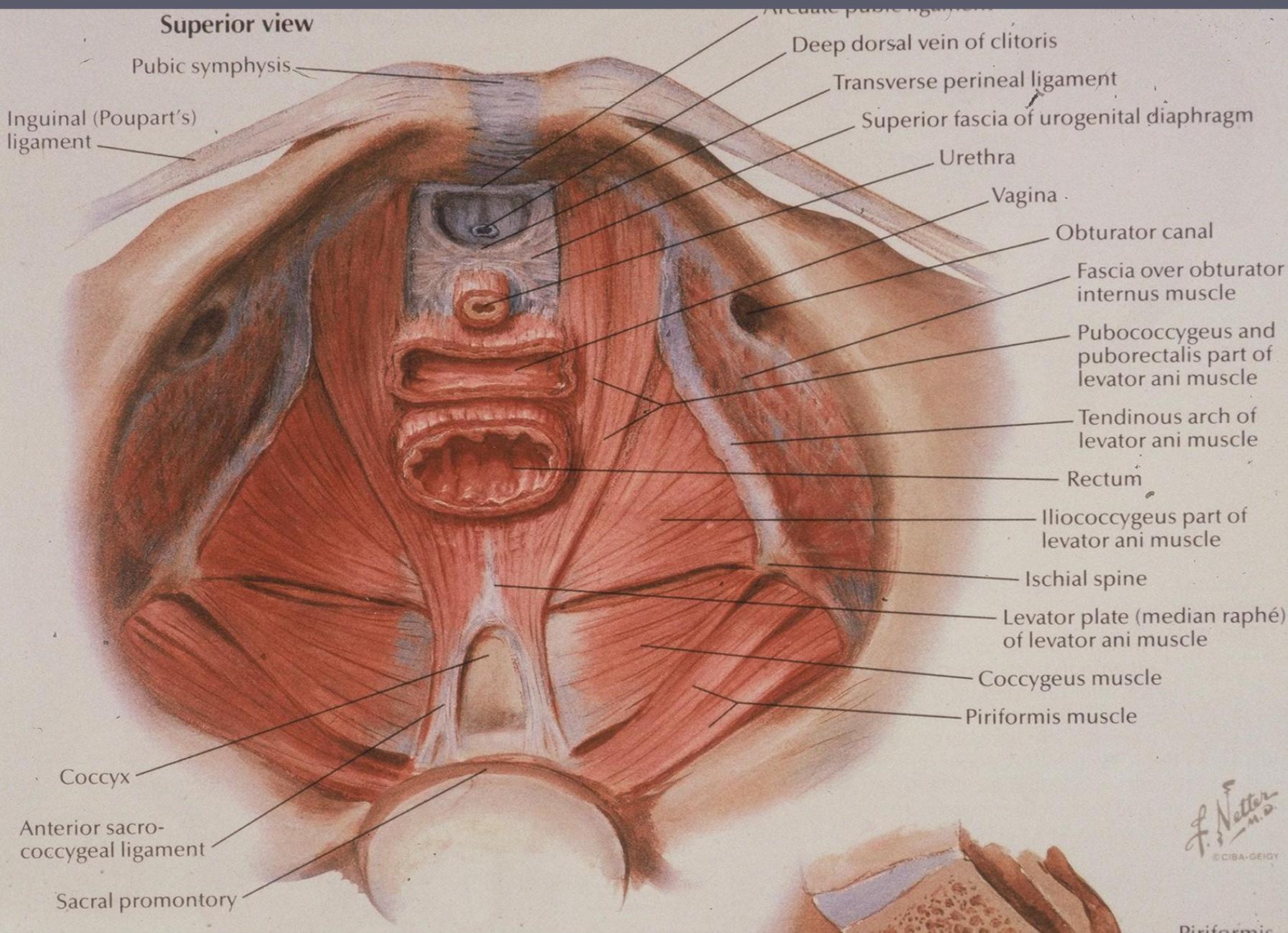
Anatomical Structure

Integral Theory *Ulmsten e Petros, 1993*

Sinergic action among muscles, fascias, and ligaments



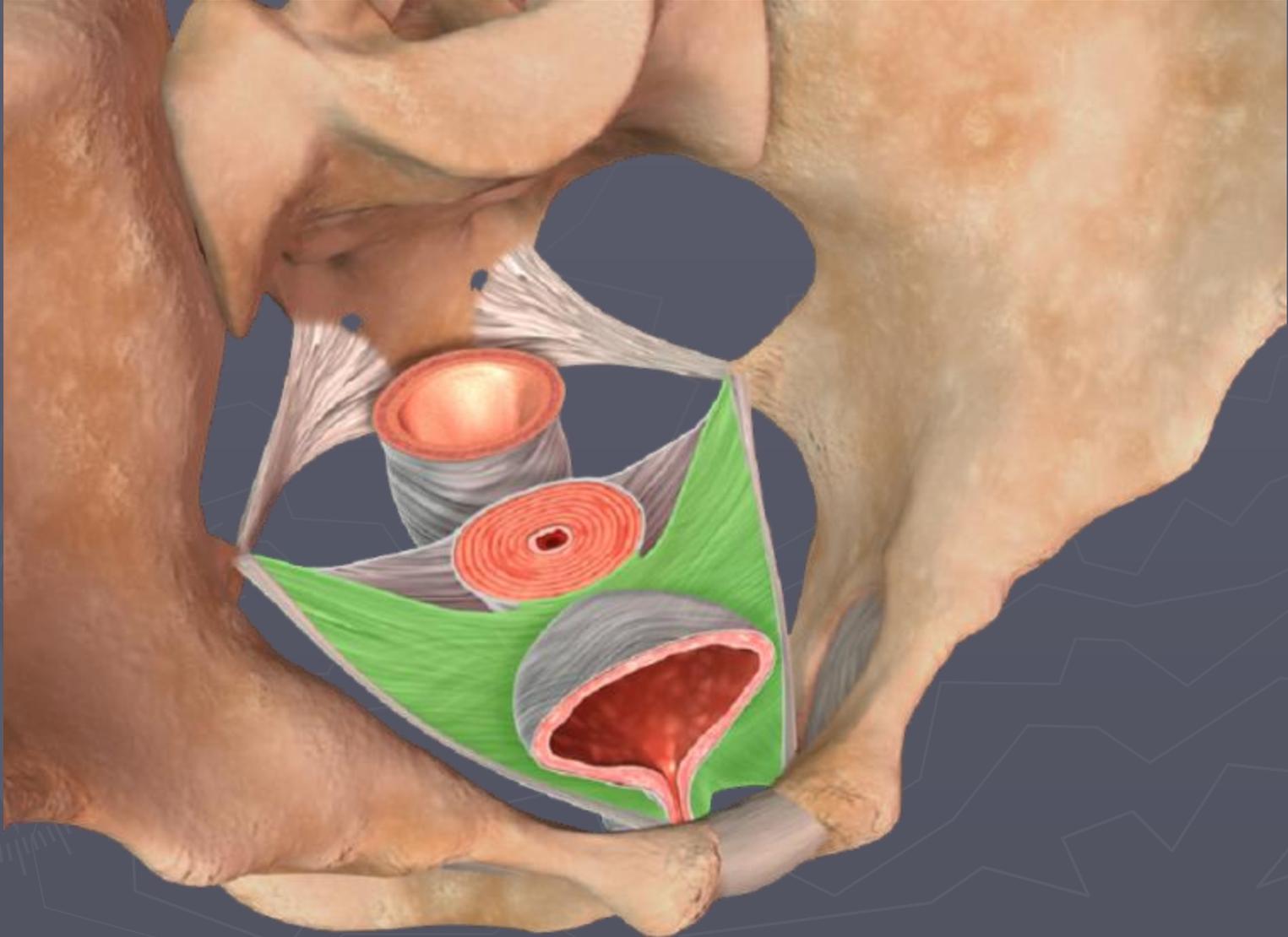
Superior view



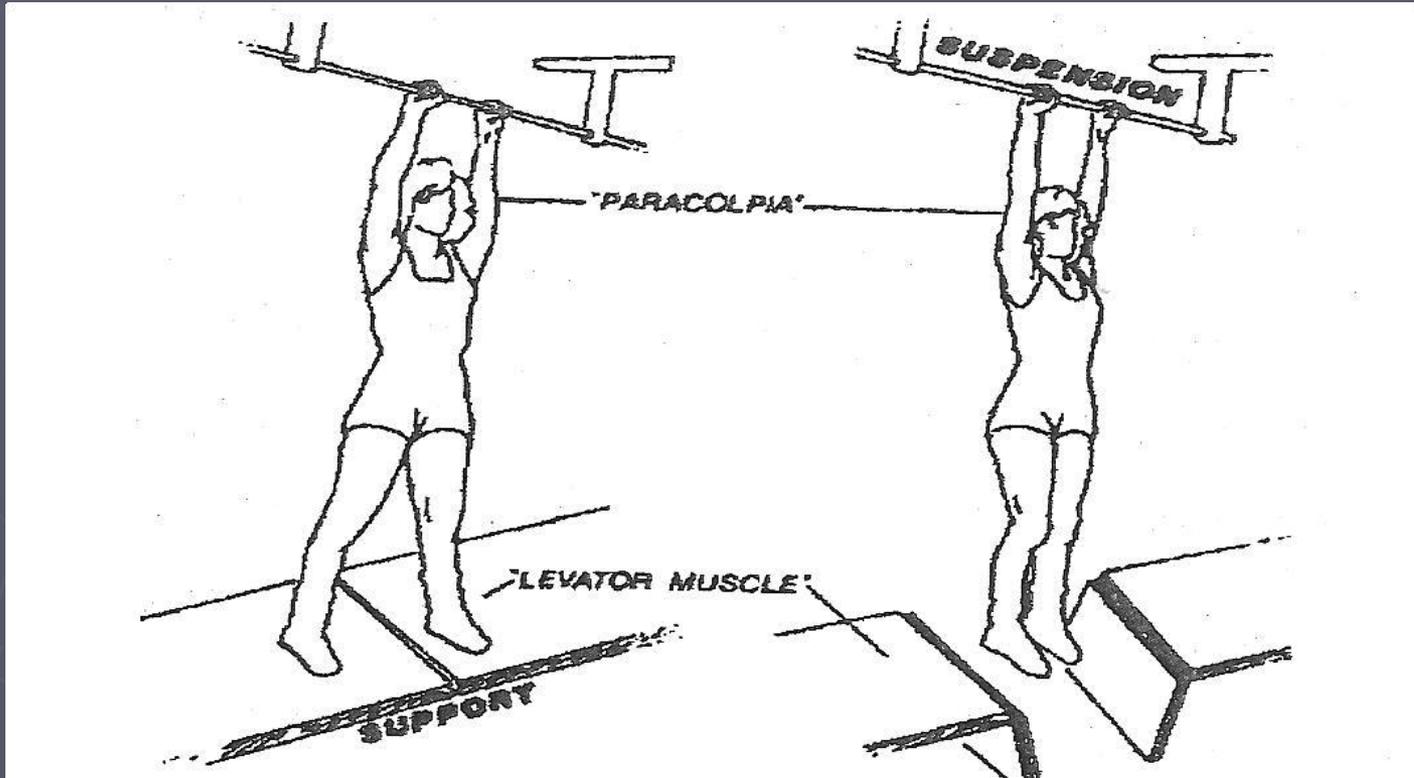
F. Netter M.D.
© CIBA-GEIGY

Piriformis

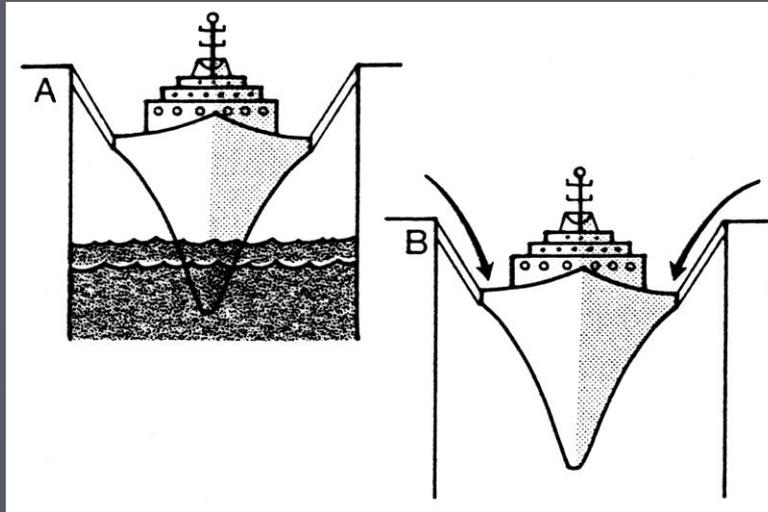
CONNECTIVE TISSUE



ADAPTED BY ROGERS, R.



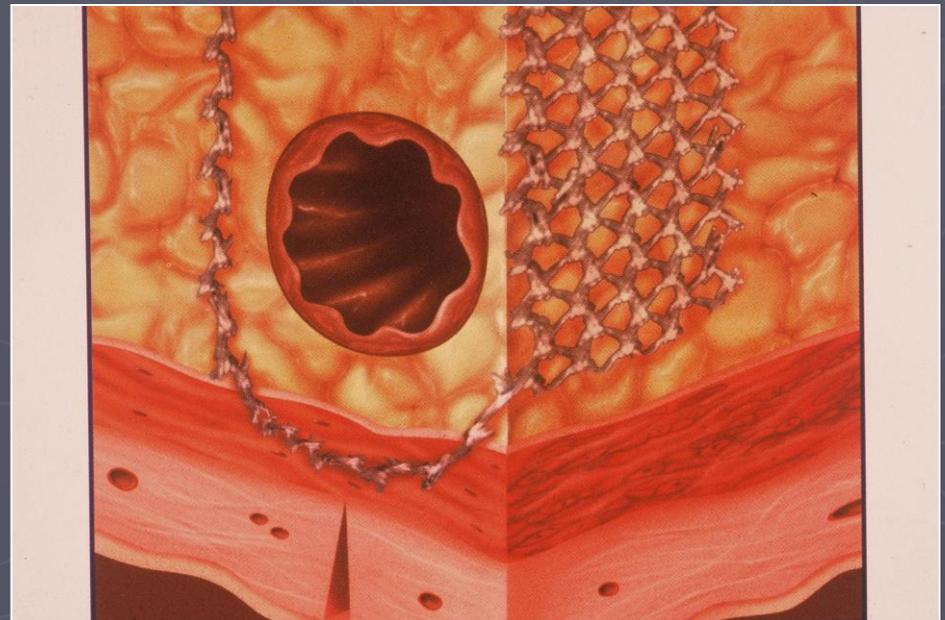
Porges RF, et al. Am J Obstet Gynecol 1994



TWO SCHOOLS

- SUPPORTERS**
- SUSPENDERS**

The diagram illustrates the larynx, showing the vocal folds and the surrounding structures. The 'SUPPORTERS' are the structures that support the larynx, and the 'SUSPENDERS' are the structures that suspend it. A red arrow points to the suspensory ligament, which is a key structure in the suspensory system.



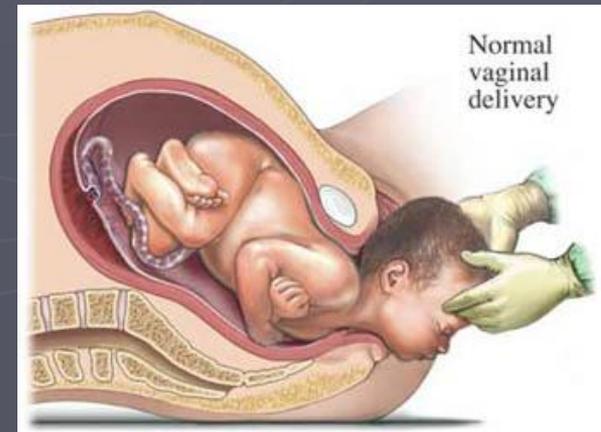
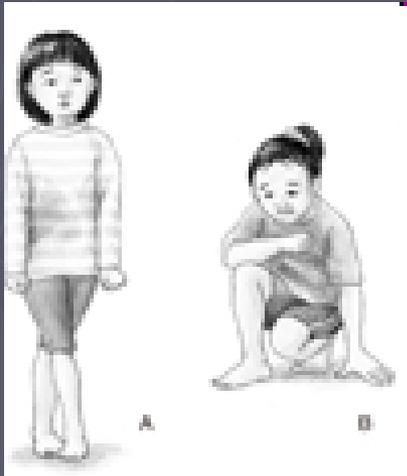


suspensio

sustencio



Pelvic floor relaxation in different age periods is caused by deteriorating laxity, elasticity and tightness of mucous membranes and the underlying adjacent tissues (muscles)



The most common problem of pelvic floor relaxation is:

Vaginal relaxation – the loss of sexual gratification
– involuntary loss of urine

Anal incontinence



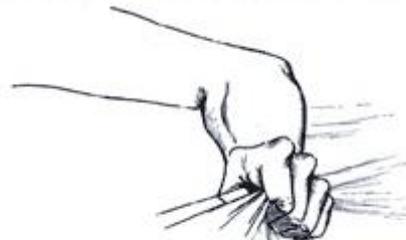
- ▶ There is direct correlation between the strenght of pelvic floor muscles and orgasm intensity

(Graber and Kline-Graber, 1979; Beji et al., 2003; Bø et al., 2000; Kegel, 1952; Lowenstein et al., 2010; Messe et al., 1985; Shafik 2000; Zahariou et al., 2008).

Some Common Signs of an Orgasm



Facial grimace and vocalization



Clutching with hand



Involuntary muscle contractions include curling of toes

PHYSICIAN DECISION MAKING



MORPHOLOGY

PHYSIOLOGY

Anatomy is not correlated to function
Looks good feels bad, feels good looks bad

OUTCOME MEASURES AND QUALITY OF LIFE

Definition of outcome measures

“NO SINGLE MEASURE CAN FULLY EXPRESS THE OUTCOME OF AN INTERVENTION”

Mattiasson A et al. Standardization of outcome studies in patients with lower urinary tract dysfunction: A report on general principles from the Standardisation committee on the ICS. *Neurol Urodyn* 1998; 17; 249-253.

- PELVIC FLOOR RELAXATION
- DEGREE OF SYMPTOMS (SUI, UUI, POP...)

DETERMINE MODE OF THE TREATMENT

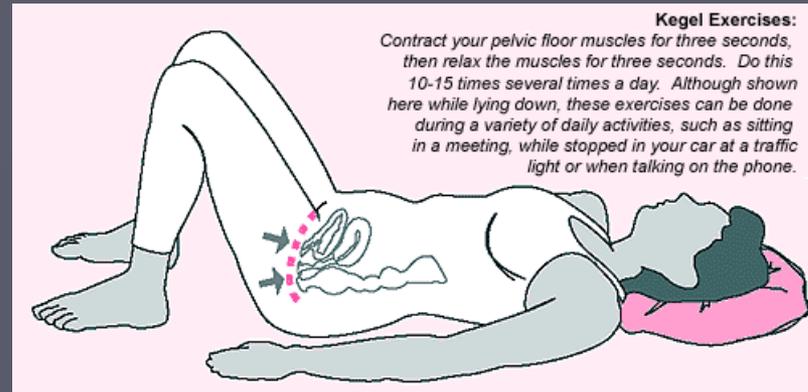
CONSERVATIVE

- Behavioral therapy
- Pelvic floor muscles training
- Biofeedback
- Electro stimulation
- Magnetic stimulation
- Medication
- **LASER TREATMENT???**

OPERATIVE

- vaginal
- abdominal
- laparoscopic
- combined
- Meshes – tension free



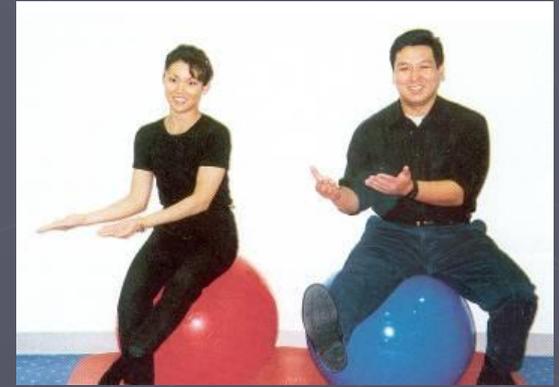
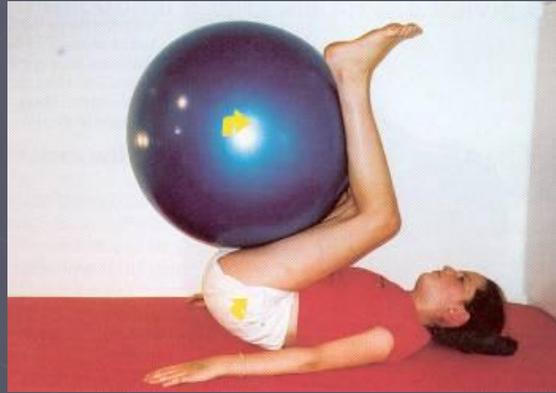
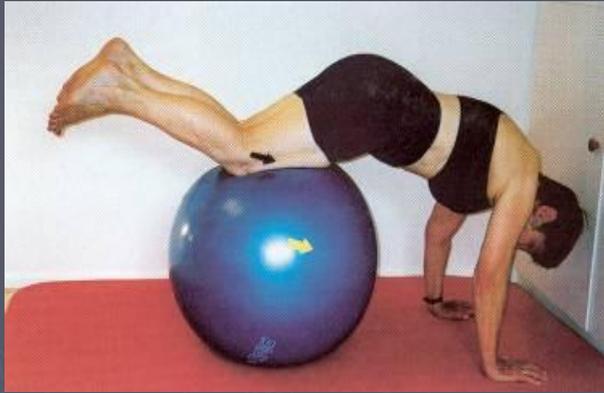


Training of pelvic floor muscles with the aim to improve urinary leakage indirectly resulted in better sexual arousal and orgasm.

(Beji et al., 2003; Bø et al., 2000).



"Fitness for the pelvic floor" Carriere 2002



DEFINITION OF SEXUALITY

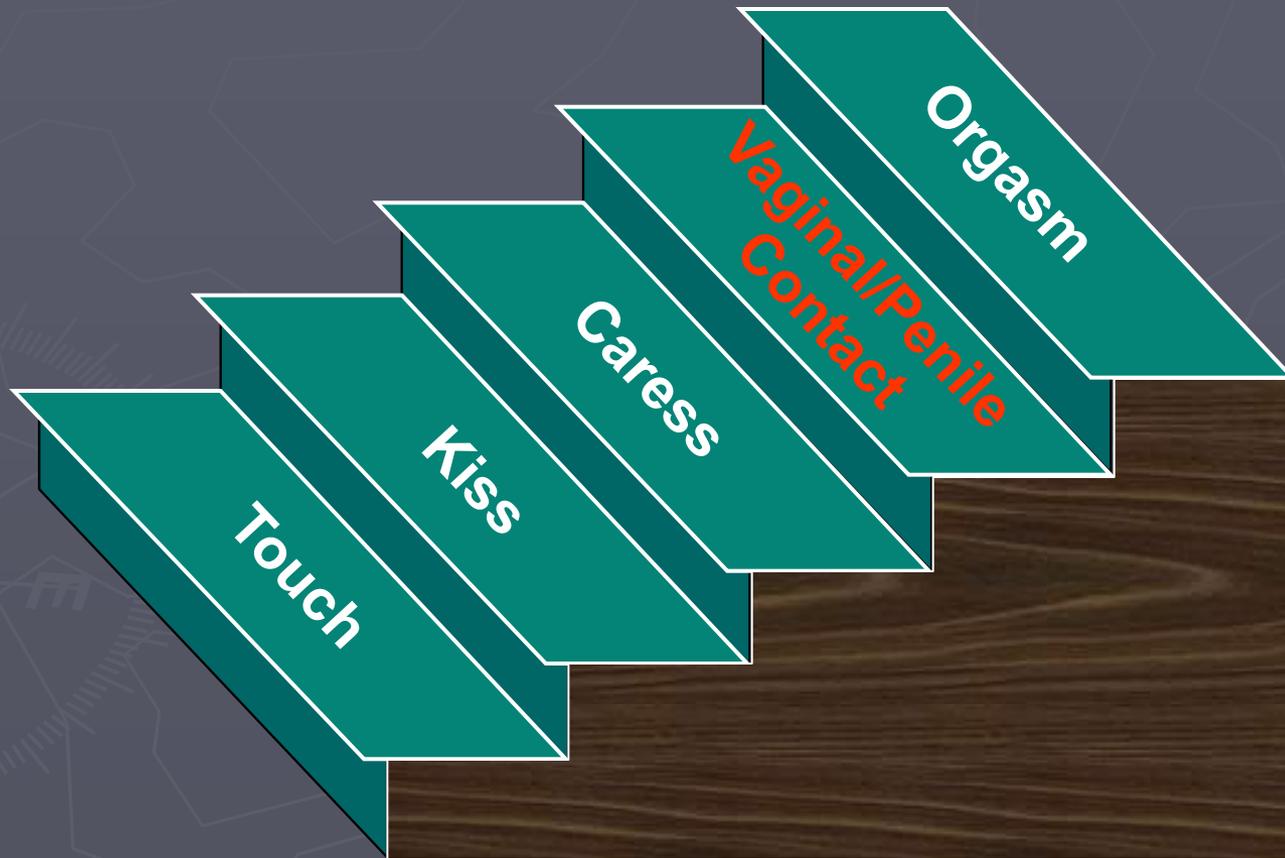
comprehenses

- ▶ biological
- ▶ psihological
- ▶ emotional
- ▶ cultural
- ▶ social
- ▶ spiritual

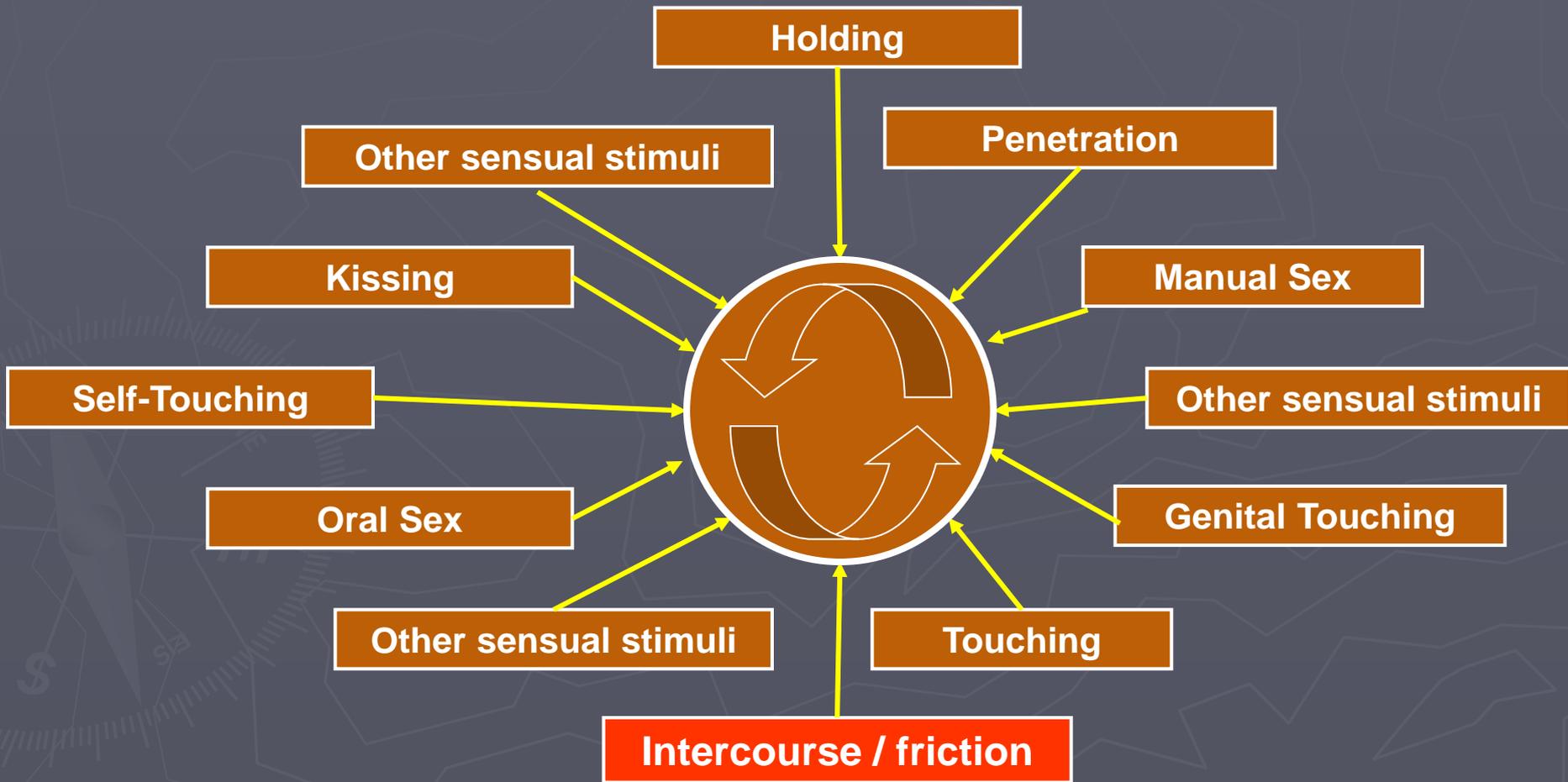


Way of behaving, feeling and all actions, which in sexual life determine partnership relations.

SEXUAL EXPERIENCE: Goal Directed



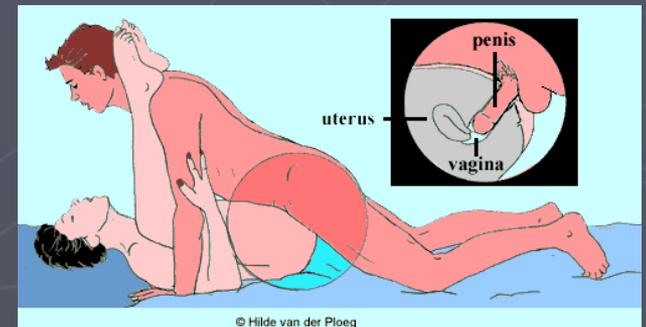
SEXUAL EXPERIENCE: Pleasure Directed



Sexual gratification is directly related to the amount of frictional forces generated during intercourse.

Friction is a function of the vaginal diameter, and when this virtual space is expanded it can lead to **reductiuon, delay or inexistence** of orgasm.

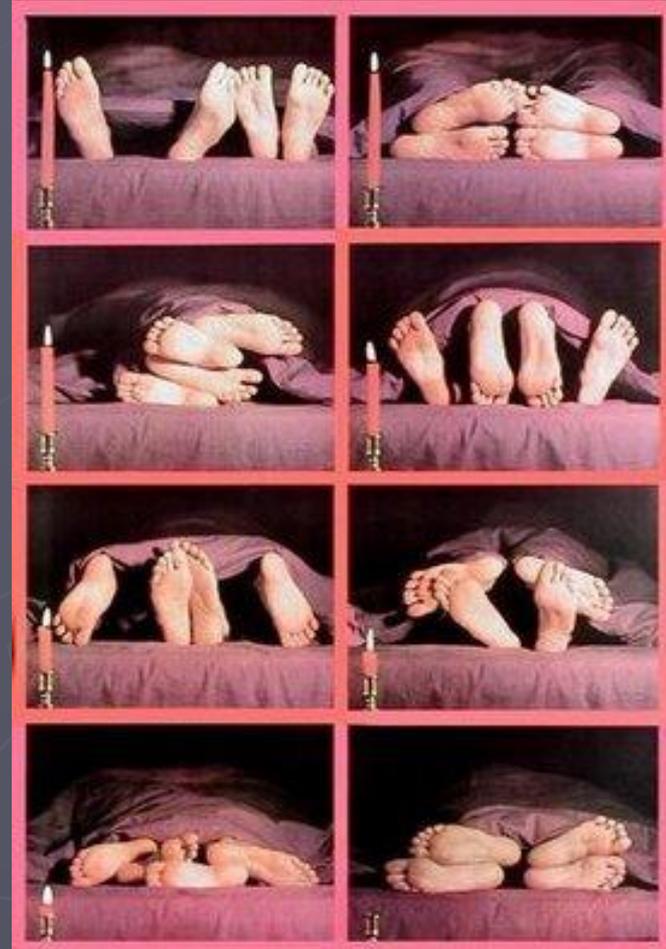
William H Masters, Virginia E Johnson, Human Sexual Responses. Toronto, New York: Bantam Books 1966



The goal and significance of sexuality in human being

Reproduction? Satisfaction?

Vaginal relaxation has a detrimental effect on sexual gratification because of the reduction of frictional forces that diminish sexual pleasure



Pelvic floor function is a multifactorial complex situation

blood perfusion

collagen

musculature

endocrinology

innervation

topography

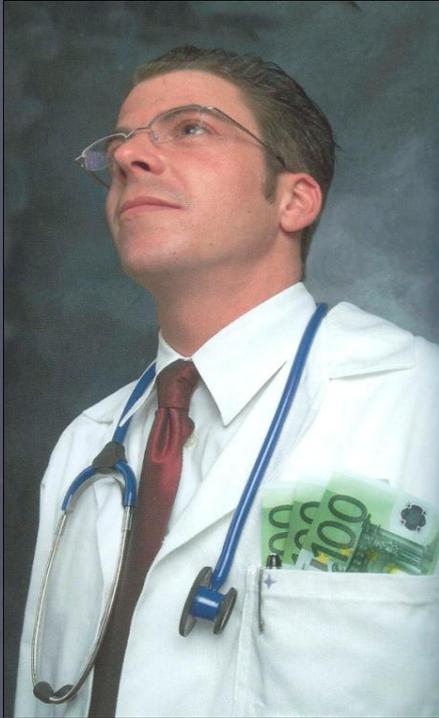
„Sometimes the surgeon is much more satisfied with his procedure than the patient ...

”

Oscar Witzel 1903

We have to talk about definitive colostomies, urinary diversions, complete loss of a functional vagina, severe infections, sepsis, necrotizing fasciitis ...





Young women with genital prolapse have a low collagen concentration

Acta Obstet Gynecol Scand 2004; 83: 1193-1198

MARIE WESTERGREN SÖDERBERG¹, CHRISTIAN FALCONER¹, BIRGITTA BYSTRÖM², ANDERS MALMSTRÖM³ AND GUNVOR EKMAN²

From the Karolinska Institute, Divisions of Obstetrics and Gynecology, ¹Danderyd Hospital, ²Karolinska Hospital, and ³Department of Cell & Molecular Biology, Lund University, Lund, Sweden

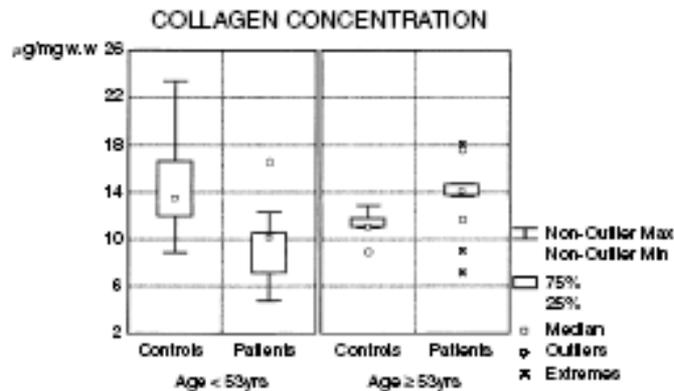
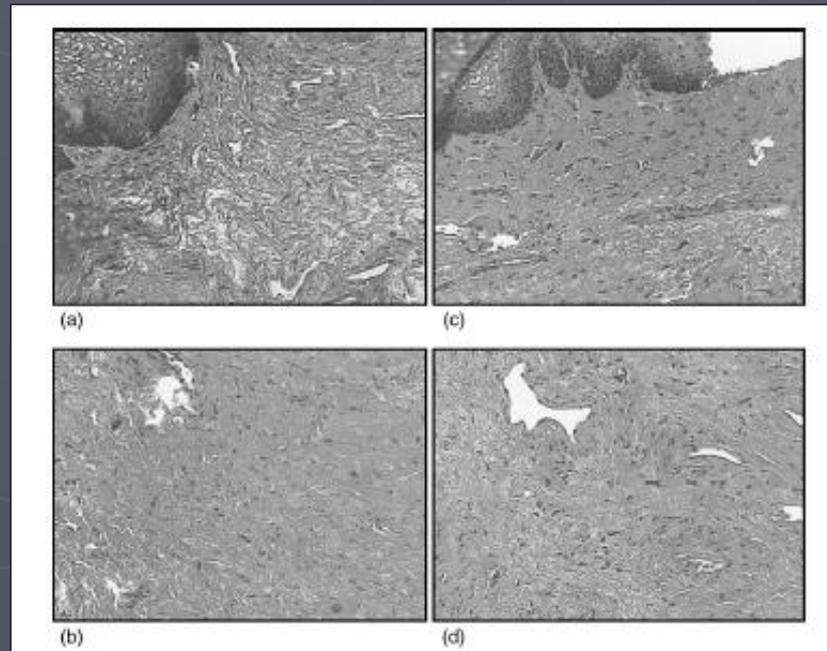


Fig. 2. Collagen concentration measured as microgram hydroxyproline per milligram wet weight from para-urethral connective tissue biopsies. To the left, results from nine women with genital prolapse and eight controls all younger than 53 years are shown. To the right, results from 13 women with genital prolapse and five controls from 53 years of age and older are shown. The collagen concentration is significantly lower, $P=0.01$, in biopsies from women with genital prolapse younger than 53 years compared with age-matched controls.



Professor Kåre Rodahl Norwegian School of Sport Sciences, A specialized university, Oslo



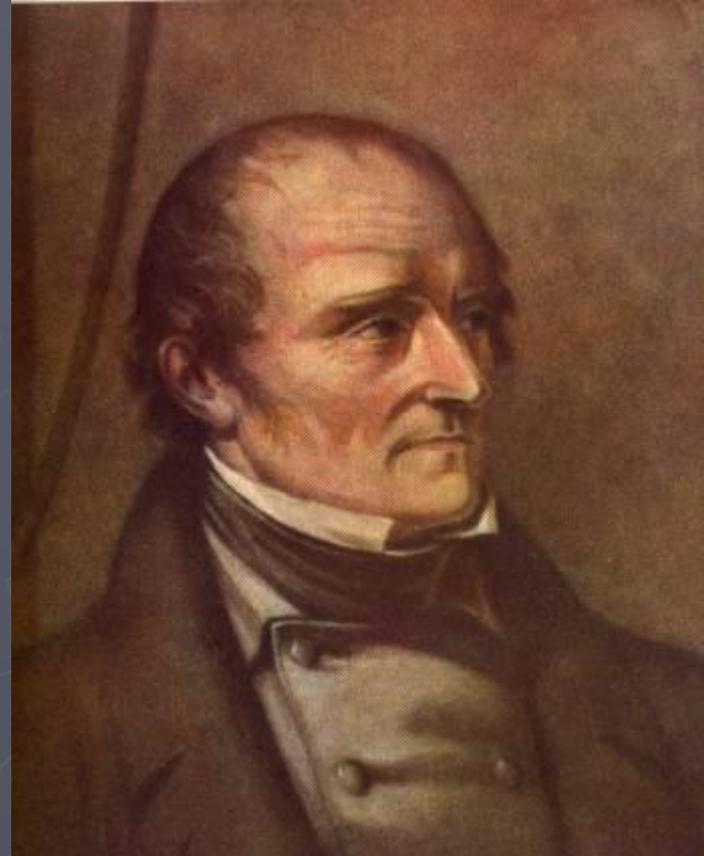
P-O Åstrand K
Rodahl

HA Dahl SB
Strømme

Textbook of Work
Physiology, 4th
ed. 2003

Per Henrik Ling, Lund, Sweden 1776-1839

- ▶ Military exercise
- ▶ Esthetic exercise
- ▶ Pedagogic exercise
- ▶ Therapeutic exercise
(Physical Therapy)



PHOTOTHERMAL NON-ABLATIVE TREATMENT ENABLES COLLAGEN SYNTHESIS

- Skin Research and Technology 2010; 16: 354–364 Printed in Singapore All rights reserved doi: 10.1111/j.1600-0846.2010.00441.x

Pulsed heat shocks enhance procollagen type I and procollagen type III expression in human dermal fibroblasts

S. D. Dams^{1,2}, M. de Liefde-van Beest¹, A. M. Nuijs², C. W. J. Oomens¹ and F. P. T. Baaijens¹

¹Eindhoven University of Technology, Eindhoven, the Netherlands, and ²Philips Research, High Tech Campus 34, Eindhoven, the Netherlands

Background: The formation of wrinkles is associated with degeneration of the collagen matrix. For regeneration of the matrix, fibroblasts need to be stimulated in producing new collagen.

Aims: In this study, the effect of short-pulsed heat shocks on gene expression of procollagen type I, procollagen type III, heat shock protein (hsp)27, hsp47 and hsp70 and on the expression of remodeling markers, procollagen type I carboxy-terminal peptide (P1P) and carboxy-terminal telopeptide of type I (ICTP), of human dermal fibroblasts *in vitro*, is investigated.

Materials and Methods: Temperatures of 45 °C and 60 °C were used for the heat shocks. The proliferation rates, viability and metabolic activity were measured directly after the pulsed heat shocks and quantitative PCR was performed at five different time points after the heat shocks. Enzyme Immuno Assays were performed to determine the concentrations of P1P and ICTP.

Results: A decreased proliferation rate of the 60 °C heat shocked cells was shown, whereas the viability and metabolic activity did not differ. Furthermore, gene expressions were upregulated in both 45 °C and 60 °C heat-shocked cells. However, remodeling marker analyses showed a larger amount of collagen produced by 60 °C heat-shocked cells.

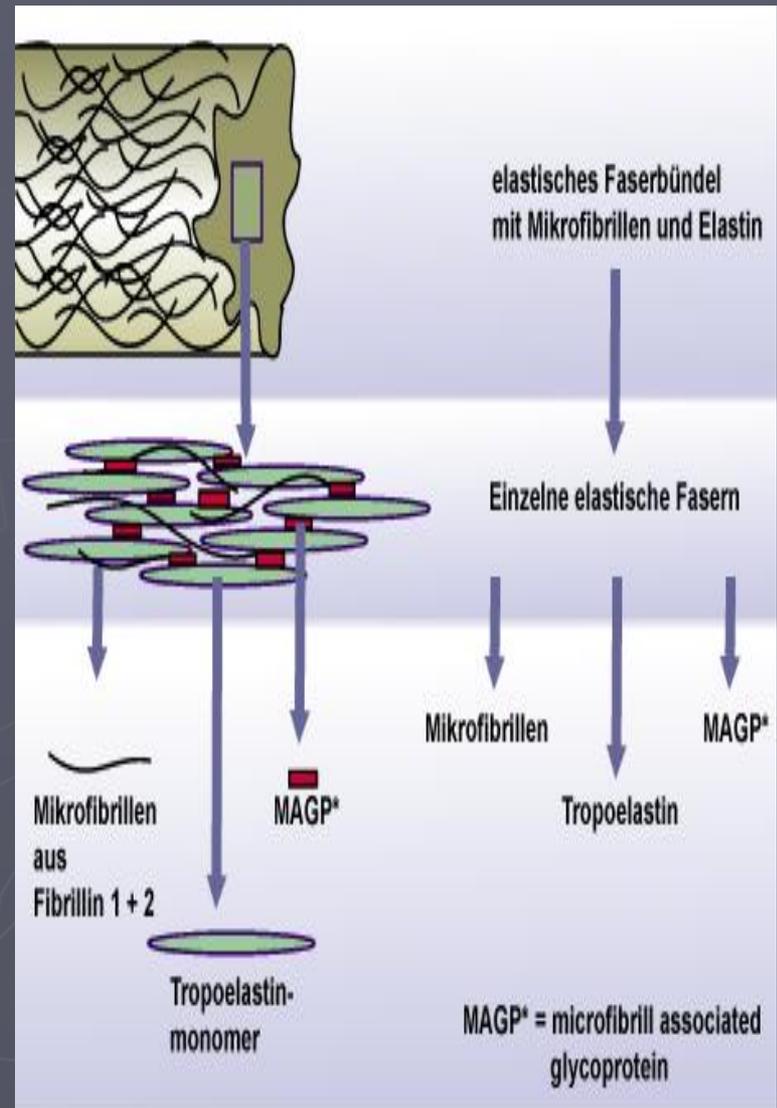
Conclusion: It can be concluded that these findings, together with upregulation in gene expression, show that it is possible to stimulate the cells to produce more collagen with short-pulsed heat shocks.

Key words: human dermal fibroblast – gene expression – procollagen – heat shock protein – rejuvenation

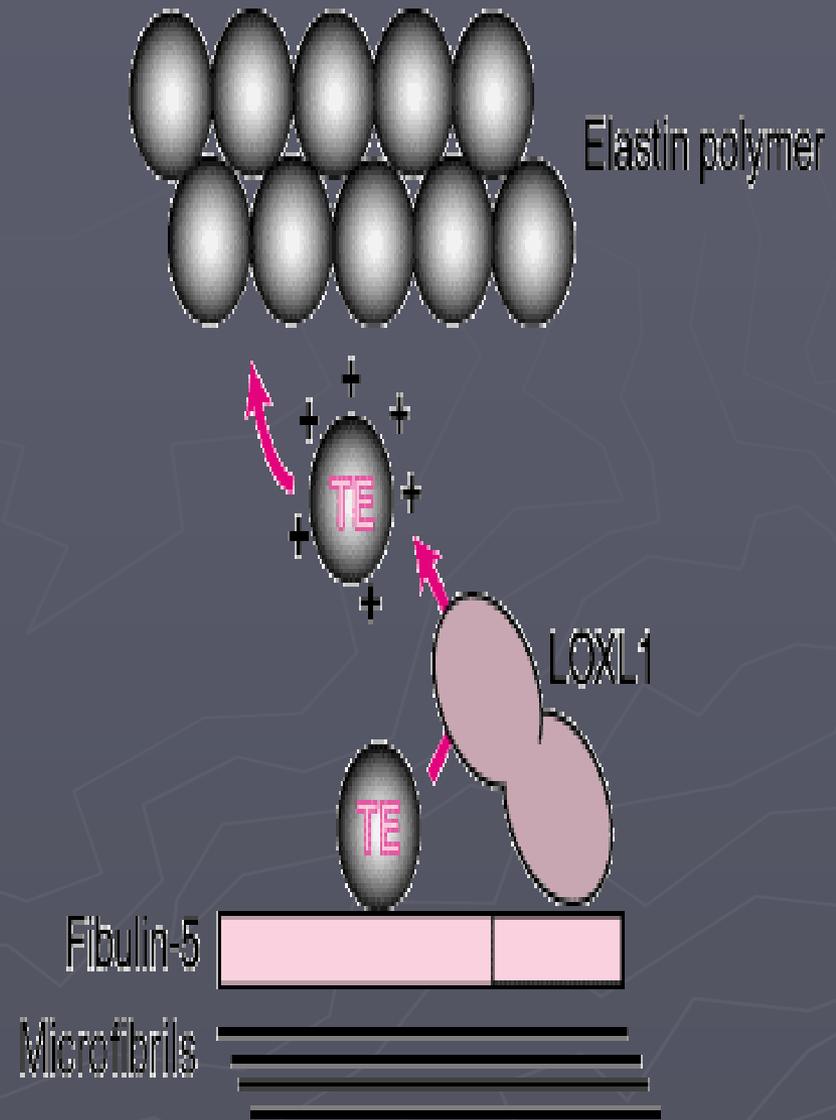
& 2010 John Wiley & Sons A/S

Accepted for publication 23 January 2010

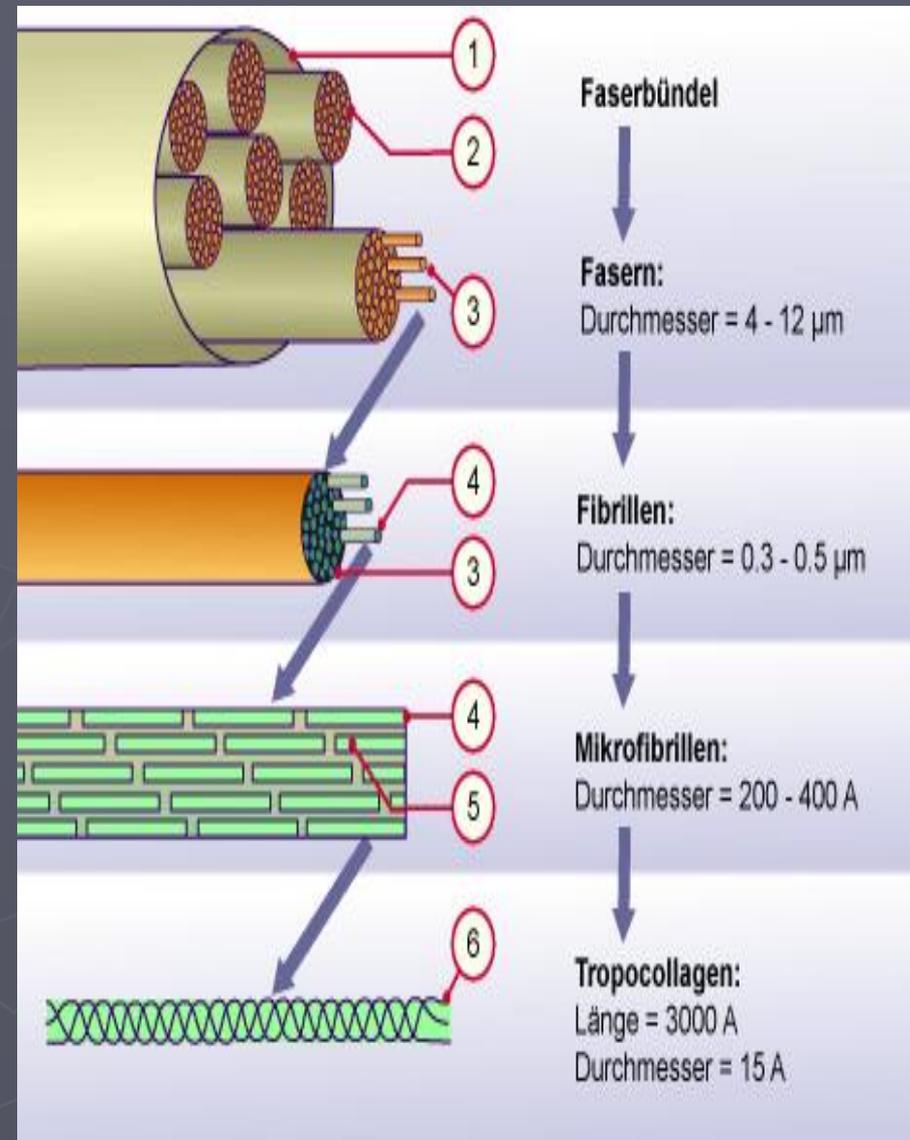
- ▶ Elasticity of all structures in human being is due to collagen and elastin
- ▶ 80% of them are proteins
- ▶ Collagenesis is diminishing through ageing process of any human being

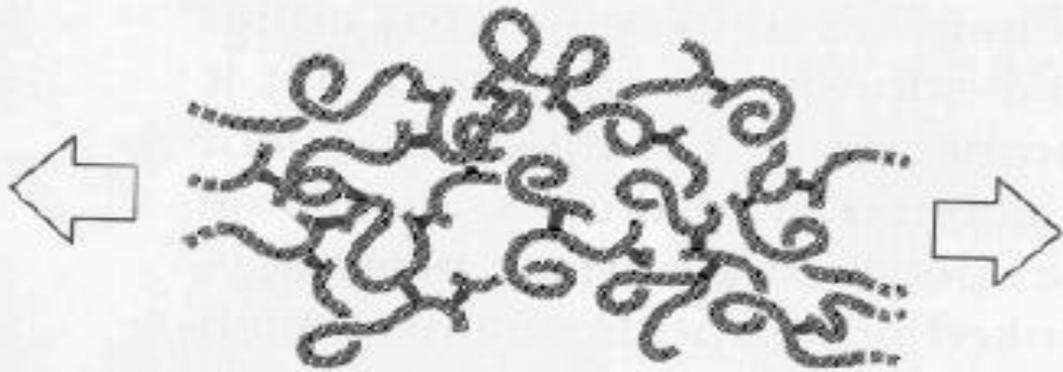


- ▶ Collagen is a specific glycoprotein synthesised in the fibroblasts.
- ▶ Hardness of collagen is due to extracellular enzyme lysyl-oxidase, which enables connections between aldehyde elements from hydroxylysine.

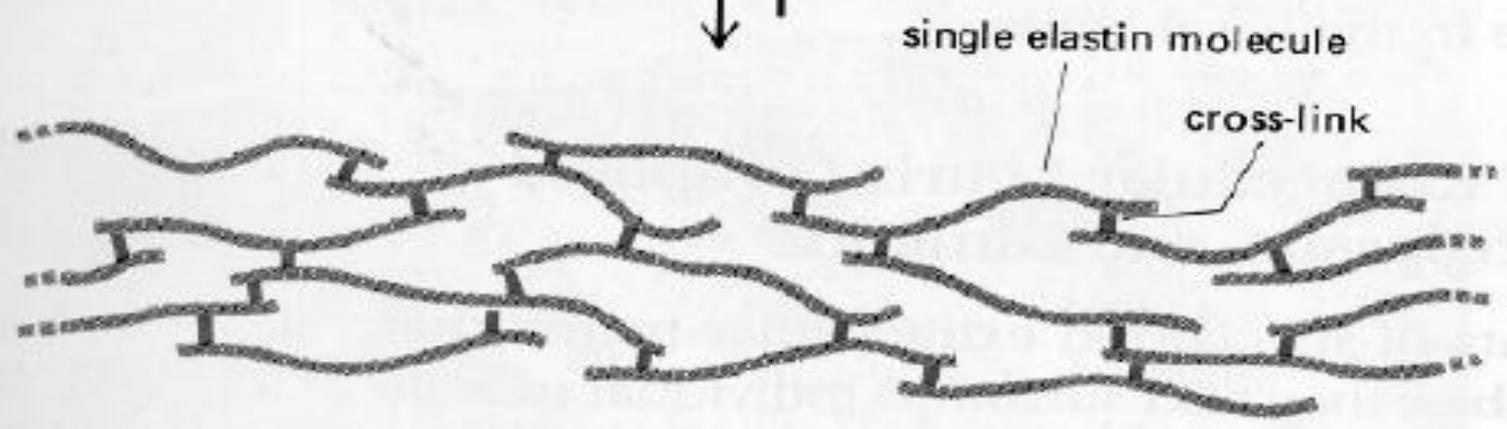


- ▶ Each fibre consists of fibrils, thickness 0,3 - 0,5 μm , conected with specific mucopolisaharids.
- ▶ Fibriles consists of micro fibriles (protofibriles), which present agregates of molecules of tropocollagen.
- ▶ Molecule of tropocollagen (basic unit of collagen fibriles is long 3000 Å and wide 15-20 Å).





stretch
↓
↑
relax



SYSTEMIC COLLAGEN DEFICIENCY

- ↑ Weaker type III collagen in the fascia Norton P, 1999
- ↓ Collagen content of the pubocervical fascia Rechberger T, 1999
- ↓ Cervical collagen (nonsupport collagen) Wong MY, 2003
- ↑ Collagenase activity resulting in increased collagen breakdown relative to normal
James V, 1999

THE PERFECT VAGINA ?

What many women are worrying in connection with their vaginas?

External Look : Shape , Hairiness, Color, Smell

Size: Externally (of labias, of mons pubis)

Size: Internally: too loose? too tight?



THE PERFECT VAGINA ?

CULTURE, HEALTH & SEXUALITY, 2001, VOL. 3, NO. 3, 263-277



The perfectible vagina: size matters

VIRGINIA BRAUN and CELIA KITZINGER

With the construction of women's genitals as problematic, the 'private' female body becomes a site for potential improvement. Socio-cultural accounts of vaginal size in the West construct a tight (but not too tight) vagina as desirable, and a 'loose' vagina as undesirable. The importance of size is evident in contexts as diverse as slang, comedy, and surgical practices to tighten the vagina. After identifying the desirability of tightness, we analyse talk collected from women in individual and group interviews, and in undergraduate tutorials on intersex. In women's talk, we found a curious pattern: women identified the cultural desirability of a tight vagina, and noted negative uses to which this is put (such as the positioning of women with 'loose' vaginas as promiscuous). However, when women described their personal concerns about vaginal size, these were couched in terms of anxiety about being too tight. We argue that constructions of vaginal size are problematic because they create another site of bodily concern for women, and are used to control and abuse women. We suggest that they also reflect a disregard of women's sexual pleasure, and a lack of familiarity with the functions of the vagina.

the f word

CONTEMPORARY UK FEMINISM

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http://www.thefword.org.uk/features/2007/07/vagina_institute

'Honey! Your vagina needs a mint'

The Vagina Institute purports to provide a public service to curious women. But Samara Ginsberg detects a rather different agenda

Samara Ginsberg, 7 July 2007

How does your vagina compare to those of other women? Have you ever thought about it? Is it too big? Too hairy? Too ugly? Too smelly? Too loose? Well, you

http://www.hawaii.edu/hivandaids/The_Perfectible_Vagina_Size_Matters.pdf



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Human Female Evolution

EVOLUTION

From the dawn of time, human females have been evolving and changing with the passage of time. It is time to explore the female gender and what she brings to the world.



EVOLUTION: THE HUMAN FEMALE

Quick Access

- [VAGINA SIZE](#)
- [CLITORIS SIZE](#)
- [LABIA SIZE](#)
- [VAGINA SLIT](#)
- [CLIT HOOD](#)
- [PUBIC HAIR](#)
- [VAGINAL ODOR](#)
- [EMBARASSING](#)
- [WHAT MEN WANT](#)
- [INSECURITIES](#)
- [ODDITIES](#)
- [DESIGNER VAGINA](#)

What Do You Think Of Your Vagina?



FEMALE KNOWLEDGE
Surveys for women
The following surveys are for women, to explore one's body and to understand...

Select a link

What Do You Prefer From Vaginas?



MALE KNOWLEDGE
Surveys for men
The following surveys are for men, let women know what men prefer and want...

Select a link



GENITAL SIZE, AN ORGAN HIDDEN IN MYSTERY



Does size matter, female genitalia have far too long been shrouded in mystery, until now. Learn about all aspects of size from the vaginal canal to the lips of the vagina.

GENITAL APPEARANCE, THE UGLY VS. PRETTY



In real life we know that some female genitalia are pretty and some are not. A woman's genes that will determine the attractiveness of her genitalia.

WHAT TYPE OF VAGINAS DO MEN PREFER?



Very seldom do we hear men's opinion about their preference towards female genitalia due to taboos, so what do they really want when it comes to vaginas?

VAGINAL ODORS, SCENTS & SMELLS



Worried about the odor that your vagina is emitting? Do you know what women are doing to control their vaginal odors? Don't get caught with something fishy down under!

Media Content



Photographic Vaginas
Explore a world of vaginas, and see the variations that female genitalia have in size and shape.



Videos of Vaginas
See various stages in female sexuality from orgasm to coitus and how the vaginas functions.



Aesthetic Gynecology



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Aesthetic Gynecology

ABAGyn Recognized Nomenclature



The following is the list of standardized nomenclature recognized by ABAGyn. ABAGyn Fellows should use these terms, as defined, in describing physical findings and procedures related to aesthetic gynecology.

Condition: Symmetric Multiparous Vault (SMV)

Pronunciation: [sim-et-trick mul-tip-are-us-valt]

Description: This is a normal condition. Women who have delivered a child vaginally or undergone the labor process typically have a larger vagina than women who have not delivered vaginally or undergone labor. A vagina (vault) that is larger, but maintains the same shape as the vagina typically found in women whom have not labored or delivered vaginally, is described as a Symmetric Multiparous Vault. The Multiparous Vault state is more common than the nulliparous vault state. SMV is often associated with Vaginal Relaxation Syndrome.

Treatment: This condition is only treated when associated with Vaginal Relaxation Syndrome. When associated with Vaginal Relaxation Syndrome, it is treated with a surgical technique known as vaginal rejuvenation or restoration. This surgery is typically performed with a laser and the use of suture material should be kept to a minimum. The goal of the surgery is to decrease the size of the vagina and recreate the normal shape of the vagina often lost with childbirth and aging. It may take as long as three months following completion of the surgery for full reduction and reshaping to occur. This is because, in a successful rejuvenation procedure, new collagen continues to be deposited by the body's cells for months after the surgery.



Vaginal Relaxation Syndrome: slov.: sindrom ohlapne vagine



AESTHETIC VAGINAL SURGERY

36.75 AMA PRA Category1 Credits™

Maximum of 4 attendees per workshop to assure adequate hands-on opportunity for all attendees

Vaginal rejuvenation is a marketing term referring to vaginoplasty, or the surgical tightening of the vaginal canal. Birth trauma, tissue stretching, and improper surgical healing are the usual reasons for requesting vaginal rejuvenation. Surgery usually entails a modification of a standard gynecologic procedure called "posterior repair" along with rebuilding of the perineum (the space between the vagina and rectum). This procedure was traditionally performed for a fallen or prolapsed rectum, or rectocele. A rectocele is a bulge of rectum going into the vagina. A similar appearing vaginal bulge is an enterocele. It is a bulge of small bowel going into the vagina. Gynecologists and urogynecologists have the most training performing these types of surgery. Lasers, scissors, cautery units, knives are used in surgery. Excellent results have been achieved by all these methods.

The didactic portion along with the clinical hands-on exposure will allow attendees to gain a comprehensive understanding of the procedure. The format used in this activity is an effective method for knowledgeable OB/Gyn physicians to expand their surgical abilities safely.

Learning Objectives:

At the conclusion of the CME activity, participants should be able to:

1. Review the history of vaginal rejuvenation.
2. Discuss the terminology and anatomy of aesthetic vaginal surgery.
3. Describe technologies available for vaginal rejuvenation surgeries.

BASIC COURSES OFFERED

AWAKE Tumescant Liposuction
Laser Liposuction
Botulinum Toxin
Dermal Fillers
Silhouette Lift
Venous Procedures

ADVANCED COURSES OFFERED

Large Volume Fat Grafting
Facial Fat Grafting
AWAKE Breast Augmentation
AWAKE Abdominoplasty
Liposculpture With Abdominoplasty
Aesthetic Vaginal Surgery

SOLUTIONS: LASER THERAPY?

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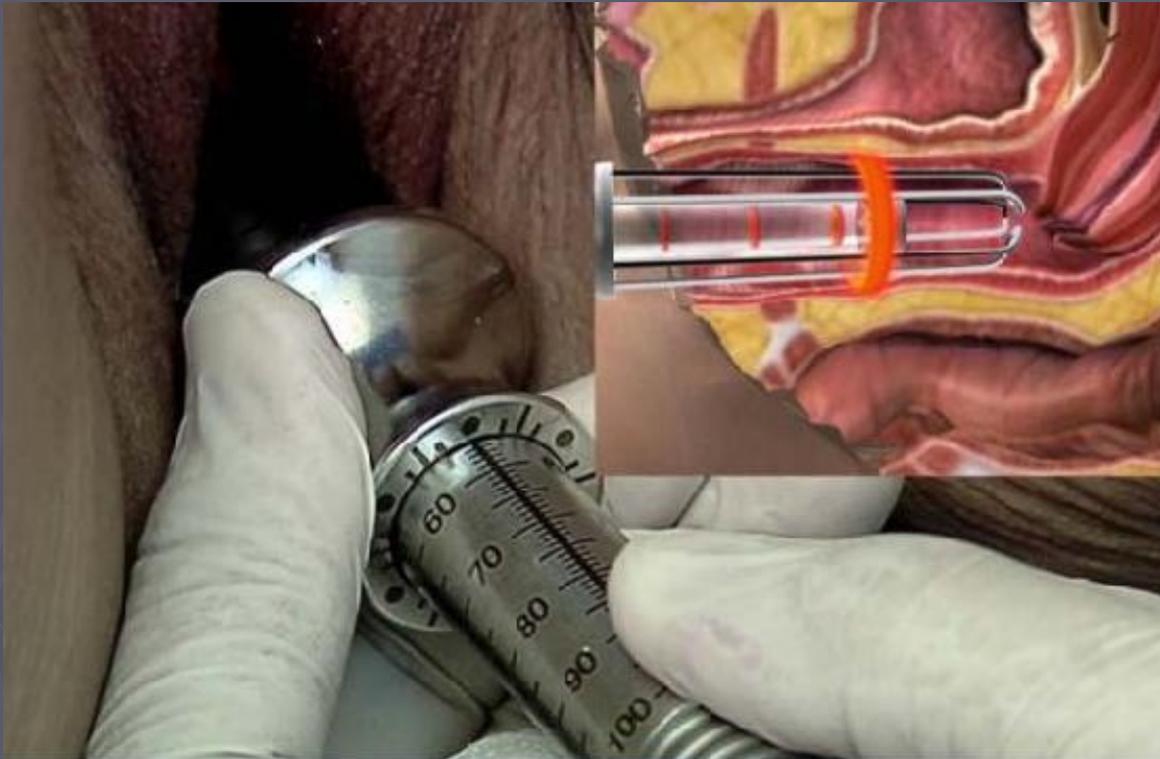
[more >](#)

[Laser & Health >](#)

This website presents an overview of how lasers are successfully applied in many medical fields and how laser therapy can help you.

[more >](#)

RenovaLase® - Laser Treatment for Vaginal Tightening



- 2940 nm Er:YAG laser (Fotona, XS Dynamis, Slovenia)
- 360° delivery system for simultaneous irradiation of the whole vaginal wall
- tissue rejuvenation with non-ablative photo-thermal effect
- 3 laser sessions

Laser Vaginal Tightening (LVT)

Gyno Adapter Set R 11 (full field)



Full field handpiece with circular adaptor is used to perform the irradiation of full circumference of the vaginal canal. For easier access laser speculum is used. It serves as a guide for handpiece, allowing it to easily glide along the vaginal canal without touching it.

Laser Vaginal Tightening (LVT)

Gyno Adapter Set

PS 03 (pixeled beam)



In second phase of LVT procedure
Pixelated non-ablative SMOOTH
mode laser irradiation is delivered
To the mucosa of vestibule and introitus



Non-ablative Er:YAG for Controlled Tissue Heating



SPECULUMS

Speculums Range:

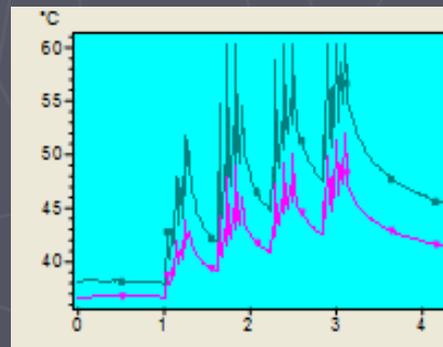
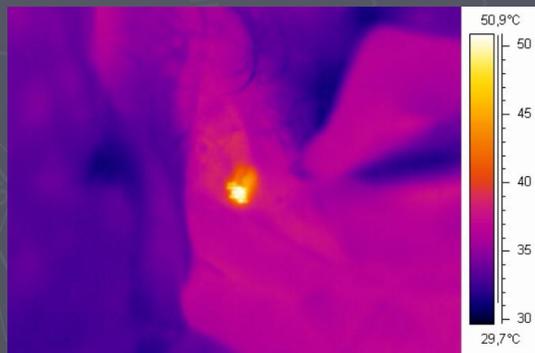
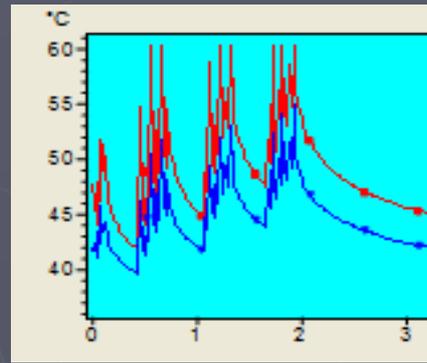
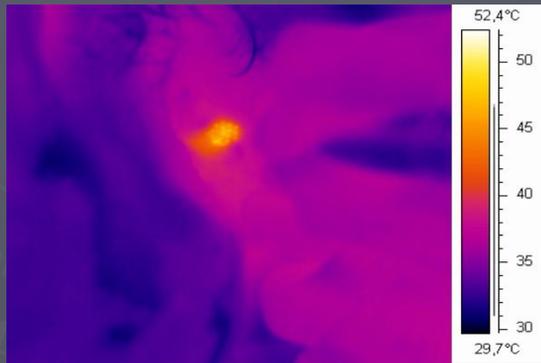
- Standard
- Slim
- Slim long (SL)
- MClear (multiple use)
- SClear (single use)



Temperature provoked by laser beam in humid environment stimulates neocollagenesis. Laser photoimpulses destruct intermolecular connections and though stabilizes collagen triple-helix structure consecutively shortening the collagen fibriles.

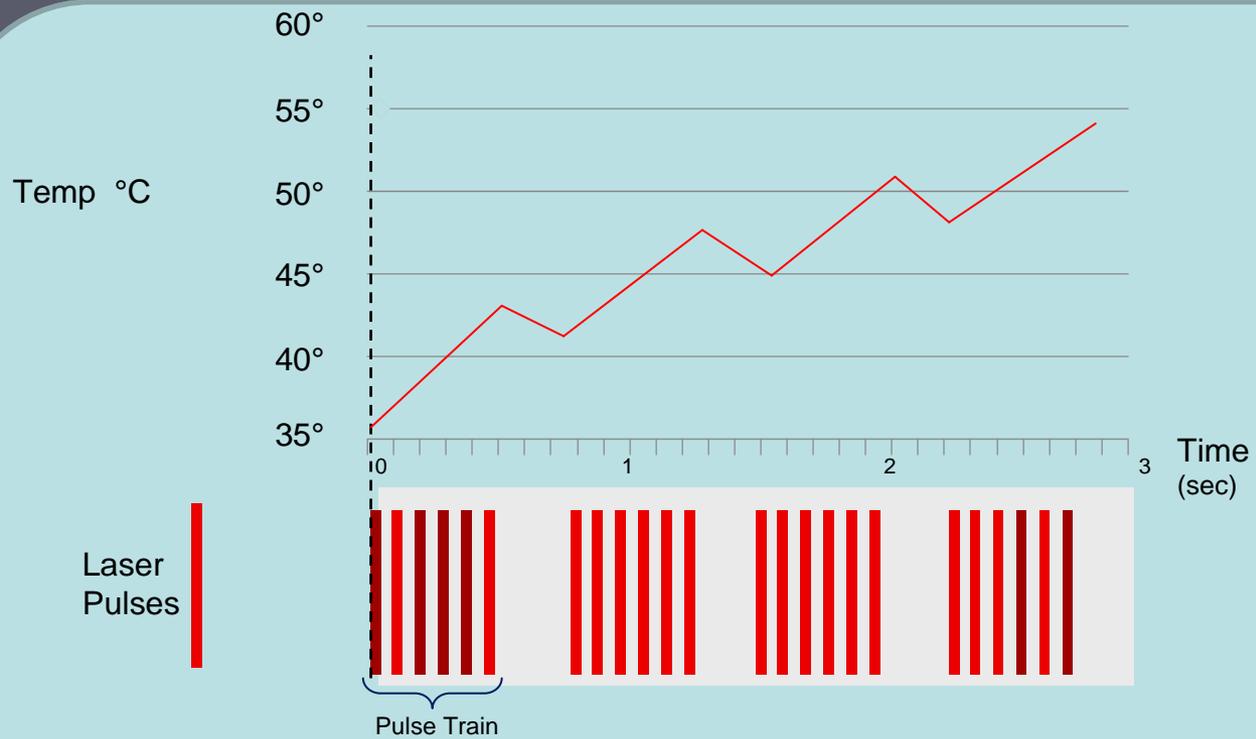
Photothermal effect of laser beam acts on mucous tissues provoking its shrinkage **without removal of the tissue**

To achieve this goal :to shorten the collagen fibriles and to keep the former structure without any destruction of the collagen matrix the temperature must vary from 61 to 63 degree centigrade.



Painless !

Non-ablative Er:YAG for Controlled Tissue Heating

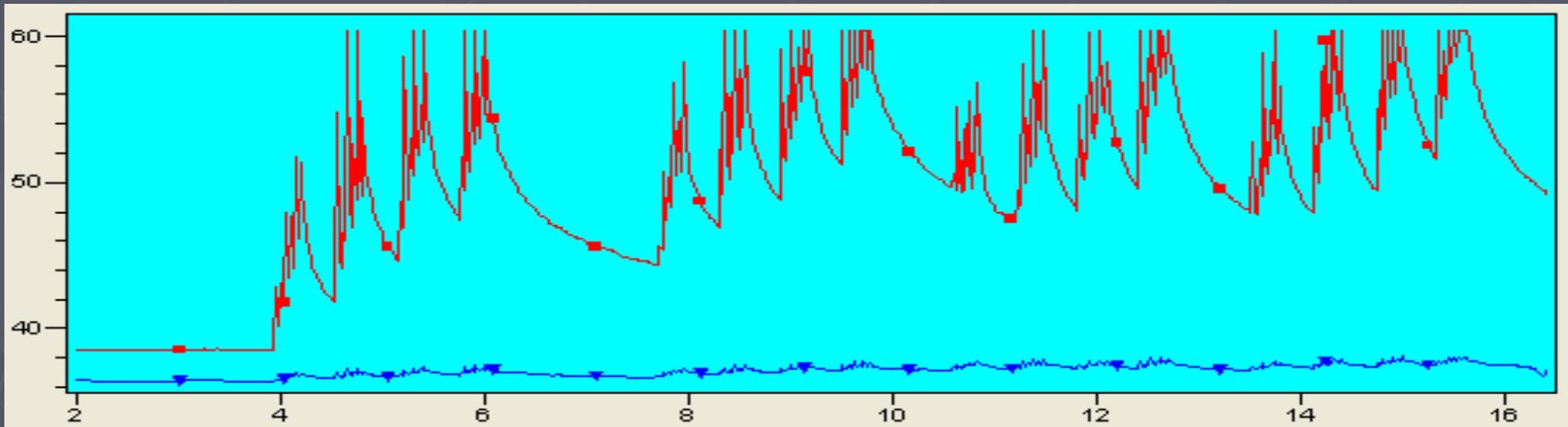


Non-ablative Er:YAG for Controlled Tissue Heating

Using the proper dosage of non-ablative ErYAG the temperature in mucosa reaches

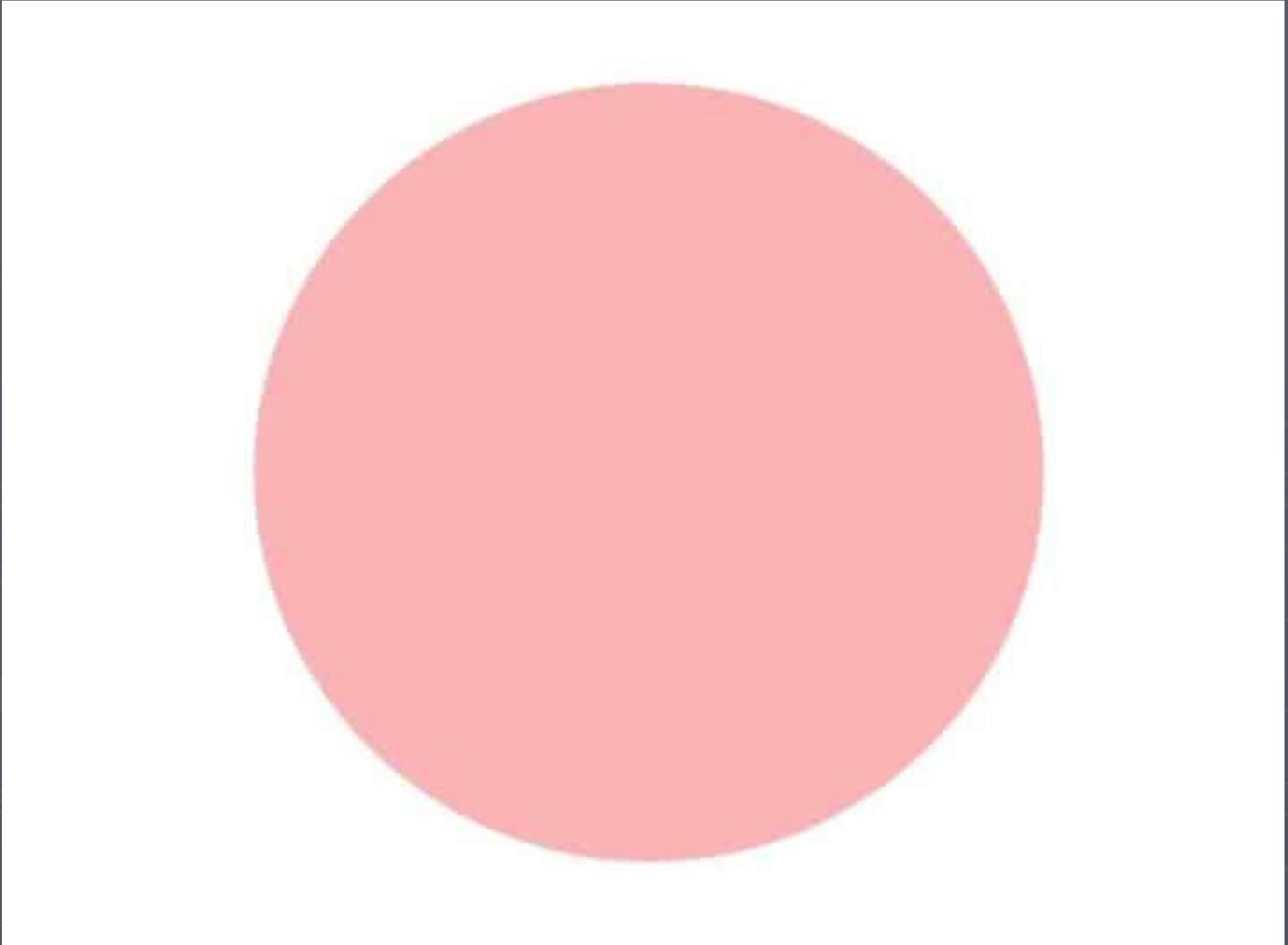
60° C to 63° C

This is the optimal temperature for the process of shortening the collagen fibers and neocollagenesis [1]



- 1) Dams SD, de Liefde-van Beest M, Nuijs AM, Oomens CW, Baaijens FP : Pulsed heat shocks enhance procollagen type I and procollagen type III expression in human dermal fibroblasts, Skin Res Technol. 2010 Aug;16(3):354-64

Non-ablative Er:YAG for Controlled Tissue Heating

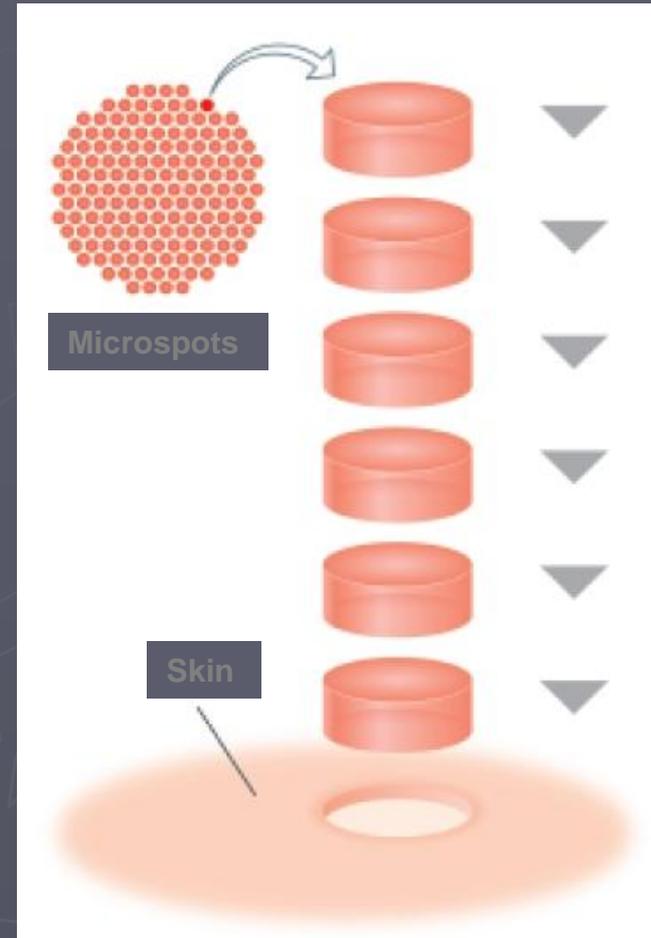


Non-ablative Er:YAG for Controlled Tissue Heating

Non-ablative (Smooth) Er:YAG

Train of sub-ablative micro pulses with precisely defined pauses for adequate cooling of the tissue surface

Both options are used in procedures:
Full-field and Fractionated laser beams

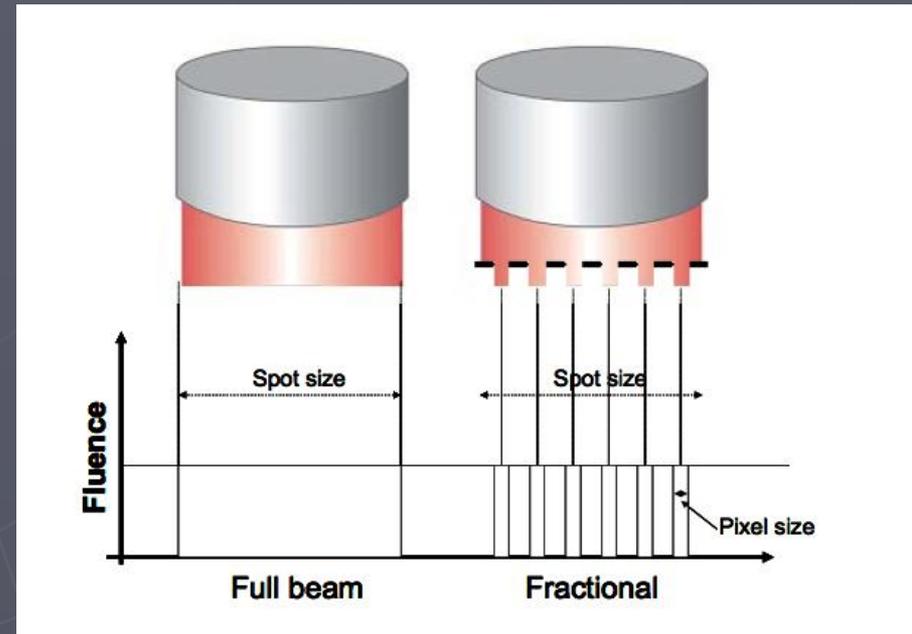


ErYAG laser Pixel Screen technology

Create smaller beam dots
on the mucosa tissue

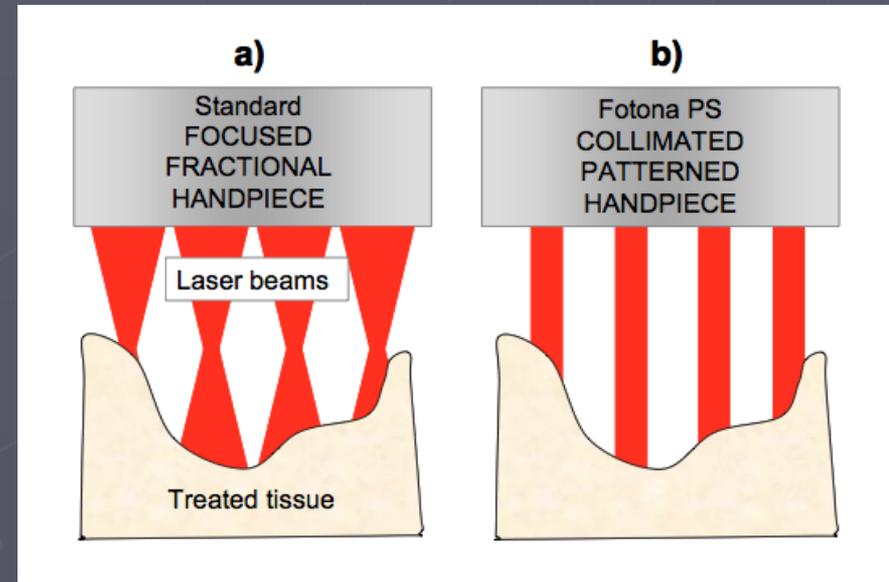
The full beam is divided
into smaller beams by
a special pixel screen.

Healthy untouched spots
around the heated tissue
enable fast immune
response and healing process



ErYAG Laser Pixel Screen technology

Enables that the beam spot size does not depend on the distance between the treated tissue surface and the emitting handpiece. Important when treating irregularly shaped surface of body cavities where the treated surface is not flat.



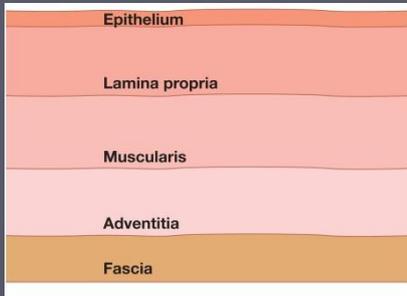
Laser Vaginal Tightening (LVT)

LVT Advantages:

- Ambulatory procedure
- Minimally invasive (no cutting, no bleeding, no ablation)
- Virtually painless, no anesthesia needed
- No special pre or post-op preparation
- No consumables
- Quick and easy procedure: 30-45 minutes
- High success rate

Mechanism of Action

Before



Vaginal wall structure

Irradiation

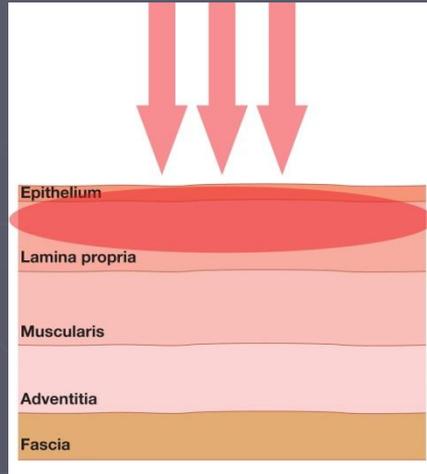
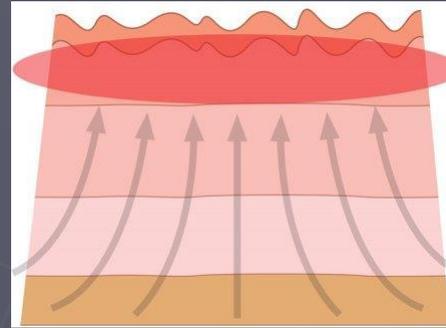
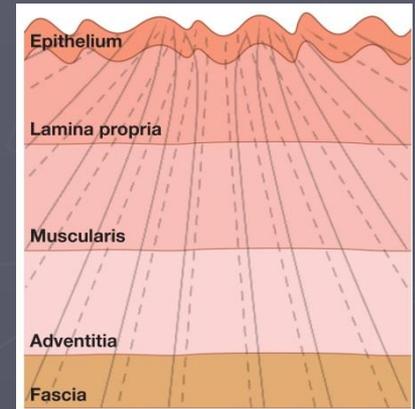


Photo-thermal effect



Thermal shrinkage of top layers and mechanical pull of deeper structures

After



Shrunk and thicker wall after neo-collagenesis

Courtesy of Juna Clinic



M. Rivera measured an average shrinking of vaginal canal of 12 mm (or 17%)

A.A. Bezmenko measured an average thickening of vaginal wall of 1.5 mm (or 56%)



Courtesy of Juna Clinic

Conservative ways of urinary stress incontinence treatment

Abstract. We present a survey of conservative ways of urinary stress incontinence treatment (behavioral therapy, pelvic floor exercises, etc.)

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Journal of Russian Military Medical Academy



Министерство обороны Российской Федерации

Федеральное государственное бюджетное военное образовательное учреждение высшего профессионального образования

ВОЕННО-МЕДИЦИНСКАЯ АКАДЕМИЯ ИМЕНИ С. М. КИРОВА

МИНИСТЕРСТВА ОБОРОНЫ РОССИЙСКОЙ ФЕДЕРАЦИИ

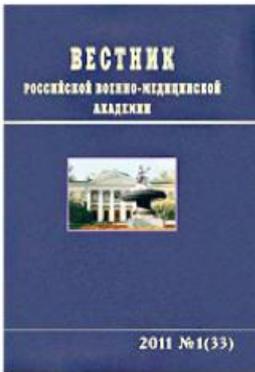
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Вестник Российской военно-медицинской академии



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- 2013
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денатурация коллагена, Er:YAG-лазер, IncontiLase.

Laser Vaginal Tightening (LVT)

August 2010

Rejuvenecimiento vaginal con láser

La ciencia y la tecnología avanzan a pasos gigantes y cada día se desarrollan equipos láser que nos permiten realizar procedimientos cada vez menos invasivos y con resultados altamente efectivos.

El Doctor **Luciano Gutiérrez Paz**, médico ginecólogo, obstetra y perinatólogo y el Doctor **Johnny De La Riva Salinas**, médico cirujano dermatólogo estético, son los pioneros en traer esta tecnología a la ciudad de La Paz.



Dr. Luciano Gutiérrez Paz



Dr. Johnny De La Riva Salinas



Láser ginecológico erbio - yag

Por lo general, mujeres después de sus embarazos y partos experimentan cambios a nivel de la región vaginal, donde los músculos se distienden, perdiendo su capacidad vital, y esto provoca un trastorno funcional en la vida sexual de la mujer.

El rejuvenecimiento vaginal con láser es una de las técnicas que está revolucionando la intimidad femenina, consiste en realizar disparos con un láser ginecológico de erbio yag en el interior de la vagina con la finalidad de producir tensión, aumento del tono muscular y generar la producción de colágeno nuevo a este nivel.



“Las pacientes que sufren de pérdida involuntaria de orina al toser, estornudar, reír, hacer ejercicio o al tener relaciones sexuales, pueden corregir su incontinencia urinaria y al mismo tiempo mejorar su placer sexual!”

¿Cómo se realiza el rejuvenecimiento vaginal con láser?

Es un procedimiento mínimamente invasivo, ambulatorio que no necesita anestesia, es indoloro y dura aproximadamente entre 15 a 20 minutos, utilizamos un espéculo, que nos permite acceder a la cavidad vaginal y realizamos los disparos con el láser ginecológico erbio yag.

¿Cuántas sesiones son necesarias para obtener buenos resultados?

Por lo general se realiza entre 2 a 3 sesiones, dependiendo de cada paciente con un intervalo de 30 días, previa valoración ginecológica completa.

¿Qué tratamientos se realizan con el láser ginecológico erbio yag?

- Rejuvenecimiento vaginal.
- Incontinencia Urinaria.
- Exeresis de pólipos, quistes y condilomas.
- Remodelación estética de genitales externos.
- Lipolaser de la región del pubis.

¿Cuál es el costo del tratamiento?

El costo varía de acuerdo a las sesiones que se requiera, con un promedio entre \$us 1000 a 2000v

Edificio Iturri, Calle Campos No. 334, esq. Av. 6 de Agosto, Apt. 2º
Telf.: 2432671 - 2433370
centrovidalpz@gmail.com



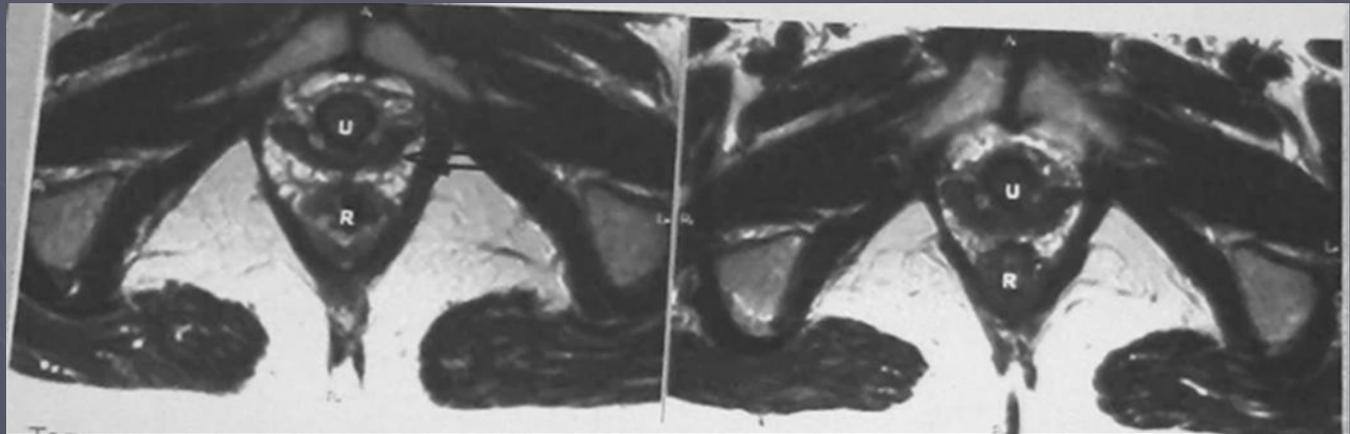
The first therapy presentation in media in Latin America

INCONTINENCE CLINICAL STUDIES

- MRI of vaginal wall

Courtesy of A.A. Bezmenko

Significant increase of vaginal wall thickness showing overall improvement in vaginal firmness



Before

Vaginal wall thickness was estimated to be 2-4 mm

After

Thickness in the range of 5-6 mm was measured

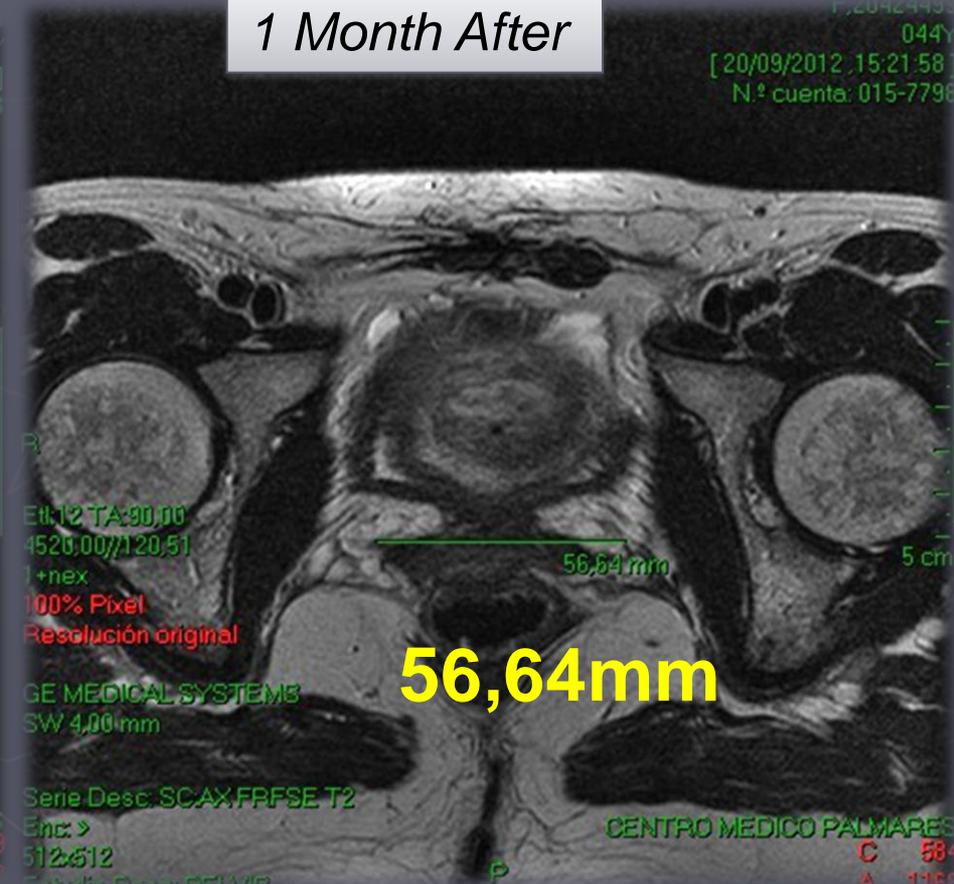
Laser treatment of Vaginal Relaxation Syndrome

MRI

Before



1 Month After



Courtesy of Dr. Gaspar

Laser treatment of Vaginal Relaxation Syndrome

ISSN 1855-9913

Journal of the Laser and Health Academy
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Laser Vaginal Tightening (LVT) – evaluation of a novel noninvasive laser treatment for vaginal relaxation syndrome

Jorge E. Gaviria P, Jose A. Lanz L
Aldana Laser Center, Caracas, Venezuela

ABSTRACT

The objective of this study was to evaluate the safety and efficacy of a novel laser treatment for vaginal relaxation syndrome.

Method: A pilot study was conducted on 21 patients who received the novel laser treatment (IntimaLase) for vaginal tightening with a 2940 nm Er:YAG laser between June 2011 and January 2012. All patients received two treatment sessions with an interval between sessions of 15 to 30 days. In a non-ablative, thermal-only mode, laser energies of approx. 90 J per treated area in the vaginal canal and of approx. 10 J per treated area at the vestibule and introitus were delivered to the patient's vaginal mucosa. A special Laser Vaginal Tightening (LVT) questionnaire was

Key words: vaginal relaxation syndrome, laser treatment, Er:YAG laser, collagen remodeling and synthesis

*Article: J. LAHA, Vol. 2012, No.1; pp. 32-39.
Received: April 13, 2012; Accepted: May 04, 2012.*

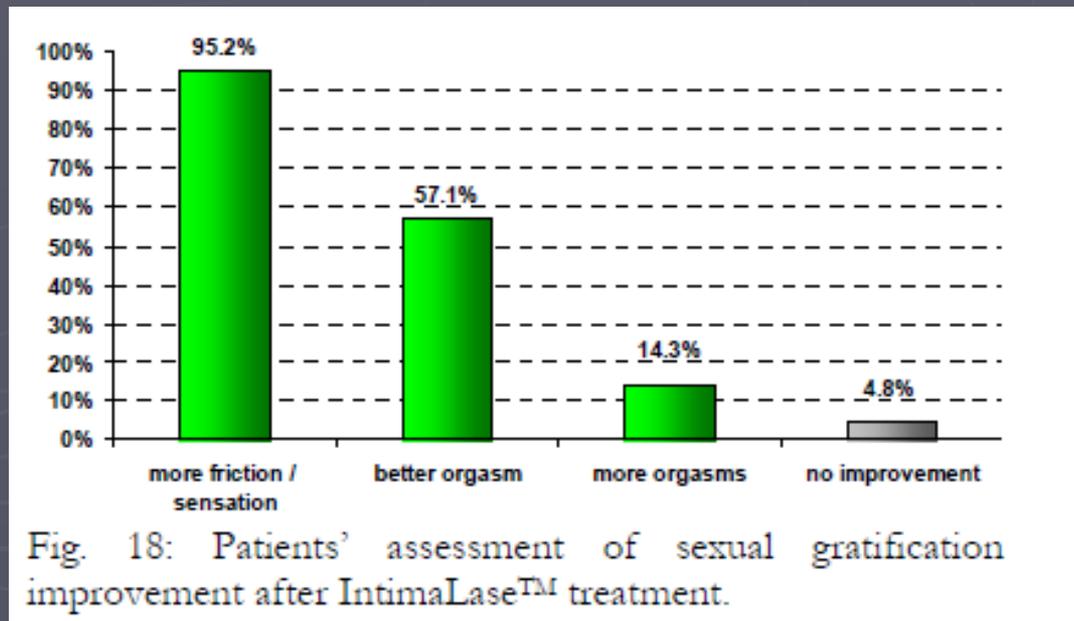
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I. INTRODUCTION

Vaginal Relaxation Syndrome (VRS) is a quite common medical condition described as a loss of the optimal vaginal structure and is usually associated with vaginal child delivery and natural ageing. Multiple

LASER TREATMENT OF VAGINAL RELAXATION SYNDROME

95% of patients declared improved sexual gratification after IntimaLase treatment



(Dr. Gaviria)



Inclusion criteria

- ▶ History of stress urinary incontinence
- ▶ Premenopausal status
- ▶ History of vaginal delivery

Exclusion criteria

- ▶ Descensus >1st degree (anterior, apical, posterior (sec. POP-Q))
- ▶ Interstitial cystitis or PASM
- ▶ Radiotherapy in pelvic floor region
- ▶ Infections
- ▶ Women who refuse the participation in the study

Randomisation

120 patients

Laser therapy

„Sham“ laser therapy



LASER THERMOTHERAPY IN PELVIC FLOOR DYSFUNCTION RANDOMISED PLACEBO CONTROLLED STUDY

APPROVAL OF NATIONAL MEDICAL ETHICS COMMITTEE

21st August 2012

INCLUSION CRITERIA

- ▶ History of stress urinary incontinence
- ▶ Age over 18 years
- ▶ Predmenopausal status
- ▶ Written patient's approval
- ▶ History of vaginal delivery



LASER THERMOTHERAPY IN PELVIC FLOOR DYSFUNCTION RANDOMISED PLACEBO CONTROLLED STUDY

APPROVAL OF NATIONAL MEDICAL ETHICS COMMITTEE

EXCLUSION CRITERIA

- ▶ Descensus >1st degree (anterior, apical, posterior (sec. POP-Q))
- ▶ Interstitial cystitis or overactive bladder
- ▶ Radiotherapy in pelvic floor region



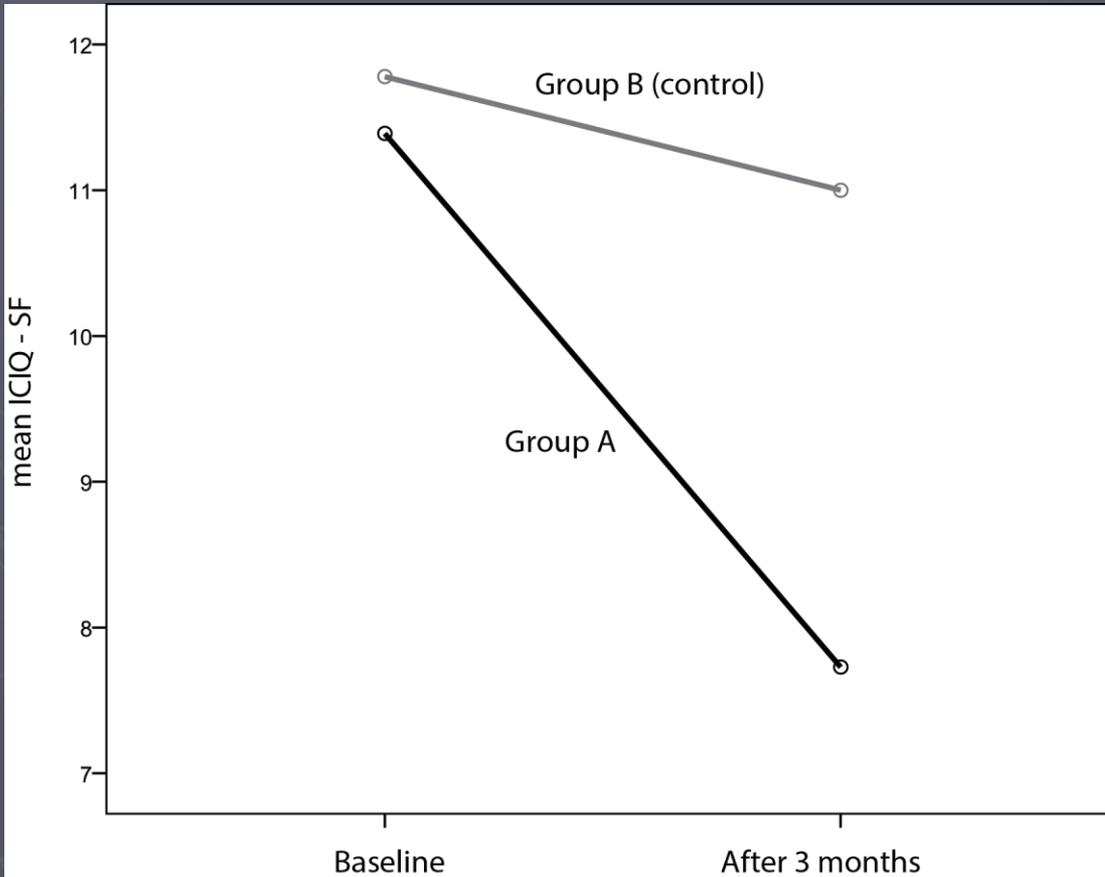
Evaluation at inclusion and 3 months later

QUESTIONNAIRES

1. Questionnaire for self evaluation of the impact of UI on sexual function: **PISQ-12** (Pelvic Organ prolapse/Urinary Incontinence Sexual Function Questionnaire).
2. Questionnaire for self evaluation of severity of urinary incontinence: **ICIQ-UI SF** (International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form).
3. Questionnaire for self evaluation of female sexual function: **FSFI** (Female Sexual Function Index). \

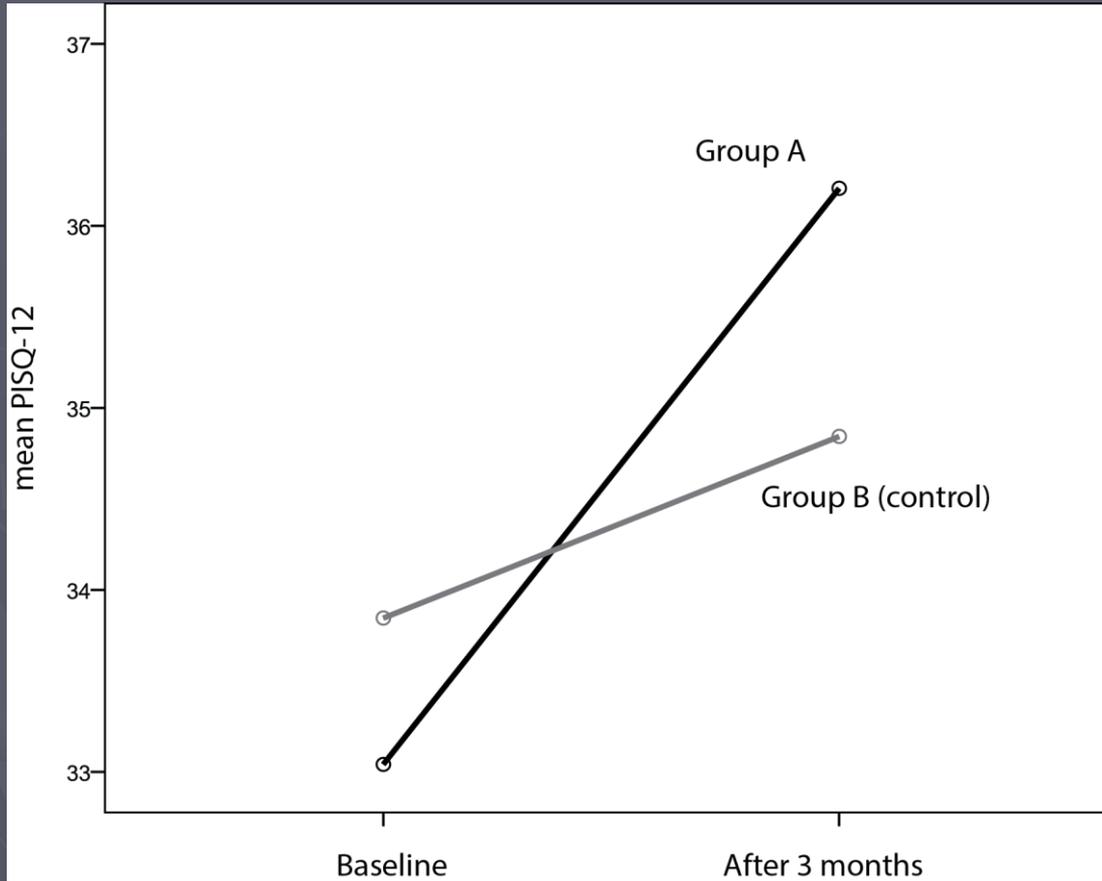
PRESSURE BIOFEEDBACK: Myomed632X Enraf Nonius

EFFICACY OF LASER THERAPY IN TREATMENT OF SUI AND SEXUAL DYSFUNCTION IN WOMEN



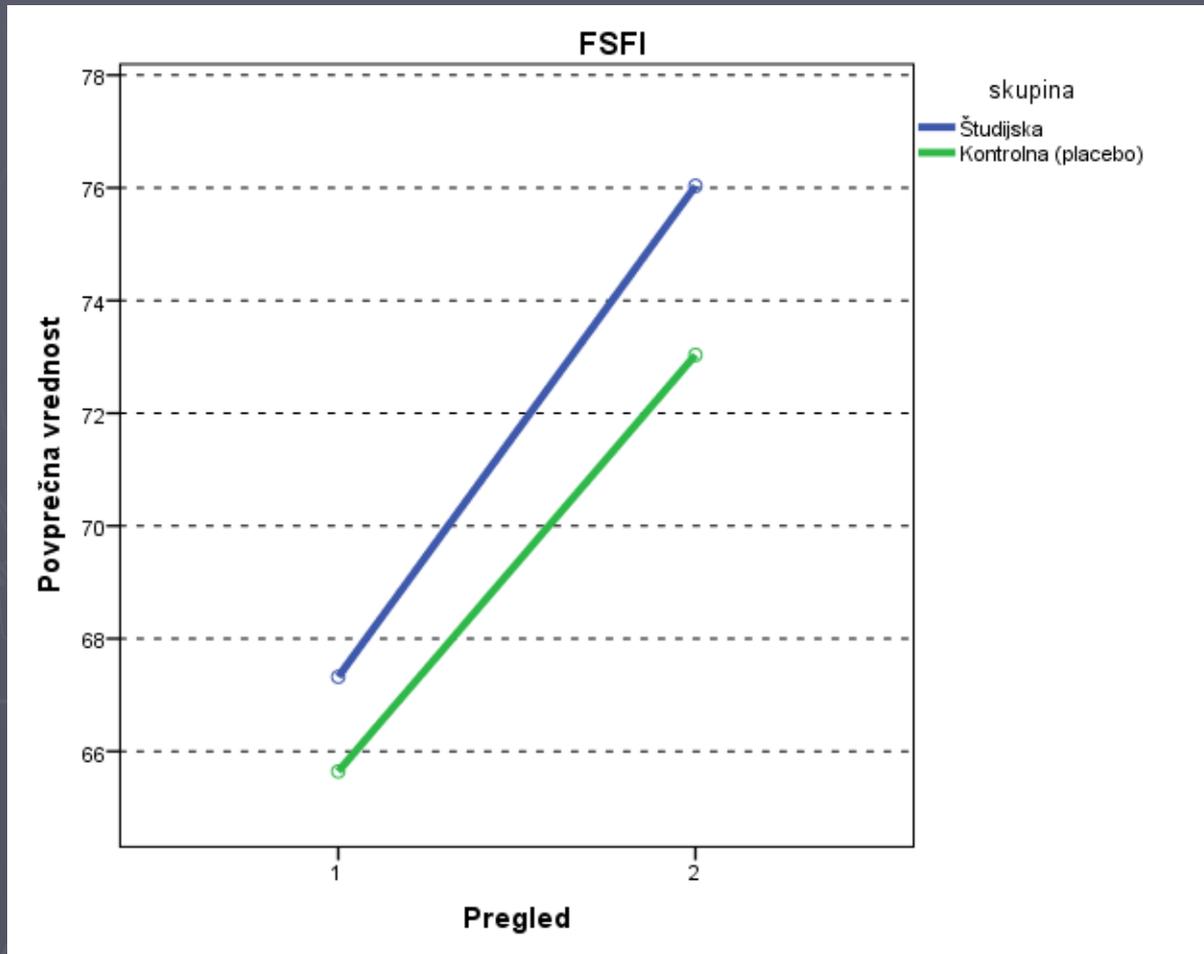
Although the improvement of SUI severity was significant in both groups, ICIQ-SF test showed statistically significant improvement ($p < 0,001$) of laser group compared with improvement of control group

SELF EVALUATION OF THE IMPACT OF SUI ON SEXUAL FUNCTION



Sexual improvement evaluated by PISQ-12 test. Statistically significant ($p=0,009$) improvement of sexual function in laser group compared with control group.

FEMALE SEXUAL FUNCTION INDEX: QUESTIONNAIRE FOR SELF EVALUATION OF FEMALE SEXUAL FUNCTION



*Statistically significant improvement in both groups ($p < 0,001$)
Although the laser group had better improvement, the difference in improvement between two groups were not statistically significant ($p = 0,512$).*

Higher value present better sexual function

PRESSURE BIOFEEDBACK

Myomed632 Enraf Nonius

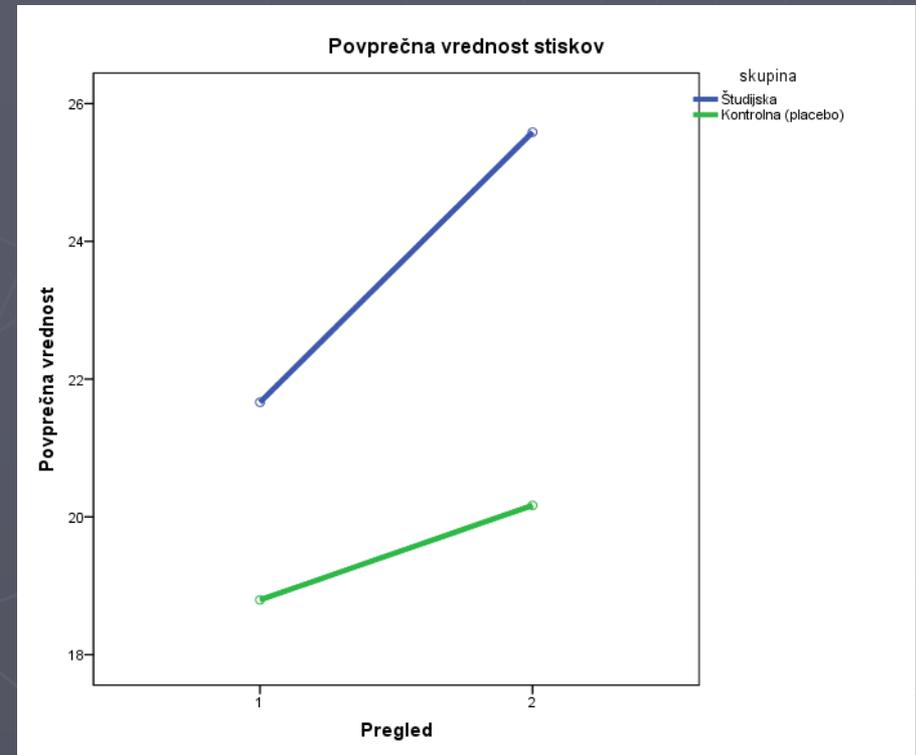
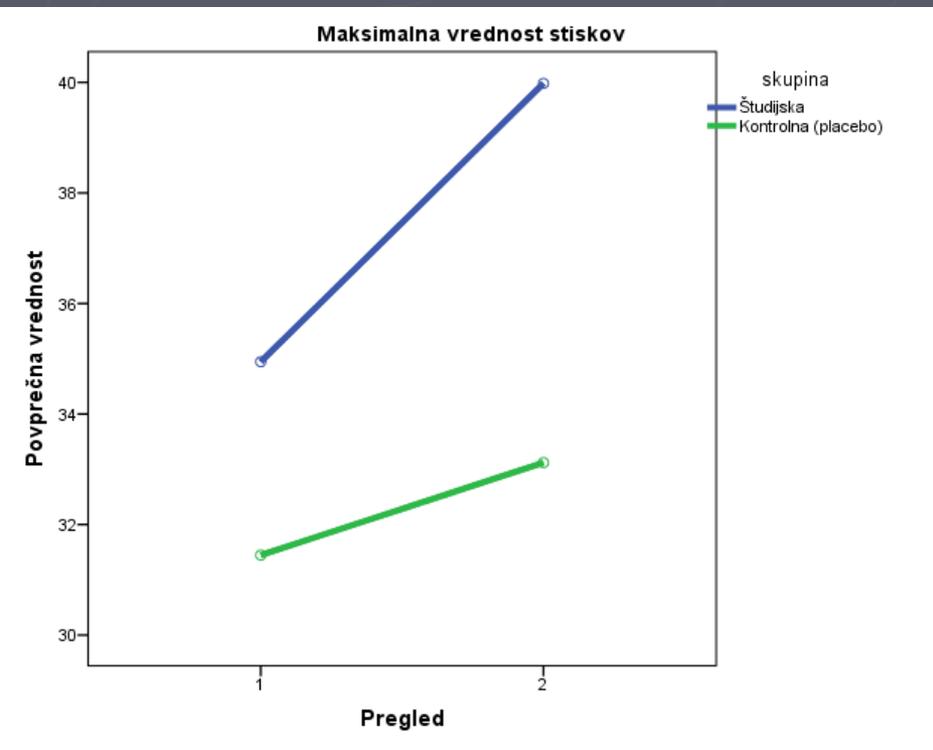


Represent the mechanical effect of motor system activity which is result of muscle-connective tissue activity. Changes in pressure are measured by means of cavity electrodes.

PERINEOMETRY

MAXIMAL PRESSURE VALUES

AVERAGE PRESSURE VALUES



Although the laser group had better improvement, the differences in improvement were not statistically significant ($p=0,166$ for left and $p=0,128$ for right)

THERMAL EFFECT (SUB-ABLATIVE PULSES)

Absorption  deep warming
(no burning or charring)

- ▶ Collagen shrinkage (30% of its original length)
- ▶ Vasodilatation effect (trophism)
- ▶ Increment of fibroplastic activity
- ▶ Release of cytokines
- ▶ Neocollagenesis

CONCLUSION

- In last three years this technology widely spread all around the world
- Installations in more than 30 countries
 - ▶ **Latin America:** Argentina, Chile, Brazil, Venezuela, Colombia, Equador, Mexico, Bolivia, ...
 - ▶ **Europe:** Germany, Sweden, Norway, Finland, Spain, Italy, Slovenia, Croatia, Serbia, Poland, Russia,...
 - ▶ **Middle East:** Turkey, Egypt, Saudi Arabia, Kuwait, Emirates
 - ▶ **Asia:** South Korea, China, Taiwan, Thailand, Malaysia, Indonesia, Singapore, India
 - ▶ **Canada, USA, Australia, South Africa**
- More than 10.000 patients treated
- Great results, no serious adverse events noted

LASER VAGINAL TIGHTENING CONCEPT OF CLINICAL EFFECTIVENES

effective

Diminish symptoms

acceptable

No side effects

**CLINICAL
EFFECTIVENES**

patient friendly

painless

CONCLUSIONS

- ▶ Great advances in recent decades
- ▶ Still tremendous amounts to learn
- ▶ We must agree on definitions of success
- ▶ We must collaborate



We have come a long way-we have only just begun

Harold P. Drutz Founding member of IUGA, 1976