Scope of the Problem: Epidemiology of Sexual Dysfunction: Men

Common problem worldwide

- 30 million in US; 152 million worldwide
- 31% incidence of *any* dysfunction in men 18-59 years old
- Erectile dysfunction (ED) most commonly reported, but effects on libido also occur

ED may be age related

- US: Complete impotence increased from 5% in men 40 years old to 15% in 70 years old
- Netherlands: ED 22% men 50-54, increased to 54% in 70-78 year old

Feldman et al J. Urol 1994;151:54-
Steftel J. Urol 2003;169:1999-2007
Laumann et al JAMA 1999;281:537-544
Blanker et al Urology 2001;57:763-

Hormonal Changes in the Aging Male

Hormone	Change
Testosterone	decreased
Bioactive testosterone	decreased
Dihydroepiandrosterone	decreased
Sex hormone binding globulin (SHBG)	increased
Lutenizing hormone (LH)	increased

Steftel J Urol 2003;169:1999-2007

Scope of the Problem: Epidemiology of Sexual Dysfunction: Women

- Female dysfunction can be subdivided into disorders of desire, arousal, orgasmic, pain
- Incidence varies depending upon ascertainment methodology
  - 40% women 18-59 years
    - Low desire 22%, arousal problems 14%, pain 7%

Phillips N. Am Fam Physician 2000;62:127-136
Laumann et al. JAMA 1999;281:537-544

Spectrum of Potential Sexual Dysfunction in Women

Alterations in Desire
- Hyposexuality
- Inhibition of desire
- Aversion
- Hypersexuality
- Panic/phobia
- Obsessive-compulsive

Lubrication Disorders

Orgasmic Disorders
- Orgasmic inhibition
- Anorgasmia
- Diminished number of orgasms
- Altered perception
- Anesthetic orgasm
- Spontaneous orgasm

Dyspareunia
- Pain during intercourse
- Pain after intercourse
- Painful orgasm

Menstrual Disorders
- Dysmenorrhea
- Menorrhagia
- Amenorrhea

Clitoral Hypertrophy

Infertility
- Decreased frequency of ovulation
- Decreased quality of egg
- Hypofertility

Breast Disorders
- Galactorrhea
- Gynecomastia
- Pain/tenderness

Paraphilia

Crenshaw & Goldberg. Sexual Pharmacology. Drugs That Affect Sexual Functioning. WW Norton & Co. New York 1996

Spectrum of Potential Sexual Dysfunction in Men

Alterations in Desire
- Hyposexuality
- Inhibition of desire
- Aversion
- Hypersexuality
- Panic/phobia
- Obsessive-compulsive

Erection Abnormalities
- Inability/difficulty obtaining erection
- Inability/difficulty maintaining erection
- Decreased firmness of erection
- Ejaculation through flaccid or semi-erect penis
- Painful erection
- Peyronie's disease
- Priapism
- Decreased or absent nocturnal/morning erections

Infertility
- Decreased or malformed spermatogenesis
- Decreased sperm motility
- Hypogonadism
- Testicular atrophy

Orgasm/Ejaculation Disorders
- Ejaculatory incompetence (inability)
- Ejaculatory inhibition (delay)
- Ejaculation without orgasm
- Orgasm without ejaculation
- Retrograde ejaculation
- Decreased ejaculatory volume
- Anesthetic ejaculation
- Spontaneous orgasm
- Painful ejaculation
- Premature ejaculation

Dyspareunia
- Pain during intercourse
- Pain after intercourse
- Painful ejaculation

Breasts
- Galactorrhea
- Gynecomastia
- Breast pain/tenderness

Paraphilia

Crenshaw & Goldberg. Sexual Pharmacology. Drugs That Affect Sexual Functioning. WW Norton & Co. New York 1996

Assessment of Sexual Adverse Effects: How good is the data?

- Many studies retrospective in nature
- Many studies lack controls
- Imprecise classification/description of medical and/or psychiatric comorbidities
- Insufficient data on drug exposure (how many, how long, previous exposure, doses, etc…)
- Patient self report vs clinician interview

Assessment of Sexual Dysfunction

- Early clinical studies rarely detect sexual dysfunction
  - Few studies systematically evaluate for this adverse effect
- Post-marketing surveillance studies also historically report low incidence
- Relatively few physicians (~50%) routinely obtain sexual history from their patients
  - Direct inquiry yields higher reporting rates as compared with spontaneous reports (58% vs 14%)

Bull et al Sex Tram Dis 1999;26:584-589
Montejo-Gonzalez et al J Sex Marital Ther 1999;23:176-194

Neurophysiology of Sexual Response

The Sexual Response

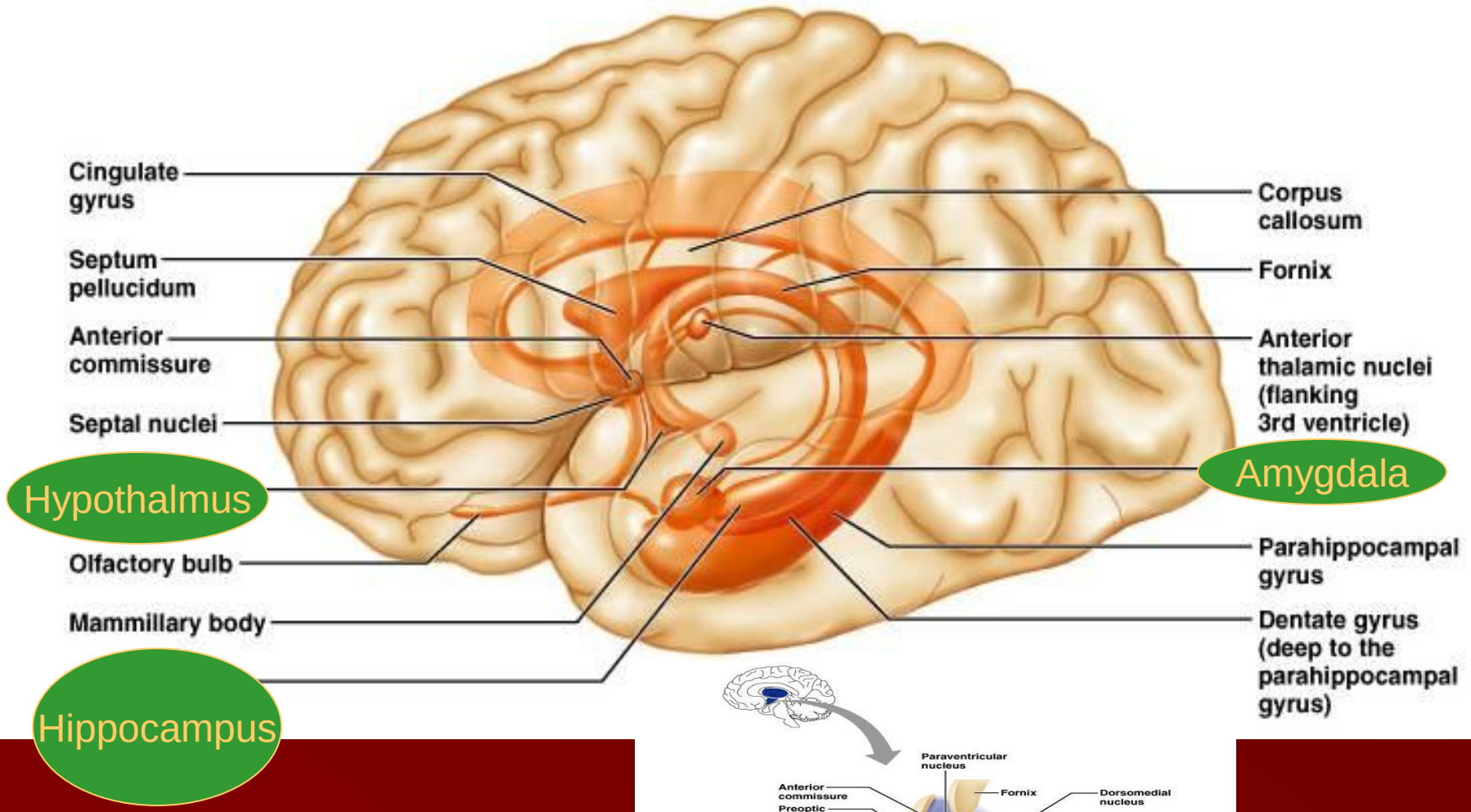
- Sexual response is a complex, multifactorial process
- Sexual dysfunction may result from a disturbance in 1 or more domains including
  - Cognitive
  - Psychosocial
  - Neurological
  - Vascular

Neurophysiology of Sexual Response

- Requires intact libido and arousal response
  - Libido (desire) involves both affective and cognitive processes
  - Arousal (capacity to respond to stimuli) depends on neural, muscular and vascular response
- Sexual response is under control of both central & peripheral neural systems

Argiolas & Melis. J Endocrinol Invest 2003;26(Suppl 3):20-22

Limbic system & Hypothalmus



Adapted: Marieb. Human Anatomy 4th Ed.

Positive Modulators of Sexual Response: Neurotransmitters & Neuropeptides

NATURALLY OCCURRING
ENDOGENOUS SUBSTANCES
WITH GENERALLY EXCITATORY
SEXUAL ACTIONS
(Increase in dose or activity favorable to sex;
decrease in dose or activity unfavorable to sex.)

Adrenergic ($Alpha_1$) Activity
Adrenergic ($Beta_2$) Activity
Calcitonin-Gene-Related-Peptide (CGRP)
Cholinergic Activity
Dehydroepiandosterone (DHEA/DHEAS)
Dopamine (DA)
Endothelium-derived Relaxing Factor (EDRF)
Estrogen (female only)
Excitatory Peptides
Growth Hormone (GH)
Histamine
Luteinizing Hormone Releasing Hormone (LHRH)
Nitric Oxide (NO)
Oxytocin
Prostaglandins
Substance P (SP)
Testosterone
Vasoactive Intestinal Peptide (VIP)
Vasopressin
Zinc (replacement value only)

Crenshaw & Goldberg. Sexual Pharmacology. Drugs That Affect Sexual Functioning. WW Norton & Co. New York 1996

Neurophysiology of Sexual Response: Facilitatory Effects

- Activation of oxytocinergic neurons projecting to limbic structures and spinal cord by dopamine, norepinephrine and excitatory amino acids facilitates erectile function
  - Activation of these neurons secondary to activation of nitric-oxide synthase→nitric oxide

Inhibitory Modulators of Sexual Response: Neurotransmitters & Neuropeptides

NATURALLY OCCURRING ENDOGENOUS SUBSTANCES WITH GENERALLY INHIBITING SEXUAL ACTIONS
(Increase in dose or activity unfavorable to sex; decrease in dose or activity favorable to sex.)

Adrenergic ($Alpha_2$) Activity
Angiotensin II (Ang II)
Cortisol
Estrogen (male only)
Melatonin
Monoamine Oxidase (MAO)
Neuropeptide Y (NPY)
Opioids
Progesterone
Prolactin
Serotonin (5-HT) (5HT 1B, 2C, 2A, 3)
Thyroid Hormone*
Vasoconstrictive Peptides (Ang II and NPY)

Crenshaw & Goldberg. Sexual Pharmacology. Drugs That Affect Sexual Functioning. WW Norton & Co. New York 1996

Neurophysiology of Sexual Response: Inhibitory Effects

- GABA, opioid peptides reduces activation of nitric oxide synthase, and impairs erection
- Increased serotonin neurotransmission in lateral hypothalmus can result in decreased libido and impaired orgasm, ejaculation
  - Variable effects depending on 5-HT receptor subtype being stimulated
  - Postulated mechanisms include modulation of CNS dopamine, inhibition of NO synthase

Control of Sexual Response: Sex Steroids

Estrogen

- Effect on sexual desire relatively small in both men and women
- Does appear important in maintaining arousal in women
- Hypothalmic aromatase suggests some central conversion of testosterone to estradiol

Androgens

- Male sexual behavior largely modulated by testosterone and DHT
- Androgens important in maintaining arousal in women
- Very low levels of testosterone consistently associated with decreased desire and occasionally ED
- Supra-physiologic concentrations of testosterone *do not* modify desire or behavior

Rochira et al. J Endocrinol Invest 2003;26(Suppl 3):29-36

Local Control of Sexual Response: Modulation of Cavernosal Smooth Muscle

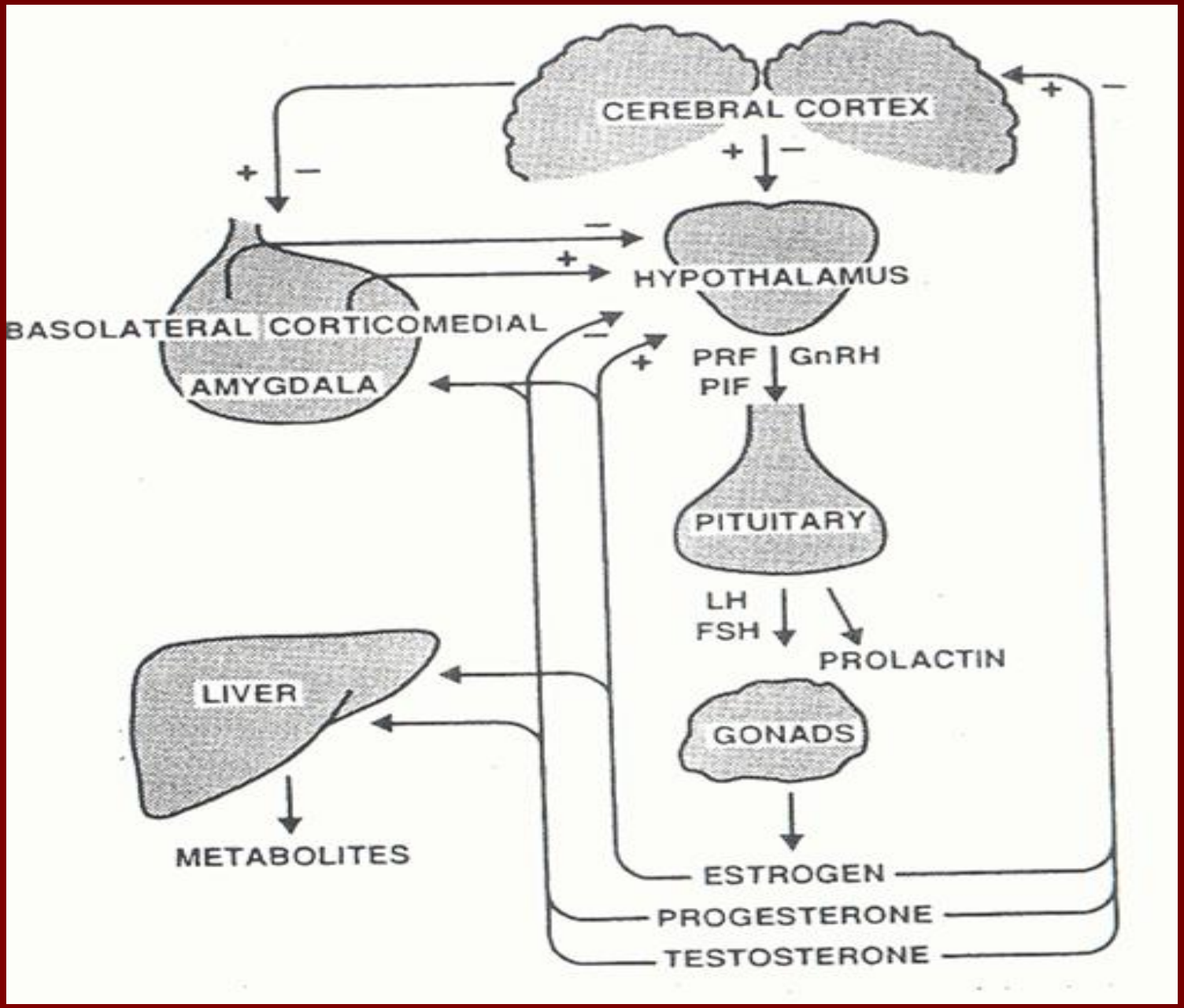
Involvement of adrenergic & cholinergic systems

- Alpha Adrenergic stimulation → contraction of cavernosal tissue → flaccid
  - B_2 activation → positive
  - B_2 blockade → inhibitory

  Cholinergic inhibitory control → relaxation of cavernosal tissue → erection

- Neuronal & endothelial derived nitric oxide → activation of guanylate cyclase → ↑cyclic GMP → relaxation of smooth muscle → erection

- VIP, NPY prostaglandins also involved in control of erection



Morrell M. Epilepsia 1991;32(Suppl 6):38-45

Summary

- Sexual dysfunction is a common problem
- Not limited to men
- Prevalence likely increased with advancing age
- Understanding drug/disease interactions a necessary 1st step in assessment
- Knowledge of drug pharmacological properties valuable in predicting potential adverse effects

Sexual Dysfunction

Looking at the whole patient:

The role of co-morbid disorders

Sexual Dysfunction In PWE: A Biopsychosocial Model

John J. Barry, MD

Associate Professor of Psychiatry

Stanford University Medical Center

Biological Issues In Sexual Dysfunction – Part 2

- Overall medical issues need to be assessed
- Specific issues related to PWE
- Medication side-effects
  - Related to epilepsy
  - Other common co-morbid disorders seen in PWE, i.e. psychiatric disorders

Causes of Sexual Dysfunction

- Drugs!!!!!
- Medical – vascular; endocrine (hyperprolactinemia, thyroid dysfunction and specifically low testosterone); systemic illness – renal, hepatic, cardiac, pulmonary and cancer; urogenital – infections and injury.
- Neurological – spinal cord, neuropathy and cortical lesions
- Psychogenic – psychiatric (psychosis, affective illness); intrapsychiatric (religious, social, family taboos, sexual experiences and low self-esteem); extrapsychic (dysfunctional relationship)

Morrell MJ. Women with Epilepsy – A Handbook of Health and Treatment Issues. 2003, p152-163.

Causes of Sexual Dysfunction: Effect of Co-morbid disorders

Endocrine	*Gastrointestinal*	*Gynecological*	*Immunological*	*Neurological*	*Urological*	*Vascular*
Acromegaly	Constipation	Dysfunctional bleeding	AIDS/HIV	Alzheimer's disease	Chronic kidney disease	Arteriosclerosis
Adrenal dysfunction	Diarrhea	Dyspareunia	Arthritis & other bone/joint disorders	Brain lesions	Cystitis (acute, chronic & postcoital)	Fistula
Diabetes mellitus	Irritable bowel syndrome	Endometriosis	Cancer	Dementia	Epididymitis	Hypertension
Hyperprolactinemia	Ulcerative colitis	Genital warts	Chronic fatigue syndrome	Diabetic neuropathy	Peyronie's disease	Ischemia
Hypogonadism		Infertility/ pregnancy	Respiratory diseases	Epilepsy	Priapism	Myocardial infarction
Thyroid dysfunction		Menopause		Multiple sclerosis	Prostatitis	Stroke
		Menstrual cycle disorders		Parkinson's disease	Renal failure	Transient ischemic attacks (TIAs)
		PMS		Spinal injury or tumors	Urethrocele/ cystocele	Venous insufficiency
		Vaginismus		Stroke	Urinary incontinence	
		Vaginitis (bacterial, fungal, trichomonal, viral)				

Crenshaw & Goldberg. Sexual Pharmacology. Drugs That Affect Sexual Functioning. WW Norton & Co. New York 1996

Comorbid Disorders in Elderly Patients with Epilepsy

• Dyslipidemia	80%
• Hypertension	53.8%
• Stroke	52.7%
• Cardiac disease	48.1%
• Diabetes	28.3%
• Cancer	23.8%
• Psychiatric disease	21.6%
• Renal disease	12.3%
• Liver disease	2.7%
• Parkinson’s disease	2.7%

Ramsay et al Epilepsia 2002;35(Suppl 8):91

The Role of Co-Morbid Disorders: Epilepsy

Sexual dysfunction described in 33-66% of men and women with epilepsy

- Men report less sexual experience, anorgasmia and high incidence of ED (self-reported data)
- Low testosterone concentrations, and impaired nocturnal penile tumescence reported
- Both men and women with temporal lobe epilepsy demonstrate diminished physiologic arousal (genital blood flow) in response to visual erotic stimuli
- Likelihood of sexual dysfunction may increase in patients with continued seizures, and those with a longer history of seizures

Morrell Epilepsia 1991;32(Suppl 6):38-45
Morrell et al Neurology 1994;44:243-247
Fenwick et al Acta Neurol Scand 1985;71:428-435
Herzog et al Arch Neurol 1986;43:347-350

The Role of Co-Morbid Disorders: Epilepsy-Possible Etiologies

Epilepsy as a cause:

- Higher frequencies in partial epilepsies (60% Vs 10%)
- Noted in PWE naïve to AED
- Laterality – right > left
- Improvement with Anterior Temporal Lobectomy
- Influence of interictal discharges on gonadotropins and prolactin and altered hypothalamic-pituitary activity

Biology – Sexual Dysfunction in PWE

- Morrell et al: (1994)[1] studies of genital blood flow (GBF) in both men (N=8) and women (N=9) showed significant decreases in response to viewing erotic material compared to control (12 women and 7 men). Women with epilepsy reported less arousal and more anxiety perhaps associated with seizure activity. Fewer sexual experiences were reported by both men and women with epilepsy.
- Morrell et al: (1996)[2] Nocturnal penile tumescence in 5 of 6 men with TLE epilepsy were abnormal
- Morrell et al: (1996)[3] 116 women were evaluated (99 with LRE and 17 with PGE) – reported no dysfunction in sexual desire but rather one third had dysfunction in sexual arousal which included (in those with LRE) dyspareunia, vaginismus, arousal insufficiencey and (in those with PGE) anorgasmia with both groups c/o sexual dissatisfaction. Conclusion – treatable conditions warranting GYN referral

1. Morrell MJ, et al. Neurology 1994;44:243-247.
2. Guldner GT. Epilepsia 1996;37:1211-1214.
3. Morrell MJ, et al. Epilepsia 1996;37:1204-1210.

Biology – Sexual Dysfunction in PWE

- Herzog et al: (1991)[1] Reported androgen deficiency in men with epilepsy. Noted the importance of free testosterone levels and the development of hypogonadism and functional hyperprolactinemia. Role of increased conversion of testosterone to estradiol in men with epilepsy and the use of aromatase inhibitor or the antiestrogen clomiphene.

- Herzog et al (2003)[2] Sexual dysfunction in women
  - Sexual dysfunction scores significantly higher in women with temporal lobe epilepsy vs control (right > left)
  - Inverse relationship between bioactive testosterone sexual dysfunction
  - Serum estradiol lower in women with epilepsy vs controls

- Herzog et al. (2004)[3] Reviewed the effects of AED on sexual functioning and hormone levels in 63 men with epilepsy. Noted the superiority of lamotrigine in contrast to the enzyme inducing AEDs.

1. Herzog GA, Epilepsia 32:S34-S37,1991
2. Herzog AG.Neurology 1995;45:1660-1662.
3. Herzog AG, et al. Epilepsia 2004:45:764-769

Biological Issues In Sexual Dysfunction

Drugs

Medications & Sexual Function

Psychotropic agents

- SSRI's
- MAOI's
- Lithium
- -typical & atypical antipsychotics

Antiepileptic drugs

- phenytoin
- carbamazepine
- phenobarbital
- primidone

Thomas Clin Geriatr Med 2003;19:553-562
Keene & Davies Adverse Drug React. Toxicol Rev 1999;18:5-24

Medications & Sexual Function

Antihypertensives

- Beta blockers
- Thiazides
- Clonidine, methyldopa
- Spironolactone
- Alpha antagonists

Hormones

- Estrogen
- Antiandrogens

Misc

- Opiods
- Metoclopramide
- Cimetidine
- Statins
- Alcohol

Thomas Clin Geriatr Med 2003;19:553-562
Keene & Davies Adverse Drug React. Toxicol Rev 1999;18:5-24

AED Effects on Sexual Function: Potential Mechanisms

- Older AEDs (phenytoin, carbamazepine, phenobarbital & primidone) induce hepatic drug metabolism
- CytochromeP450 isozymes participate in metabolism of estradiol and testosterone
- Increased hepatic synthesis of sex hormone binding globulin (SHBG) → ↓ concentrations of bioactive androgen

Differential Effects of AEDs on Sexual Function and Reproductive Hormones in Men with Epilepsy

TABLE 2. *Comparisons of sexual function scores, bioactive gonadal steroid levels and ratios, and gonadal efficiency (BAT/LH) among groups*

	S-score (/20)	SHBG (μg/dl)	BAT (ng/dl)	BAE (pg/ml)	BAT/BAE	BAT/LH
Controls	18.8	0.83	307	25.1	129	70.9
(n = 18)	[18.2–19.4]	[0.65–1.05]	[265–350]	[21.7–28.5]	[107–147]	[54.6–87.2]
LRE/No AED	17.3	0.85	236[a]	26.6	93[a]	64.3
(n = 9)	[14.6–20.0]	[0.55–1.10]	[152–320]	[20.3–32.9]	[63–123]	[48.1–90.5]
LRE/LTG	18.3	0.85	262	21.7	128	58.1
(n = 18)	[17.5–19.1]	[0.66–1.04]	[215–309]	[18.4–25.0]	[105–151]	[48.4–67.8]
LRE/EIAED	16.2[be]	1.47[bde]	211[be]	23.5	98[ce]	44.7[bde]
(n = 36)	[15.0–17.4]	[1.21–1.73]	[180–242]	[21.2–25.8]	[83–113]	[36.8–52.6]

Herzog A, et al. Epilepsia 2004;45:764-768

Differential AED Effects on Sexual Dysfunction in Women

Morrell et al 2004

- Women with epilepsy (31 5.6 years) more likely to report sexual dysfunction than were healthy controls
- Women receiving enzyme inducing drugs, particularly phenytoin or phenobarbital had significantly lower sexual arousal scores as compared to controls
- As compared to controls, depression was more common in women with partial seizures
- Effects were modestly correlated with reduced androgen (DHEAS) concentrations

Morrell M et al, Submitted Epilepsy & Behavior 2004

Strategies for the Management of Sexual Dysfunction Related to AEDs[1]

- Need baseline sexual functioning
- Eliminate other causes of sexual dysfunction
- Choose an AED with a low frequency of sexual dysfunction and one with few effects of SHBG
- Use alternative strategies for sexual dysfunction, ie psychotherapy
- Use monotherapy and consider a switch in anticonvulsants if necessary and possible

1. Adapted from Segraves RT et al. Sexual Pharmacology Fast Facts 2003;157-168.

Biological Issues In Sexual Dysfunction

Psychiatric disorders - Depression

The Role of Co-morbid Disorders: Depression

- Sexual dysfunction is correlated with depression. Changes in sexual function (particularly libido) can be symptoms of depression. It has been estimated that between 30-70% of patients with a Depressive Disorder suffer from a primary sexual dysfunction.
- In addition - treatment emergent sexual dysfunction noted in 50-60% of men and women
- Sexual side effects can have a negative impact on medication adherence.

Fava J Clin Psych 2002;63(Suppl 5):13-16
Aranjo et al. Psychosom Med 1998;60:458-465
Laumann et al. JAMA 1999;281:537-544
Shabsigh et al Urology 1998;52:848-852

Incidence of Psychiatric Disorders in PWE – Depression and Anxiety

- Lifetime-to-date major depression
  - Chronic epilepsy: 29% mean of 7 studies[1]
  - Kessler et al in 1994 found a rate of 17.1% in the general population[2]
- Evaluation of 174 patients with epilepsy: 48.9% had a current Axis I disorder; 24.1% had a mood disorder (n = 42) and 52.3% had an anxiety disorder (n = 91); 72.9% of patients with a depressive disorder also had an anxiety disorder[3]
- Community sample: 24.9% of those with epilepsy had a significant depression (nearly 10× higher than the no-disease group). People with epilepsy and depression had an increased seizure frequency, poorer compliance, greater unemployment, and higher medical usage than people with epilepsy and no depression.[4]

[1]Hermann BP, et al. *Epilepsia.* 2000;41(suppl 2): S31-S41.
[2]Kessler RC, et al. *Arch Gen Psychiatry.* 1994;51:8-19.
[3]Jones JE, et al. *J Neuropsychiatry Clin Neurosci.* In press.
[4]Ettinger AB, et al. *Epilepsia.* 2002;43(suppl 7):120.

Medication Effects on Sexual Function: Antidepressant Agents

- Erectile dysfunction (10-30%)
- Loss of libido (40-60%)
- Delayed orgasm (46-59%)
- Anorgasmia (31-48%)

Rosen & Marin. J Clin Psych 2003;64(Suppl 10):5-10

Incidence of Sexual Side-Effects of Antidepressants

< 10%:

- bupropion, mirtazepine, moclobemide

10%-30%

- citalopram, duloxetine, venlafaxine

>30%

- fluoxetine, fluvoxamine, paroxetine and sertraline

Incidence of TCA's and MAOI are similar to SSRIs and dual action antidepressants

Potential Treatment Options for Sexual Dysfunction Associated with Antidepressants[1]

- Avoidance of potentially offending drug
- Switching/dose reduction/drug holiday
- Herbals (Ginkgo)
- Yohimbine
- Cyproheptadine
- Testosterone replacement
- Dopaminergic agents
- Type 5 phosphodiesterase inhibitors

1. Adapted from Segraves RT et al. Sexual Pharmacology Fast Facts 2003;45-63.

Addition of Sildenafil

- Reportedly safe for restoring sexual performance in PWE with a usual dosage of 50 mg/day[1]
- Gilad et al. reported two cases of new onset seizure activity seemingly associated with sildenafil, i.e. caution is needed[2]

1. Harden CY, Epilepsy and Behavior 2002;3:S38-S41.
2. Gilad R, et al. BMJ 2002;325:869.

From Pharmacology to Psychology – Bridging the Gap!!

Annie Hall:

D Keaton – (to her psychiatrist)

- *"He wants sex all the time"*

W Allen – (to his psychiatrist)

- *"She never wants sex"*

- *The psychiatrist in both sessions asks the insightful question – "how many times is that"*
- *Both answer separately – "Oh! about three times a week"*

From Pharmacology to Psychology – Bridging the Gap!![1]

The transition from abstinence to intimacy:

- The Sexual Equilibrium – each partner is simultaneously responding to the other partner. A destabilization can result in sexual avoidance

- Chronic dysfunction → sexual apathy (as a result of "erections and intercourse are necessary", male embarrassment, hypoactive sexual desire in one or both partners, lack of satisfaction in past sexual relationship, preexisting psychopathology and relationship discord)

Sexual Assessment and Psychosocial Management

Mimi Callanan, RN, MSN

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Epidemiology of Sexual Dysfunction

- General population
- Chronic illness
- Epilepsy

Sexual Assessment

- Formulating the question
- Using sexual assessment tools

Sexual Assessment

- Past sexual experiences
- Family and cultural values
- Religious beliefs
- Psychosocial factors

Assessment of Sexual Function

- Direct interviews
- Questionnaires
  - Specific questionnaires
  - Quality of Life questionnaires
- Diagnostic testing

Development of tools

- Brief
- Specific
- Gender specific
- Perceived as non-intrusive
- Able to separate illness from medication effect
- Monitor change over time
- Assess pre-morbid and lifelong sexual functioning before illness or treatment and over time

Advantages of Specific Sexual Assessment Questionnaires

- Inexpensive
- Easy to use
- Specific to problem
- Specific to gender
- Research

Disadvantages of Specific Sexual Assessment Questionnaires

- Lengthy
- May not cover full scope of problem
- May not answer the question
- May not differentiate between psychological and organic etiologies
- Few have been validated against physiologic measurements

Sexual Assessment Tools

- Arizona Sexual Experience Scale (ASEX)
- International Index of Erectile Function (IIEF)
- Swedish health-related quality of life survey (SWED-QUAL)
- Florida Sexual History Questionnaire

The Arizona Sexual Experience Scale (ASEX)

- Five item rating scale
- 6 point Likert scale
- Responses from the last week
- Male and female version

The Arizona Sexual Experience Scale (ASEX)-Male

- How strong is your sex drive?
- How easily are you sexually aroused (turned on)?
- Can you easily get and keep an erection?
- How easily can you reach an orgasm?
- Are your orgasms satisfying?

The Arizona Sexual Experience Scale (ASEX)-Female

- How strong is your sex drive?
- How easily are you sexually aroused (turned on)?
- How easily does your vagina become moist or wet during sex?
- How easily can you reach an orgasm?
- Are your orgasms satisfying?

International Index of Erectile Dysfunction

- 15-item self administered questionnaire
- Assesses male sexual function
- Validated in several languages
- 5 response domains

International Index of Erectile Function

- Erectile function
- Orgasmic function
- Sexual desire
- Intercourse satisfaction
- Overall satisfaction

Swedish Quality of Life Questionnaire (Swed-Qual)

- Sexual functioning scale
  - I am not interested in sex
  - I have difficulties in relaxing and enjoying sex
  - I have difficulties in becoming sexually aroused
  - I am afraid of the physical effort involved in sexual intercourse
  - I have difficulties in getting and/or keeping an erection (Men)
  - I have difficulties in having an orgasm (Women)

Florida Sexual History Questionnaire

- 20 item questionnaire
- Assesses male sexual dysfunction

Florida Sexual History Questionnaire

- Interest and desire
- Sexual development
- Current sexual behaviors
- Satisfaction with current sexual functioning

Psychosocial Interventions

- Education
  - Awareness of issues
  - Normal sexual response
  - Partner
- Counseling
  - Individual
  - Couple

Sexual Counseling

- Pre illness sexual activity
- Correct misinformation
- Defuse anxiety
- Psychosocial needs of partner
- Function of the couple

PLISSIT Model for sexual counseling

- Permission
- Limited information
- Specific suggestions
- Intensive therapy

Interventions

- Impact psychological and physiological sexual response
- Impact quality of life

Taking a Sexual History

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Associate Professor, Department of Clinical Neurology, Albert Einstein College of Medicine

www.epilepsylongisland.com

THE FOLLOWING **PREVIEW** HAS BEEN APPROVED FOR

ALL AUDIENCES

BY THE MOTION PICTURE ASSOCIATION OF AMERICA

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R	RESTRICTED UNDER 17 REQUIRES ACCOMPANYING PARENT OR GUARDIAN

"You'll find that what the Doctor lacks in technique, he makes up in warmth and sincerity."

Janet became extremely depressed when, six months after her second marriage, she found herself unable to have an orgasm during sex. She didn't think of this response as a medical problem, but even if she had, she would have been too embarrassed to mention it to her doctor.

It was only by accident that she began to suspect that the cause of her sexual difficulty was her blood pressure medicine, methyldopa (Aldomet). By a stroke of luck, she developed a stomach virus and temporarily stopped taking her Aldomet. As she recovered from the virus, her libido and ability to have orgasms returned. But then, when she went back on the Aldomet, her sexual problems returned.

A few experiments of not taking her medicine a couple of days and then having sex increased her growing suspicions, and her doctor confirmed the link between the drug and her sex life when she finally asked him.

The doctor inquired, perhaps rather naively, "Why didn't you tell me about this when your sexual problems first started?"

She was too nice to respond, "Why didn't you inform me about the possible side effects?"

Podell, Proctor. When Your Doctor Doesn't Know Best; Medical Mistakes that Even the Best Doctors Make-and How to Protect Yourself. New York: Simon&Schuster, 1995.

Challenges on the Clinician Side

- Lack of training
- Embarrassment
- Fear of offending pt (yet most pts say it is appropriate for MD to ask)
- Provider's discomfort w/ own sexuality
- Clinician's moral tenets re: homosexuality, abortion, extramarital sex, contraception, prostitution

Challenges on Patient Side

- Harboring:
  - Misinformation
  - Guilt or Shame
  - Rigid attitudes
- Denial of a problem
- GETTING BOTH PARTNERS INVOLVED

Rapport w/ Patient

- Sexual hx when done w/ sensitivity, strengthens clinician-pt rapport
- Strive for open communication, active listening, honesty
- Convey neutral, non-judgmental attitude
- See beyond somatic complaints
- Intuition and nonverbal cues. Be sensitive to signs of anxiety: sudden overactivity, rapid talking, sudden shift to abstract or intellectualized terms
- Use humor w/ discretion

Dangers of Direct Questions

- Avoid questions that require direct yes/no responses
- Direct question: “Do you masturbate?” may cause defensiveness vs. open-ended “How often do you masturbate?”
- Direct: “Have you ever had intercourse?” vs. Open-ended: “How old were you when you first had intercourse?

Open-ended questions

- “Sexual health is important to overall health, therefore I always ask pts about it. If it’s OK with you, I’d like to ask a few questions about this?”
- “I would like to ask you some questions about your sexual history just like I have about your medical history. This is an important part of a complete health assessment.”
- “How do you feel about your sexual life?”
- “Is sex a problem for you?”
- “Are you sexually active?”
- “Tell me about a sexual experience that was troubling for you.”

Addressing Sexual Orientation

- “Are you sexually active?”
- If +, “With men, women or both?”
- If -, “Have you ever been sexually active?”

Deferring Sexual Hx

- For sensitive subjects that pt is not ready to discuss: "I think it is an important matter- we should discuss it sometime."
- Discussion of sexuality may need to wait till subsequent visit. Trust may need to be established over time for more detailed inquiries
- Distinguish screening questions from complete sexual history

Who Takes the Sexual History?

- Is the pt uncomfortable w/ MD or staff members?

Questionnaires

- Benefits: For some, may be easier to provide info rather than discuss openly
- Deficits: Some feel uncomfortable writing down such info

Screening for Sexual Problems & Concerns-1

- Are you sexually active?
- Have you noticed any changes or problems in your sexual functioning (lately)?
- If yes to 1or 2
- For men:
  - Do you have any problems developing or maintaining an erection?
  - Do you have any trouble having an orgasm (ejaculating or coming too soon, not soon enough, or in the wrong direction)?

Screening-2 (For Women Only)

- Do you have pain during intercourse?
- Do you have problems with lubrication or becoming excited?
- Have you had an orgasm?

Screening-3 (For Women and Men)

- Do you think your epilepsy (and/or other illnesses) has affected your sexual functioning?
- Do you have sex with men, women, or both?
- What is your pattern of sexual activity (one partner, multiple or casual partners, etc.)?
- Do you have sex with people who are (or might be) in high-risk groups (IV drug users, homosexual or bisexual men, prostitutes, unknown partners, etc.)?
- Are you using birth control? What type?
- Are you using condoms to prevent disease?
- Do you have any concerns about getting a sexual disease or AIDS?
- Do you have any other questions or concerns about sex?

Be Careful w/ Terms

- Don’t make assumptions about sexual behavior or orientation (e.g. “partner” vs. “wife”)
- Use straight-forward anatomical terms
- Accept from pt but don’t use slang
- Avoid technical medical terms
- Constantly monitor if pt understands terms being used

Other Tips

- Assure confidentiality
- Avoid religious or moral judgments
- Use of 3rd person “Many people find …”

Link to Current Health

- e.g. “Its known that epilepsy can be associated with some difficulties in sexual health, I would like to ask some questions about this.”
- Women: Reproductive hx → contraceptive needs → sexual activity → complete sexual hx
- Men: Prostate sxs (e.g. hesitancy, weak urinary stream) → sexual hx or concerns.

Role of Relationship in Sexual Dysfunction

- Self-esteem
- Quality of relationship between sexual partners
- Communication between partners
- Personality patterns

Not to worry, Mr. Salem, all medications can produce mild side effects. The question is, have they affected your quality-of-life?

Sexual Dysfunction w/ Med Problems

- Impotence common w/ many med disorders
- Anxiety about sexual capability as sequelae to acute med event
- Decreased libido w/ depression accompanying med disorder
- Ask about temporal relationship w/ med use and onset of difficulties. Ask about ETOH, tobacco, and illicit drugs
- Alternatively, beginning by discussion of above can lead to discussion of sexuality
- “Sometimes sexual experiences or incidents in your past can cause the type of difficulties you are reporting today. Is there any such incident in your past that you can identify?”

Sexual Response Cycle

Desire Phase:

- Fantasies or thoughts about sexual activity and/or desire to have sexual activity

Excitement Phase:

- A subjective sense of sexual pleasure w/ accompanying physiological changes related to pelvic vasoconstriction: erection in men and the lubrication-swelling response in women

Orgasm Phase:

- A peaking of sexual pleasure associated w/ rhythmic contractions of the perineal muscles and pelvic organs and w/ ejaculation in men

Resolution Phase:

- A sense of physical relaxation and emotional well-being following orgasm; men are refractory to further orgasms for a variable period of time; women are not

Desire Phase

- Does the pt experience fantasies and/or desires?
- Are they directed toward the available partner(s) or activities, or elsewhere?
- Is there a lack of interest in sex, or aversion?
- Under what conditions or situations does sexual activity occur?
- Who initiates sex, and how is it decided when to have sex?

Excitement Phase

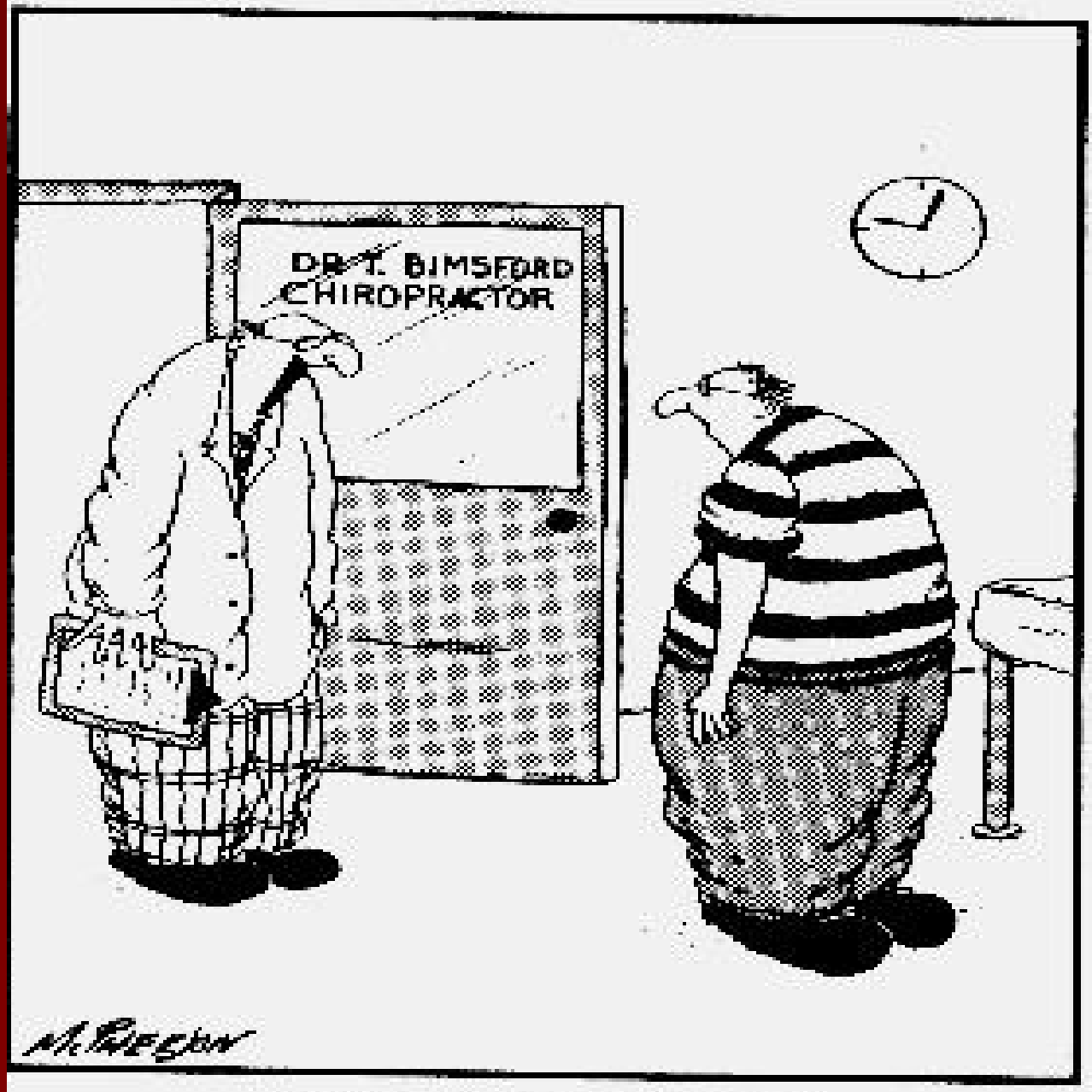
- What is the nature and duration of foreplay?
- Is it of sufficient intensity, focus, and duration to produce the sensations and physiological changes of this phase?
- Is intercourse of adequate duration and nature to produce orgasm?

Orgasm Phase

- Does orgasm occur?
- Does it occur always, sometimes, or only under certain conditions?
- If it does not occur, is this because of lack of sufficient excitement, or “shut off” prior to orgasm?
- For men: Does orgasm occur too soon, too late (too soon to satisfy partner, or later than patient wishes), or in the wrong direction?

Resolution Phase

- Does feeling of relaxation occur?
- If not, what seems to interfere?



"Well now, Mr. Fenderson, what seems to be the problem?"

Sexual Dysfunctions

Sexual desire disorders:

- Hypoactive sexual desire
- Sexual aversion disorder
- Hypersexuality

Sexual arousal (excitement phase disorders):

- Female: impairment of the lubrication-swelling response
- Male erectile disorder

Orgasm disorders

- Anorgasmia
- Inhibited female orgasm
- Inhibited male orgasm
- Premature ejaculation

Sexual pain disorders:

- Dyspareunia (genital pain in a man or woman before, during, or after sexual intercourse)
- Vaginismus (spasm of the vagina preventing intercourse)
- Priapism

	Psychogenic	“Organic”
Onset	Usually abrupt	Usually gradual
Course	Selective, intermittent, episodic, or transient	Usually persistent, often progressive
Degree of impairment	Partial: may respond to strong erotic stimulation or change of partner or situation	Partial in earlier stages: absolute later
Nocturnal or morning erection	Generally present	Generally absent or reduced in frequency and intensity
Associated Features	Onset temporarily related to specific psychosocial stress	Onset temporally related to disease

Case 1

- 46 y/o M w/ intractable szs partial w/ 2ndary generalization since age 7
- CC: Wife left him
- Prior hx: Physically abused as child, 1st sexual encounter age 12, then highly promiscuous throughout teen years
- Current sexual issues: Highly fearful of having a seizure during sexual relations
- Pt's perception of epilepsy & sexuality: No woman other than his abusive wife would want to marry him.
- Therapist's perception: Sexuality influenced by early abuse and paternal abandonment age 5. Unconscious issues of dependency, shame exacerbated by epilepsy.

Case 2

- 35 y/o F w/ intractable szs controlled after L temporal lobectomy
- Current issues: Fear of intimacy, no relationships, deficits in self-esteem
- Pt's perception epi & sexuality: Epi caused her to w/draw from male peers
- Therapist: Onset of epi during menarche led to associating epi w/ sexuality and fear of loss of control over her behavior. She believes she damaged herself by masturbation.

Case 3

- 35 y/o M w/ intractable szs, CP w/ 2ndary generalization since age 9
- Current issue: Never had sexual relations
- Pt's perception: Epi has ruined my life "Can't drive, can't take the train, can't have a life"
- Therapists perception: Severe epi impeded education, emotion, social and sexual growth. Immaturity and very low self-esteem. Sense of peer rejection during adolescence and maternal overprotection

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Long After Kinsey, Only the Brave Study Sex

By BENEDICT CAREY

e from the movie "Kinsey," opening in thea-
y, government agents seize a box of study
ng shipped by Dr. Alfred C. Kinsey, the pio-
esearcher, and impound the contents as ob-

e portrays a time in American history, the
50's, when marital relations were rarely dis-
ank reporting about sex was greeted with a
xiety verging on horror. In 1948, when Dr.
hed "Sexual Behavior in the Human Male,"
a pervert, a menace and even a Communist.
s changed in the years since then. But scien-
thing has remained constant: Americans'
about the scientific study of sexuality.
after the sexual revolution, sex researchers
States still operate in a kind of scientific un-

ny believers, cataloging behavior is like ng a field guide to sin.

aring suppression or public censure. In a
n in sex talk and advice in magazines and
n daytime TV, the researchers present their
ded language, knowing that at any time they,
y, could be held up as a public threat.
entists say that for all its diverse tastes and
nation that invented Viagra and "Sex in the
queasy about exploring sexual desire and
when this knowledge is central to protecting
ealth.
03, for instance, Congress threatened to shut
highly regarded sex studies, including one of
arousal, and another of massage parlor
last summer health officials refused to fi-
ely anticipated proposal backed by three

Attitudes on Sex: Past...

1959 Should birth control information be available to anyone who wants it?

YES 73% | 14% NO

1970 Would you approve if sex education classes discussed birth control?

YES 55% | NO 25%

1971 Should an adult be able to follow his views on having homosexual relations with a consenting adult, or be required to conform to society's standards?

FOLLOW VIEWS 39% | CONFORM 42%

1973 Do sexual materials lead people to commit rape?

NO 43% | YES 50%

...and Present

2003 Is it morally acceptable to use birth control pills or condoms?

YES 94%

2003 How important is it to have sex education as part of the school curriculum in your community?

VERY 69% | 21%