VA/DVBIC TBI Clinical Grand Rounds

It's Complicated: TBI and Sexuality

Nov 7, 2014, 12:00-1:15 p.m. (EST)

Presenter: Marcalee Alexander, M.D.
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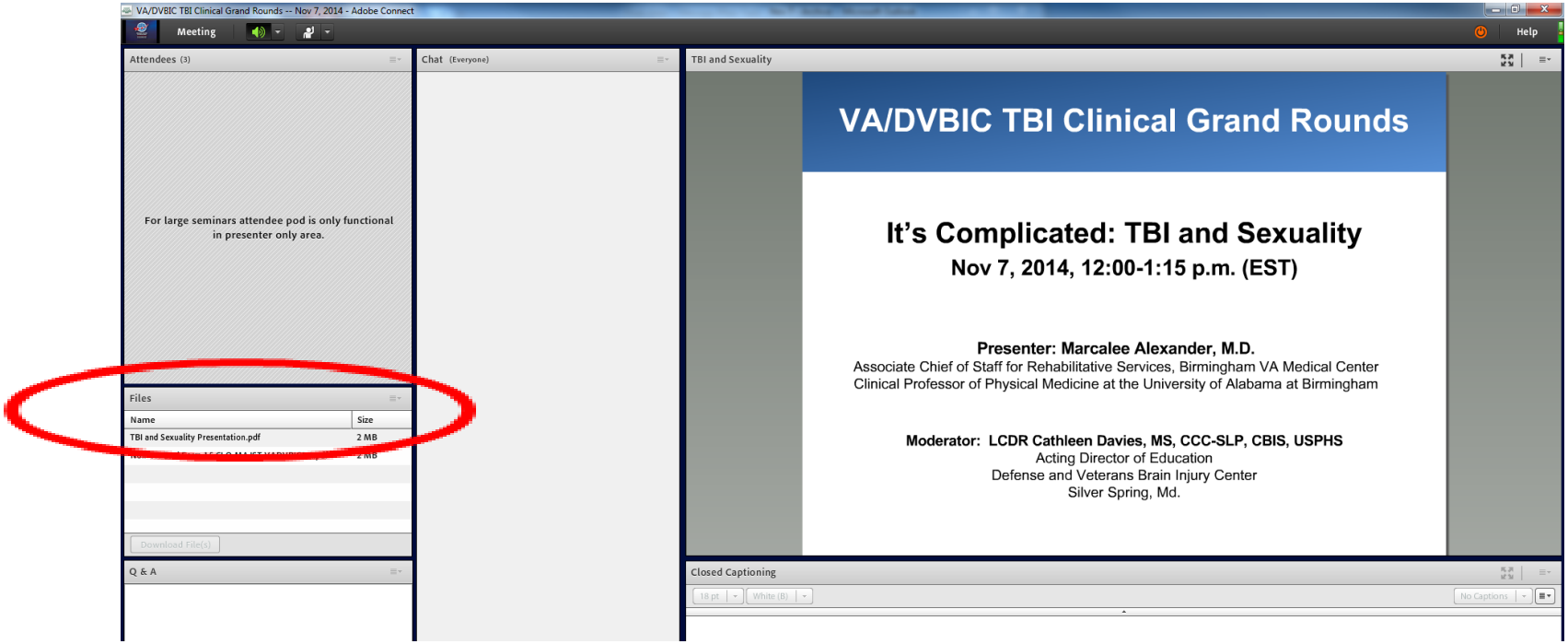
Moderator: LCDR Cathleen Davies, MS, CCC-SLP, CBIS, USPHS
Acting Director of Education
Defense and Veterans Brain Injury Center
Silver Spring, Md.

Webinar Details

- Audio for this webinar is **not** provided via Adobe Connect
  - Dial: VANTS **1-800-767-1750**
  - Use participant pass code: **49114#**
- Question-and-answer (Q&A) session
  - Submit questions via the Q&A box

Resources Available for Download

- Today's presentation and Non-VA Evaluation Form will be available for download at the end of the program in the "Files" box on the screen



Continuing Education Details

- All attendees are eligible for 1.0 CEU hours of ACCME, ACCME-NP, ANCC and APA for 100% attendance.
- In order to qualify for CEUs, the program evaluation and post test must be completed by **December 7, 2014** with a passing score of 80%.

VHA Attendee Instructions:

- **VHA** participants **must be preregistered** to complete the evaluation and post test in TMS.
- **VHA** staff should email Christopher.white3@va.gov if you were unable to register before the webinar started.
- Certificate of completion may be printed through TMS upon successful completion.

Non-VA Participant Instructions

- All Non-VA participants seeking CEUs will need to complete and email the program's fillable PDF **Non-VA Evaluation Form** by **December 7, 2014.**
- Please save and email a copy of your completed Non-VA Eval/Post-Test Form to **EESEPC@va.gov**
- Your certificate will be sent to you using the email address provided on your evaluation form.
- Questions or concerns should be sent to EPC by email at **EESEPC@va.gov**, or the EES Customer Service by phone at **1.877.EES.1331 opt 5**.
- Finally, the **Non-VA Evaluation Form** will be available for download right here on Adobe Connect at the end of today's program.

VA/DVBIC TBI Clinical Grand Rounds
It's Complicated: Traumatic Brain Injury and Sexuality
Overview

- The Defense and Veterans Brain Injury Center (DVBIC) reports an increase in traumatic brain injuries (TBIs) in Defense Department numbers worldwide over the past two quarters.

- This presentation will explore the issues associated with sexuality and traumatic brain injury (TBI). Some TBI patients experience sexual dysfunction — whether it is physical, behavioral or psychosocial. Providers must feel comfortable taking a good history to provide appropriate education and treatment. Although the body of literature related to TBI and sexuality is growing, significant gaps in the literature exist regarding treatment of sexual dysfunction after TBI. Because of these gaps, a general approach will be discussed for addressing sexual difficulties experienced by our service members and veterans.

- At the conclusion of this educational program, learners will be able to:
  - ✓ Identify the major psychological and medical effects associated with TBI that can effect sexuality
  - ✓ Describe the general issues that need to be considered addressing sexuality and TBI
  - ✓ Describe points associated with sustaining sexuality after TBI: Communicate, Educate, Wellness, Treatment
  - ✓ Describe the importance of including the partner when working on sexual issues post-TBI

Presenter Biography

Marcalee Alexander, M.D.

- Clinical Professor of Physical Medicine and Rehabilitation, University of Alabama School of Medicine
- Visiting scientist at Harvard Medical School
- Current research: Use of telemedicine to treat common problems associated with disability, such as sexual dysfunction
- Research emphasis: Studying and educating others about the impact of neurologic injury on sexual responses and sexuality

It’s Complicated: TBI and Sexuality

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Marcalee Alexander, M.D.
Associate Chief of Staff for Rehabilitative Services, Birmingham VA Medical Center
Nov. 7, 2014

Disclaimer

Addressing the topic of sexuality in the rehabilitation setting is important to providing our patients with a complete experience; however, practitioners often avoid this topic because of discomfort or uncertainty in discussing these sensitive issues.

We owe it to our patients to provide them with understanding and confidence on this very sensitive – yet critical – aspect of rehabilitation. During this presentation, discussions that are sexual in nature will take place and may be offensive or uncomfortable to some. Viewers should use discretion in their choice to participate.

Presentation Overview

This presentation will explore the issues associated with sexuality and traumatic brain injury (TBI). Some TBI patients experience sexual dysfunction — whether it is physical, behavioral or psychosocial. Providers must feel comfortable taking a good history to provide appropriate education and treatment.

Although the body of literature related to TBI and sexuality is growing, significant gaps in the literature exist regarding treatment of sexual dysfunction after TBI. Because of these gaps, a general approach will be discussed for addressing sexual difficulties experienced by our service members and veterans.

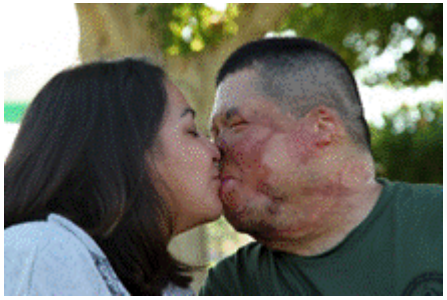
Presentation Objectives

At the conclusion of this educational program, learners will be able to:

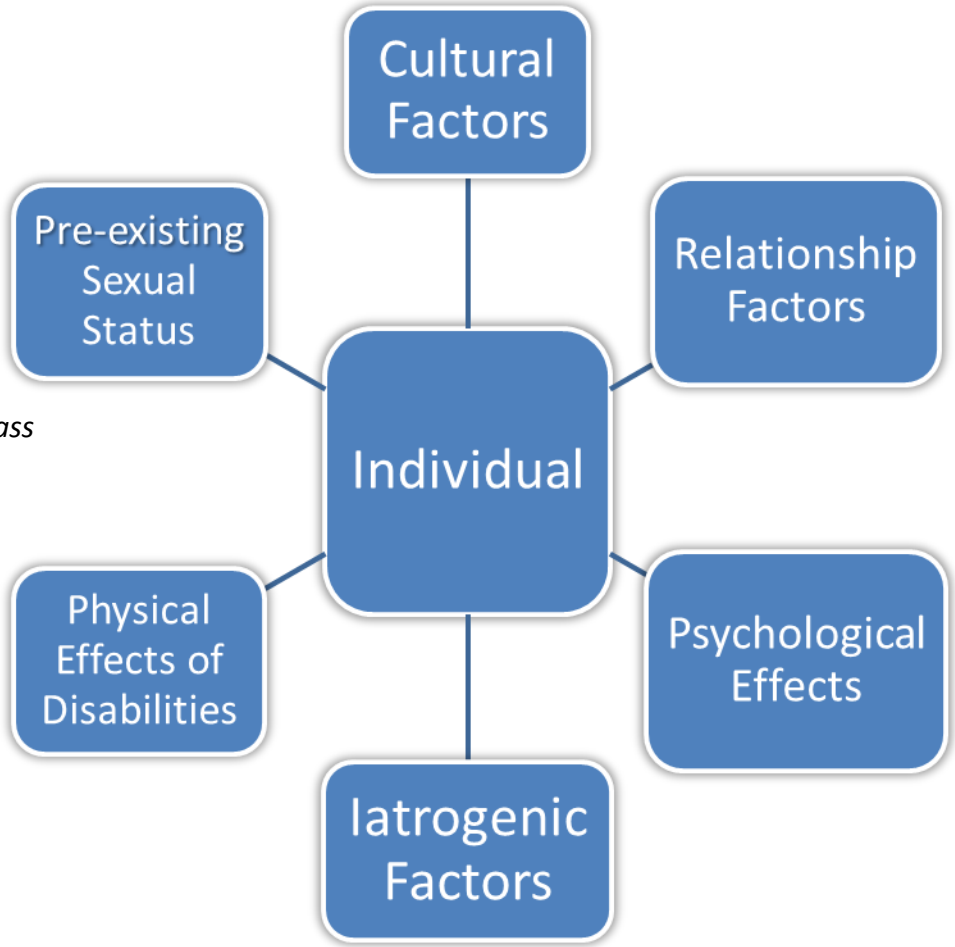
- interpret recent studies of neurophysiology of sexual response and compare the reported impact of specific brain lesions
- understand significant research on TBI and sexuality
- provide a practical framework for understanding and treating sexual concerns after TBI

Issues With Sexuality and TBI

U.S. Army photo by Sgt. 1st Class Stanley Maszczak



U.S. Marine Corps photo by Lance Cpl. D.J. Wu



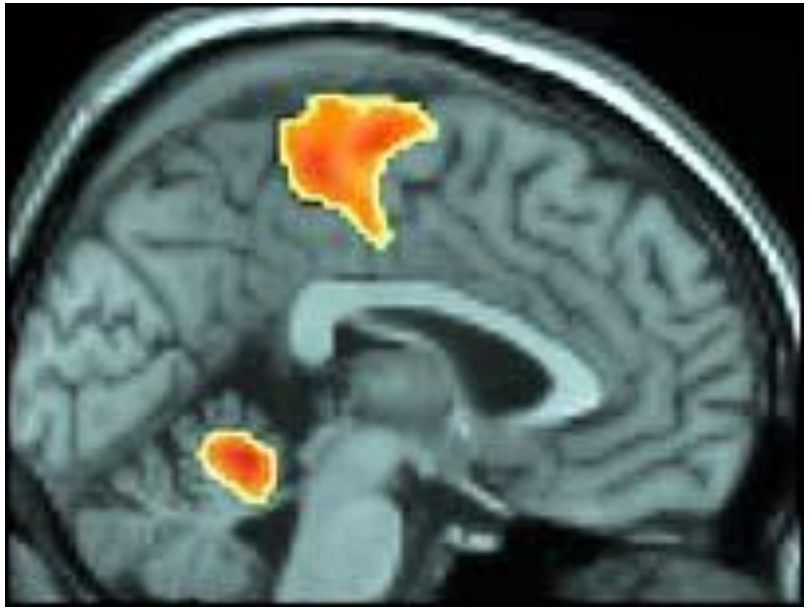
U.S. Marine Corps photo by Cpl. Jeffrey Drew

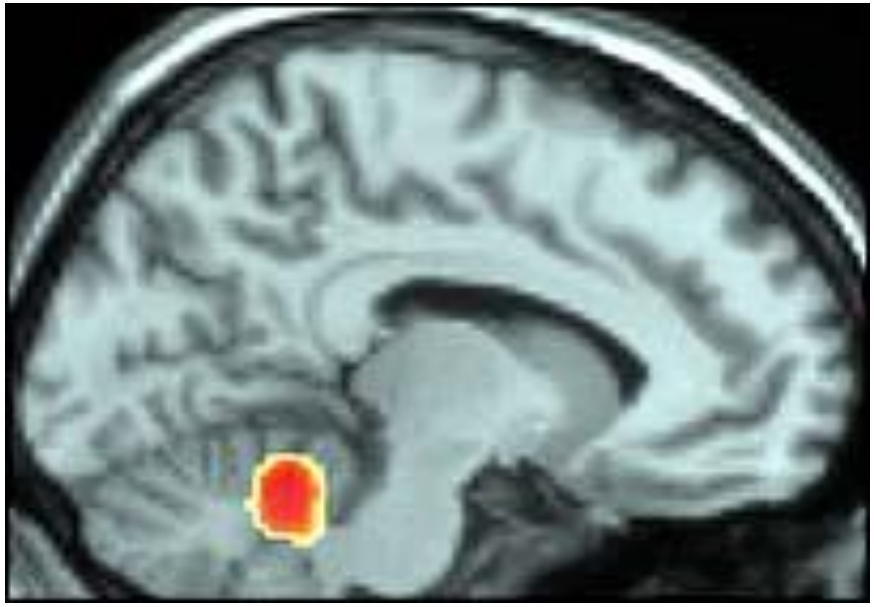
U.S. Army photo illustration by Peggy Frierson

Imaging Studies in Humans

Stock photo

Men Versus Women on Sexual Brain Function





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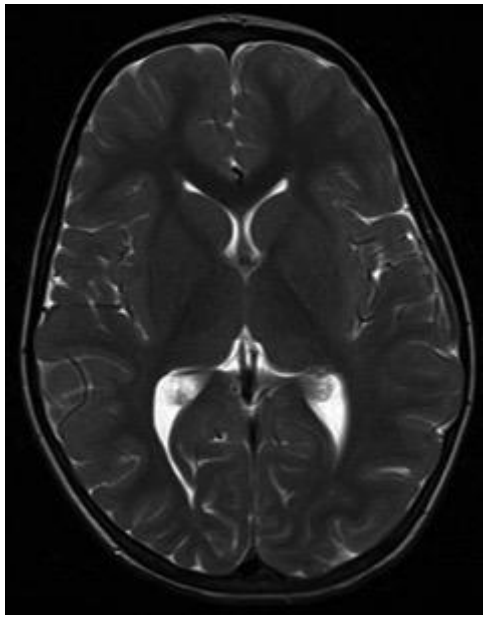
Systematic comparison of brain responses in heterosexual men and women during sexual tactile stimulation and orgasm.

Men Versus Women on Sexual Brain Function: Prominent Differences During Tactile Genital Stimulation, but not During Orgasm Georgiadis et al, 2009

Men Versus Women on Sexual Brain Function

- During tactile genital stimulation, deactivations in the right amygdala and left fusiform gyrus were found in both genders.

- Marked gender differences during tactile stimulation included greater activation in the left fronto-parietal (motor cortices, somatosensory area 2 and posterior parietal cortex) in women; while in men, the right claustrum and ventral occipitotemporal cortex showed greater activation.

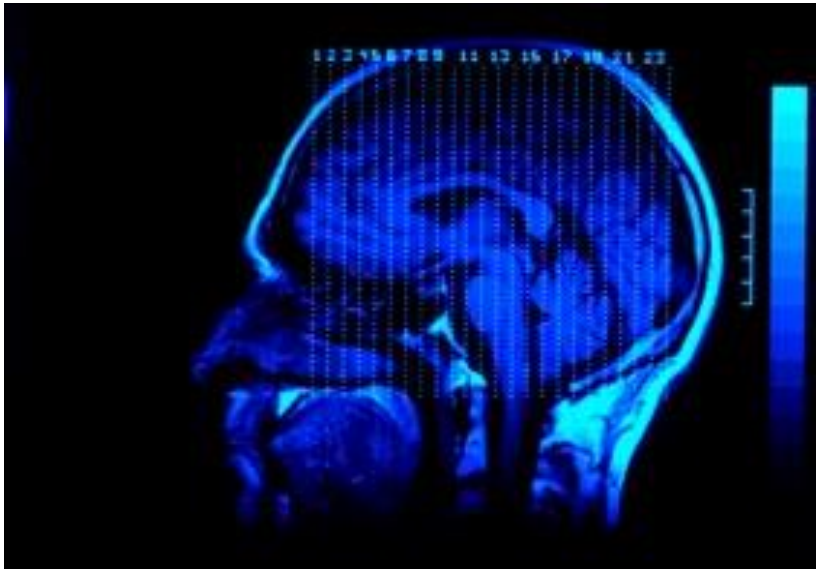


Female MRI Normal Stock Photo

Georgiadis et al, 2009

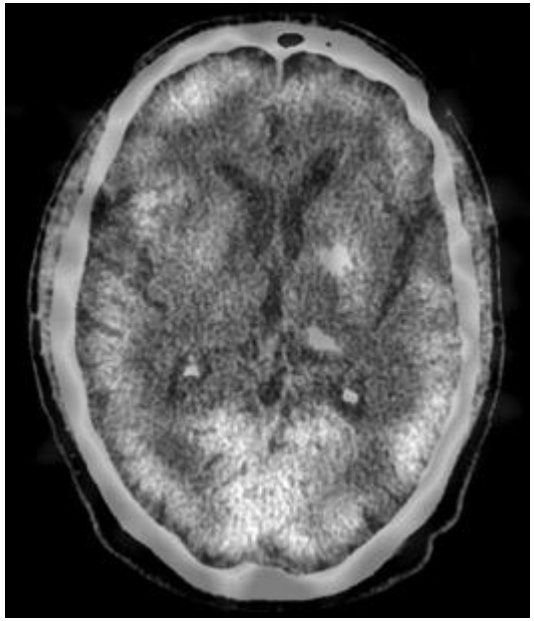
Men Versus Women on Sexual Brain Function

- Commonalities during orgasm were activation in the anterior lobe of the cerebellar vermis and deep cerebellar nuclei and deactivation in the left ventromedial and orbitofrontal cortex.
- During orgasm the only prominent gender difference was male-biased activation of the periaqueductal grey.

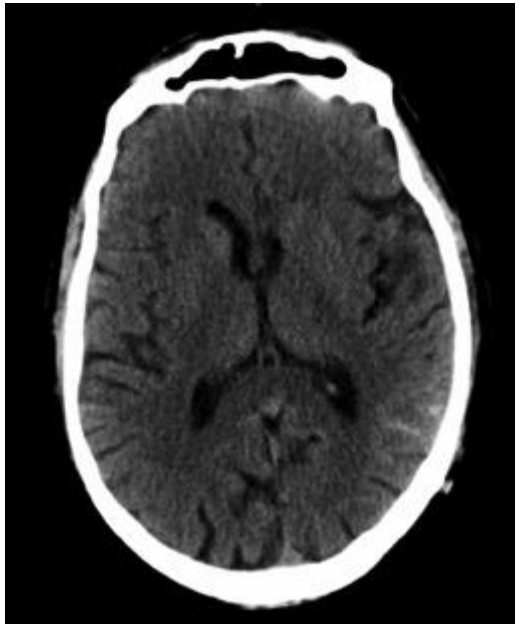


Brain scan
Stock photo

Imaging Studies in Humans



Male CT Scan Normal
Stock photo



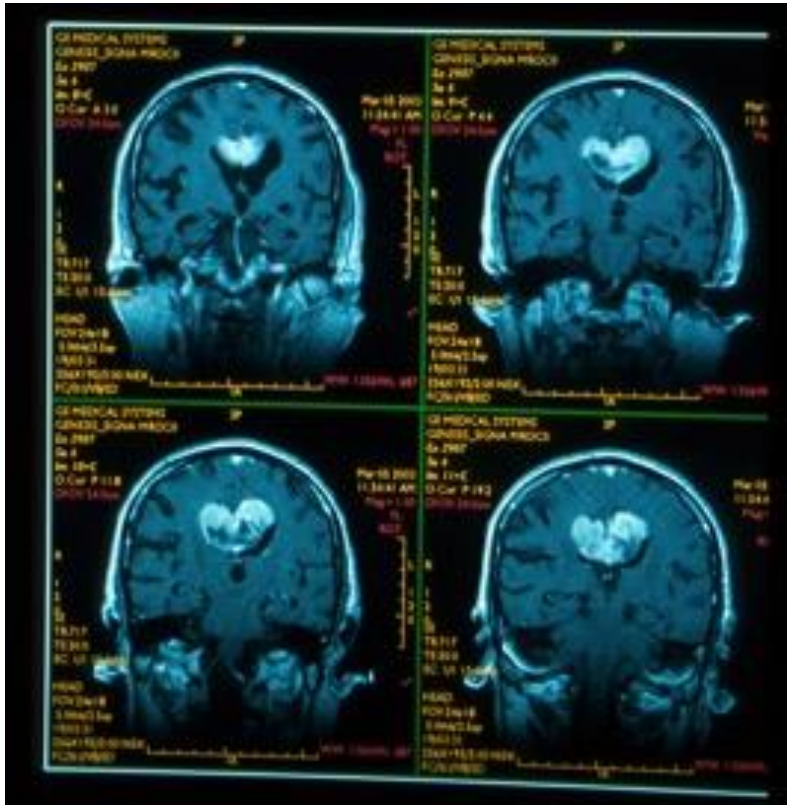
CT Scan – Concussion
Stock photo

What happens in TBI?

Specific Brain Lesions and Consequences

- basal hypothalamus can result in total and irreversible loss of libido (Kosteljanetz, 1981)
- medial basal-frontal or diencephalic injury-hypersexuality (Miller, 1986)
- central and basal frontal areas accompanied by loss of spontaneity and lack of vitality (McClelland, 1988)
- medial temporal lesions hyposexuality (Garden, 1990)

Specific Brain Lesions and Consequences



MRI lesion on corpus callosum
Stock photo

- temporal lobe dysfunction, associated with decreased libido, genital and sexual arousal (Cole, 1990)
- frontal and right-side injuries better function (Sandel, 1996)

Sexual Dysfunction in Male Stroke Patients

Study of 109 male stroke patients versus aged-matched controls

- In cases with lesions in the right cerebellum, a significant ejaculation disorder was most likely to occur.
- In lesions of the left basal ganglia, decreased sexual desire was more likely to occur.

In light of this, do we anticipate an effect on sexual response?

Jung et al, 2008

Effect on Sexual Response

- It seems like the impact of frontal lobe lesions correlates with the deactivation of the left frontal temporal area during orgasm.
- The hypothalamic lesions may go along with endocrine disorder and decreased desire.
- Cerebellar activation does not have correlations with TBI, but there is the mention in a correlation of sexual dysfunction with lesion load of the pons in MS.

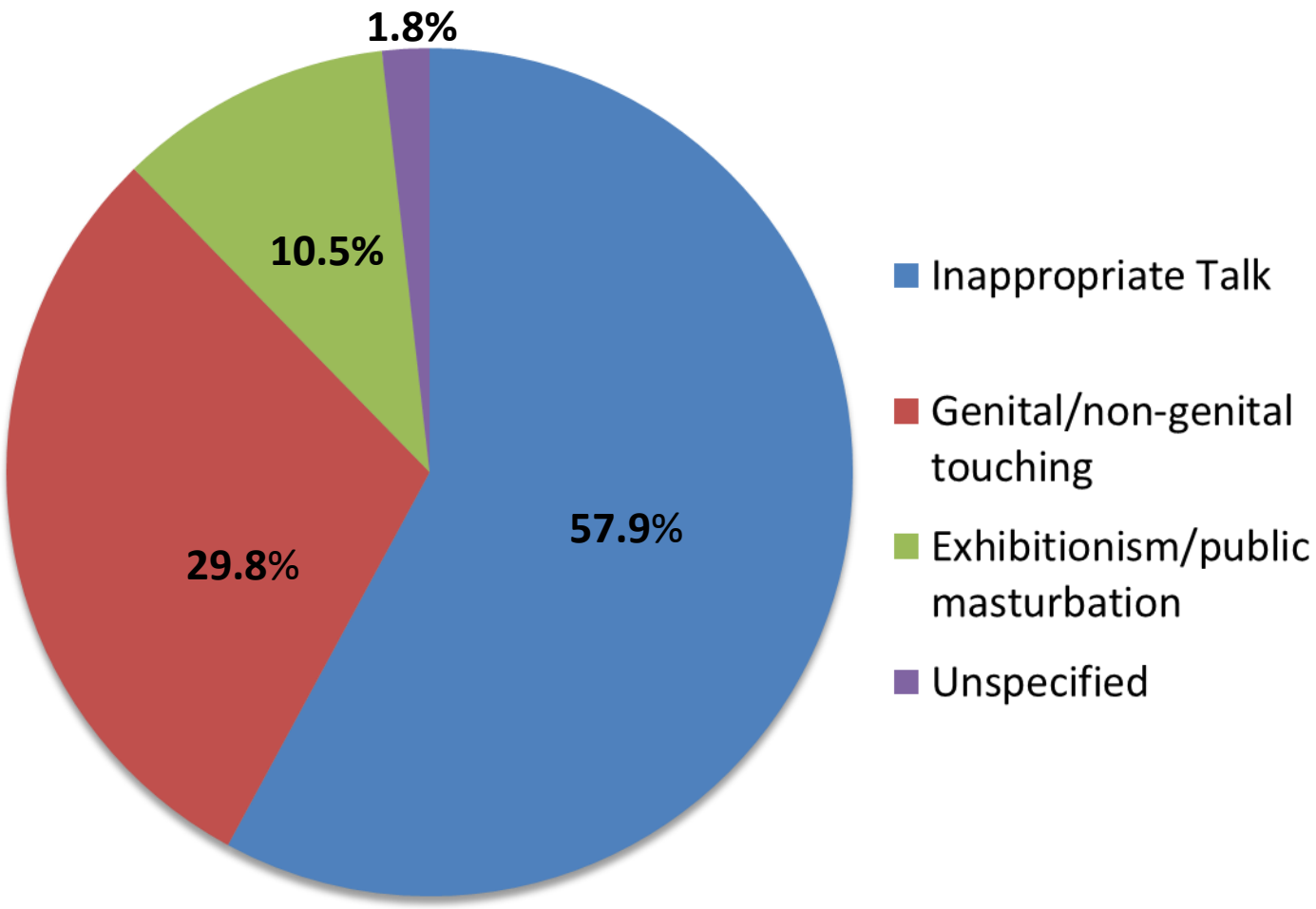
Inappropriate Sexual Behaviors (ISBs)

ISBs are a complex clinical challenge among a minority with severe TBI. In a multicenter, cross-sectional study at 11 community-based rehab centers of New South Wales network:

- Point prevalence of ISB was 8.9 percent 45/507 persons over previous 3 months
- Overt Behavior Scale, Disability Rating Scale, Sydney Psychosocial Reintegration Scale-2, Health of the Nation Outcome Scale-Acquired Brain Injury, Care and Needs Scale
- 43/45 cases ISBs accompanied by other behaviors
- Young and more severe injuries more likely to display ISNs
- ISN more likely to have challenging behaviors, lower social participation, more neuropsychiatric sequelae

Simpson et al, 2014

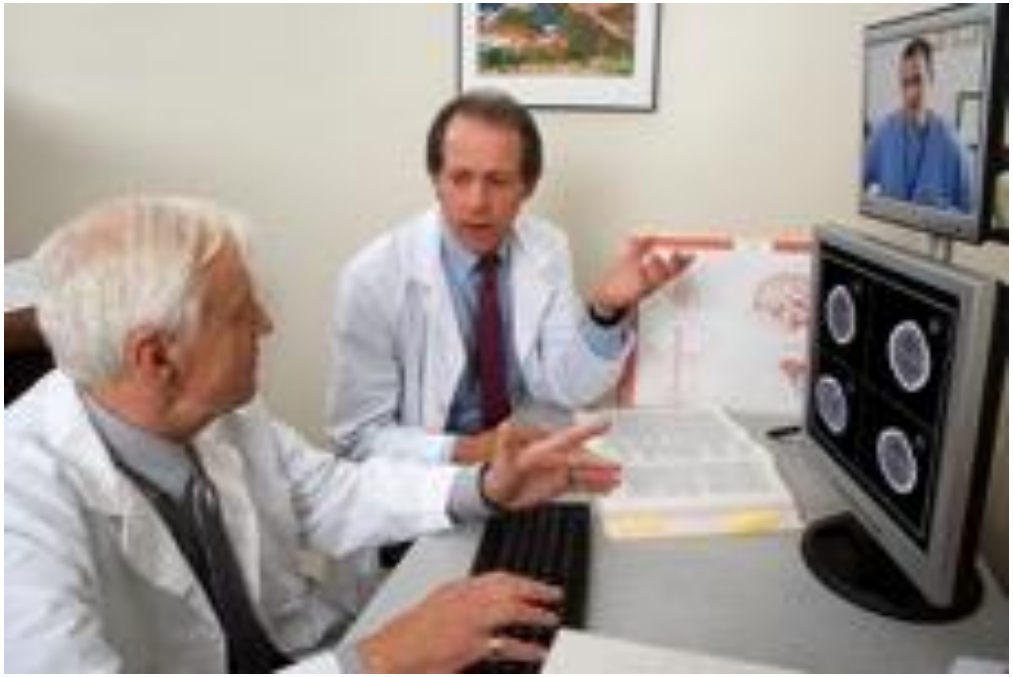
Inappropriate Sexual Behaviors



Simpson et al, 2014

Sexuality and TBI

What does research show?



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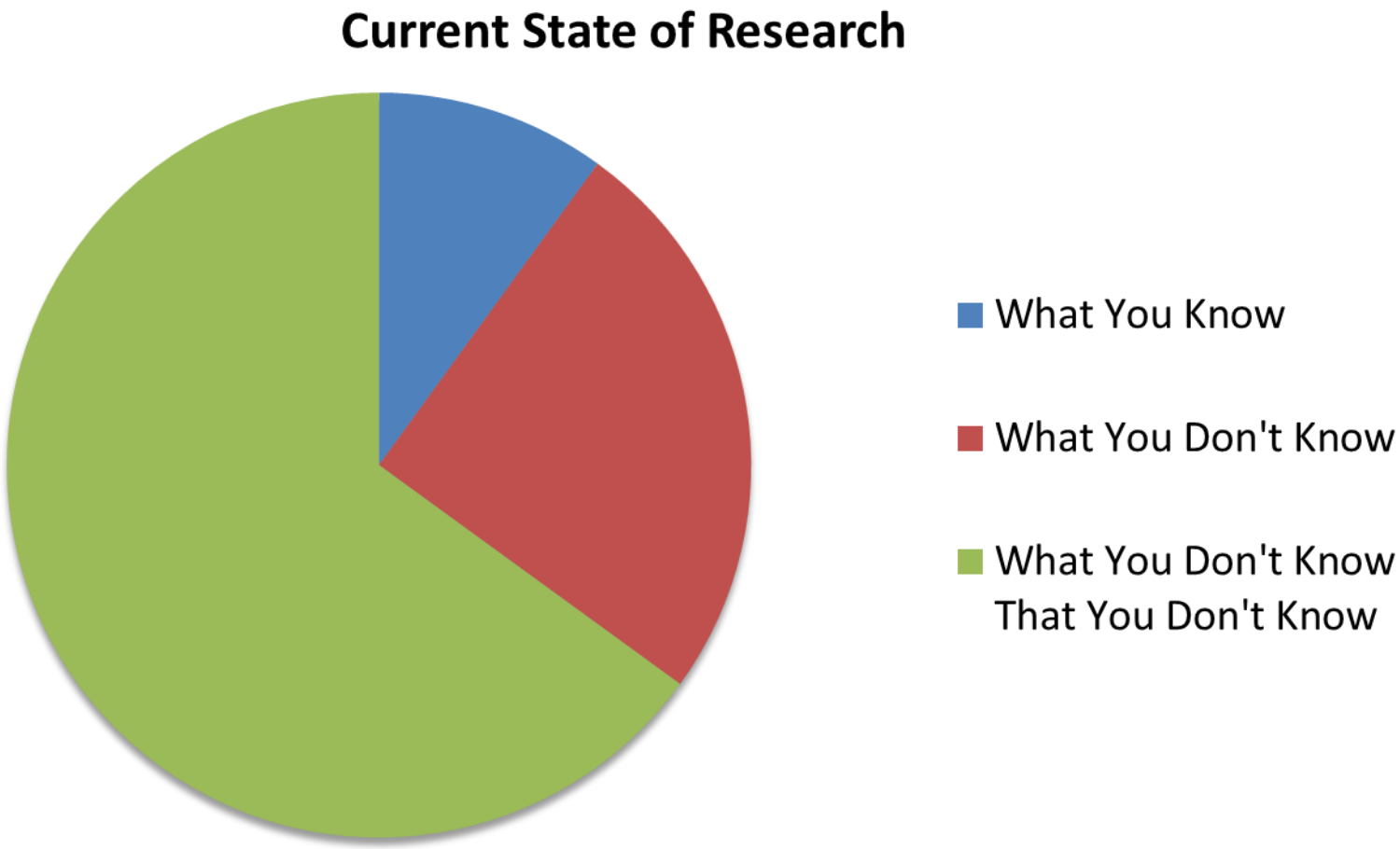
The State of Research Regarding Sexuality and TBI



Sexuality and TBI

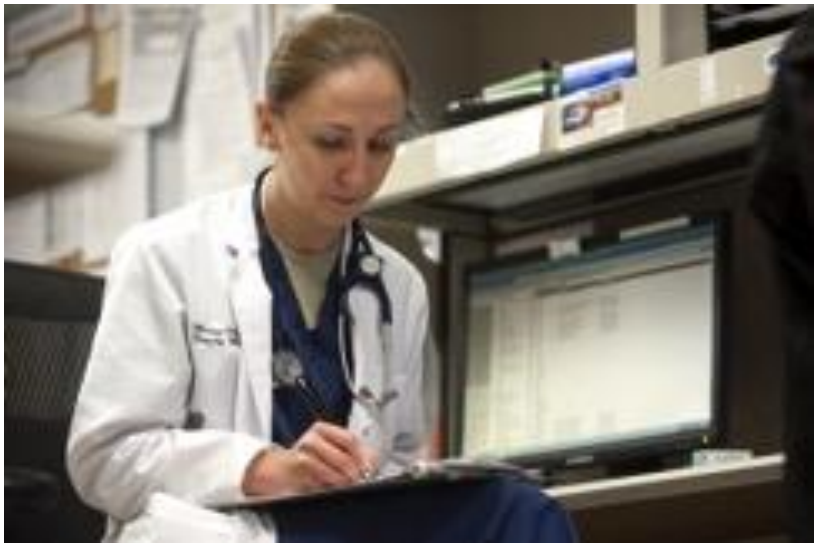
TBI Research Themes

- increased depression, anxiety, fatigue
- decreased interest in and frequency of sexual activity
- increased arousal and orgasmic dysfunction

U.S. Air Force photo by Airman 1st Class R. Alex Durbin

- increased arousal and orgasmic dysfunction
- minimal attention to concomitant issues
- no prospective studies with detailed information regarding location of lesion

Key Studies: Sexuality and TBI



U.S. Air Force photo by Staff Sgt. Christopher Hubenthal

- Kreutzer, 1989
- Sandel, 1996
- Kreuter, 1998
- Hibbard, 2000
- Ponsford, 2003
- Downing et al, (Ponsford), 2013
- Sander et al, 2012, 2013
- Goldin et al, 2014; Simpson et al, 2013

Key Studies: Kreutzer, Zasler 1989

- 21 males, all sexually active 16 months post TBI
- Mean age 39: 4 mild, 5 moderate, 12 severe TBI
- CT: 10 left, 2 right, 6 bilateral abnormalities, 2 normal
- Psychosexual Assessment Questionnaire developed
  - sex behavior
  - affect and self-esteem
  - relationship characteristics
- ↓erection, sex drive, intercourse frequency, self-confidence, sex appeal, ↑depression

Key Studies: Sexual Functioning Following TBI

- mean age 34.6
- 39 males, 13 females
- 56 percent single
- 64 percent PTA over 4 weeks; mean 4 years post TBI
- 26 frontal, 16 other; 12 left, 13 right hemisphere
- DISF in clinic, patient exam, neuropsych testing
- compared to norms ↓orgasm and drive/desire
- total score unrelated to TBI or injury severity
- more recent injury, greater arousal
- frontal: ↑fantasies and more ↑functioning
- right: ↑arousal, experiences

Sandel et al, 1996

Key Studies: Sexual Adjustment and Its Predictors After TBI

- median age 40
- 65 males, 25 females; 53 had stable partners
- PTA average 4 weeks, median 9 years post
- neuro exam with self-assessment of general health, function, mood and collecting data on social conditions, SIS developed
- ?injury location, 77 percent had some paresis, medications described along with clinical symptoms
- 11 percent severe, 66 percent moderate disability, 23 percent good recovery
- ↓erections, ↓orgasm, ↓sexual desire, ↓frequency of intercourse; ↑physical independence and maintained sexual abilities were most important predictors for sex adjustment

Kreuter et al, 1998

Key Studies: Sexual Adjustment and Its Predictors After TBI

- partner issues, self-esteem and feeling attractive were related to changes in sexual activity
- ↑satisfaction-younger at injury, ↑mood, ↑physical, psychosocial functioning and ↑rehab outcomes
- intercourse, orgasm and physical independence significantly predicted sexual satisfaction

Kreuter et al, 1998

Key Studies: Sexual Dysfunction After TBI

- 129 M, 193 F; 40% m, 60% f in relationship; community-based controls, Mean age M 40.8, females 40.1*; 9 years post;
  - M-18%, F-37% mild TBI
  - M-20%, F-18% moderate TBI
  - M-62%, F-45% severe TBI
- Only BDI, Structured QOLI & Health questions-no exam
- TBI - ↑depression, ↓QOL & Health--↑ sexual dysfunction
- Sexual difficulty correlated with TBI but not time post
- F with TBI ↑endocrine versus M; 3 times other W
- ↑F in relationship than M (60% TBI, 66% without)

Hibbard et al, 2000

Key Studies: Sexual Dysfunction After TBI

- Female, mild TBI, ↑age – dysfunction
- 193 male, 129 female, 264 control
- Women ↓ sexual activity than men; women's activity with TBI equal to those without TBI
- TBI ↓ energy for, drive, initiate sexual activities, orgasm, positioning, body movement and sensation, comfort having a partner view one's body, feeling attractive
- Women with TBI ↓ arousal, ability to masturbate, vaginal lubrication, ↑ pain with sex
- Most sensitive predictors of sexual dysfunction in women with TBI were mood and presence of an endocrine disorder

Hibbard et al, 2000

Key Studies: Sexual Changes Associated With TBI

- 208 people moderate to severe TBI – 143 males, 65 females; 56 percent never married
- Questionnaire 1-5 years post, AB controls
- Relationship: 78 percent prior TBI versus 50 percent now
- Questionnaire based on Kreutzer, HADs
- TBI: ↓self-confidence, sex appeal, ↑ depression, ↑anxiety
- ↓importance of sex, drive, frequency of sex, ability to satisfy partner, frequency of intercourse, enjoyment, arousal, climax, verbal communication with partner and relationship quality
- Contributing factors: 47 percent fatigue, 31 percent mobility, 22 percent pain, 19 percent ↓sensitivity

Ponsford, 2003

Key Studies: Sexual Changes Associated With TBI

U.S. Air Force photo by Airman 1st Class Kenneth Norman

- No significant correlations on sex scale with injury severity, PTA, gender, age, time post TBI
- TBI 46-55 greatest ↓quality and frequency of sex experiences
- Antidepressants and antispasticity→ ↓sex scores

Ponsford, 2003

Key Studies: Sexual Functioning 1 year After TBI

- 165 males, 58 females at 6 model systems
- Mean age 37
- 69 percent white, 10 to 14 months post TBI, 66 percent severe TBI
- 53 percent single, 82 percent sexually active in past year; 69 percent regular partner
- Multicenter, DISF-SR; GSSI, structured interview
- No physical exam
- Post TBI - 55 percent ↓frequency, 34 percent ↓desire/drive, 29 percent ↓ importance of sex, 34 percent opportunity ↓
- 31.9 percent men; 21.4 percent women dissatisfied
- Women with TBI were ↓ than norms all areas; 1/3 of women with TBI had scores consistent with impaired sexual functioning in all areas

Sander et al, 2012

Key Studies: Sander et al, 2013

- 187 males, 68 females with TBI in community
- Mean age 38, 73 percent male, 50 percent single
- 10-14 months post TBI, average PHQ-9 showed mild depression, PART-O low levels of participation
- Multicenter, DISF-SR, GSSI, PART-O, PHQ-9
- No physical exam
- TBI females ↓than males-sexual cognition/fantasy and arousal
- Males: 32 percent ↓orgasm; 24 percent ↓arousal
  - 69 percent would discuss sex with their doctor
  - 22 percent only if doctor asked
  - 10 percent wouldn't
- Females: Increased age and increased depression predicted an increased possibility of being sexually dissatisfied

Sander et al, 2013

Key Studies: Hanks et al, 2013

- 129 males, 43 females
- mean age 27, mean Glasgow Coma Scale (GCS) 10.8
- 46 percent married
- multicenter prospective cohort study, DISF-SR, GSSI no physical exam

Greatest concerns were in the area of arousal and orgasm. Older people and women were particularly concerned about their functioning at both the 6 and 12 month time points.

Minimal improvement was noted in arousal from 6-12 months post injury, otherwise there was relative stability in sexual functioning and satisfaction from 6-12 months post injury.

Hanks et al, 2013

Key Studies: Stolwyk et al, 2013

- 865 people with TBI
- 70.3 male, 29.7% female
- 32.4% in relationship
- mean age at injury: 31.2
  - 45.9% 1-year post
  - 14.6% 2-years post
  - 9.5% 3-years post
  - 9.6% 5-years post
  - 15.4% 10-years post
  - 2.1% 20-years post

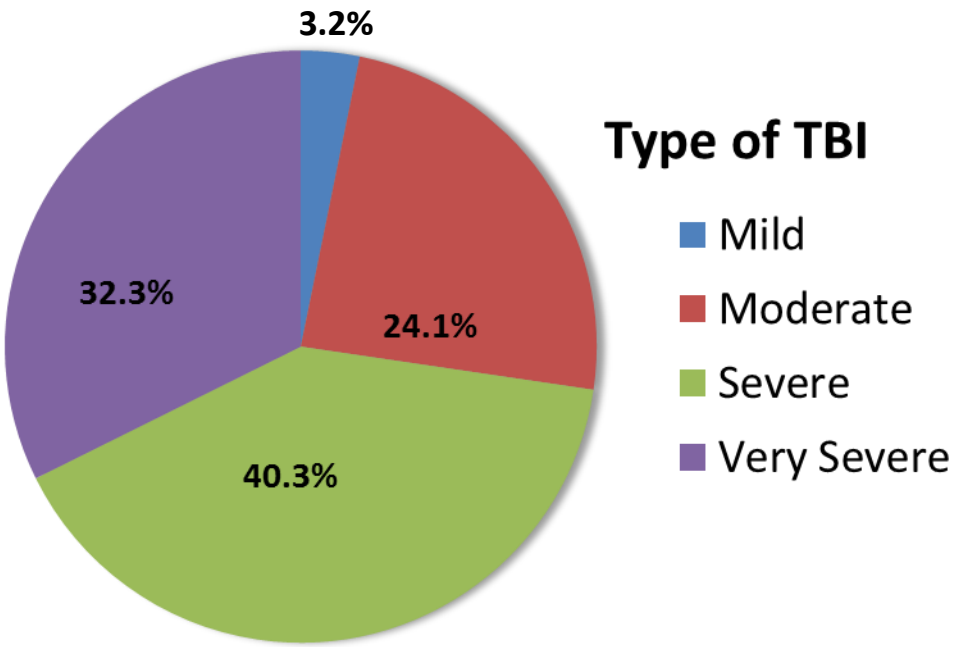
U.S. Navy Photo

- created new scale based upon Kreutzer and Zasler's and demonstrated reliability and validity of BIQS; subset DISF-R
- three subscale structure: sexual functions and behaviors, relationship quality and self-esteem and mood

Key Studies: Downing et al, 2013

- 865 TBI; 70.3 percent male, 29.7 percent female
- mean age: 34.7
- PTA mean: 27.6 days
- 58.4 percent never married
- 77.8 percent TBI, 84.7 percent controls

  reported opportunities for sex
- BIQS, HADs, RSES



Key Studies: Downing et al, 2013

- 832 CT: 41.5 percent frontal, 29.1 percent temporal
- TBI ↓ sexual function, relationship quality, mood, total sexuality
- People with TBI attributed ↓ sexual function to fatigue, low confidence, pain, ↓mobility, feeling unattractive
- Age, anxiety, depression, self-esteem ↓sex

Key Studies: Ponsford et al, 2013

- 986 TBI; 68.6 percent male, 53 percent never married, 30 percent married, 6 percent relationship
- Mean age 35 at injury, age 40 at assessment
- Mean post-traumatic amnesia 27 days, GCS 9
- BIQs, HADs, RSES & ADL assessments serially - 1673 assessments
- 447 completed more than once: 256 twice, 144 three times, 45 four times and 2 five times
- 39 percent clinically depressed, 50 percent clinically anxious, 30 percent ↓self-esteem, 47 percent no medications,

  7 percent antidepressants

Key Studies: Factors Associated With Sexuality Following TBI

- People completing multiple times less likely in a relationship
- No association between overall sexuality scores or sexual function and PTA duration
- Antidepressants, ↑depression, ↑age=↓Brain Injury Questionnaire of Sexuality score
- ↑time since injury, ↑activities of daily life = ↑Brain Injury Questionnaire of Sexuality score

Ponsford et al, 2013

Key Studies: Sexual Functioning and the Effect of Fatigue in TBI

- 220 community-based adults with mild to severe TBI
  - 38 percent mild TBI, 62 percent moderate to severe
  - mean age 48; mean age at injury 34
  - 19 percent in relationship
- 83 controls mean age 43; 16 percent in relationship
- POPS, Fatigue Assessment Instrument, Global Fatigue Index, Beck Depression Inventory, SF-36 Health Survey
- No differences between groups in sex frequency, desired frequency or satisfaction! Without TBI, sex was more important.
- After TBI higher global, situational fatigue and fatigue consequences

Goldin et al, 2014

Key Studies: Sexual Functioning and the Effect of Fatigue in TBI

- fatigue related to frequency of sexual activity with and without TBI
- fatigue post TBI was also closely related to ratings of desired frequency and importance for sex
- fatigue seemed to affect sexual function with TBI, greater than without TBI
- women with TBI: less frequency of sex and sex act less important than men

U.S. Air Force photo

Goldin et al, 2014

Summary: After TBI

- decreased participation in sexual activities, decreased importance of sex, satisfaction, arousal and orgasm
- increased sexual dysfunction
- younger, less depressed or anxious, without endocrine disorder may do better
- no research that isolates specific injuries with sexual responses, use of medications, partner issues, solely in women, no attention to sexual orientation, treatment
- no real association between degree of injury and sexual dysfunction; no comprehensive, prospective studies using MRI, PET or fMRI

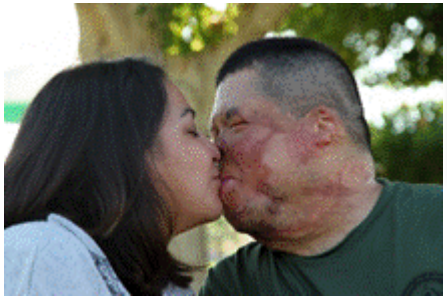
Stroke Effects on Sexuality

A Common Theme?

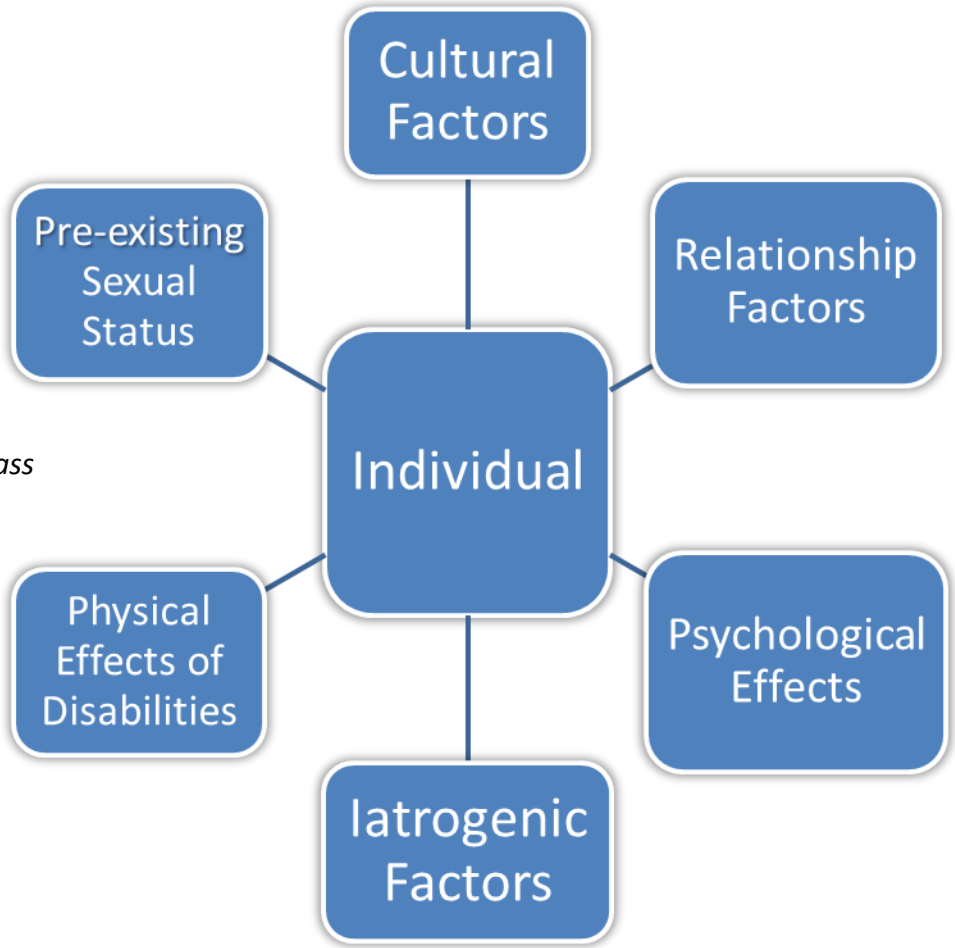
- decreased satisfaction
- decreased interest
- decreased frequency of activity
- psychosocial, medication and concomitant medical concerns
- decreased arousal and orgasm. . .

Issues With Sexuality and TBI

U.S. Army photo by Sgt. 1st Class Stanley Maszczak



U.S. Marine Corps photo by Lance Cpl. D.J. Wu



U.S. Marine Corps photo by Cpl. Jeffrey Drew

U.S. Army photo illustration by Peggy Frierson

Recipe for Sustaining Sexuality After TBI

- Let the patient/partner know you will help them with sexual concerns.
- Ask about issues before injury.
- Do a complete exam, so any other potential sources of sexual dysfunctions are ID'd.
- Educate patient/partner about impact of TBI.

U.S. Army photo by Spc. Tegan Kucera

- Routine: Ask how things are going in this area.
- Try to promote wellness therapies as opposed to medical solutions.
- Treat first with the basics and then with other techniques.
- Don't forget the partner.

Issues With Sexuality and TBI: Pre-Existing Status

Stock photo courtesy of VA

- age
- sexual history
- relationship status
- prior dysfunction

Pre-existing Illness and Sexual Status

Headache

Stock photo courtesy of VA

Chronic Pain

U.S. Air Force photo by Master Sgt. Efrain Gonzalez

Hypertension

Stock photo courtesy of VA

Vascular Disease

Diabetes

Depression

Stock Photo

Issues With Sexuality and TBI: Cultural Factors

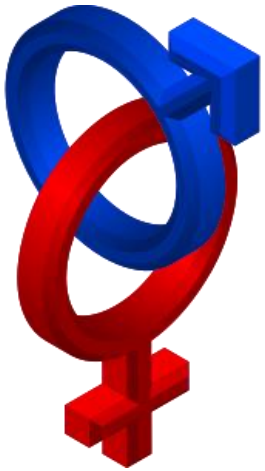
Courtesy Photo

- What is the cultural take on sex?
- What about disability and the culture?
- What does the person's culture say about sexuality and disability?

2014 study regarding TBI and sexuality:

"The study could not include female subjects because of cultural taboos and comfort level observed during the pilot phase of the study."

Issues With Sexuality and TBI: Cultural Factors



Images clockwise from top right: U.S. Air Force photo by Senior Airman Ashley Nicole Taylor; U.S. Navy public health poster; two World War II-era public health posters; and two U.S. Navy images. Male-female symbol is from openclipart.org.

TBI Impacts Relationships

- Partners are frustrated, need counseling, feel like they live with a stranger.
- Disability makes it harder to find a partner.
- Social skills deficits, communication problems, poor judgment, decreased affection cause emotional distance.
- Role reversals occur.
- Couples therapy is important.

Stock photo courtesy of VA

Cognitive, Emotional, Behavioral Effects of TBI

- depression
- ↓processing
- ↓verbal and working memory
- ↓attention
- emotional lability
- anxiety
- impulsivity
- inflexibility
- self-centeredness
- ↓behavior, language and communication
- sleep disturbance
- deficits in facial emotion perception
- sleep disturbance
- agitation
- aggression
- OCD
- PTSD
- psychosis
- personality change
- perseveration
- wandering
- anosognosia

Medications

- SSRIs
- Anticonvulsants
- Gabapentin, Lyrica
- Narcotics
- Muscle relaxers (e.g., Baclofen)
- Antihypertensives

Stock photo

Physical Effects of TBI

- fatigue
- headache
- speech problems
- pain, spasticity
- paralysis
- bladder and bowel incontinence
- sexual problems
- sleep disorders
- auditory and visual impairment

- impaired balance, dizziness
- epilepsy
- dysphagia
- orofacial hypersensitivity

U.S. Army courtesy graphic

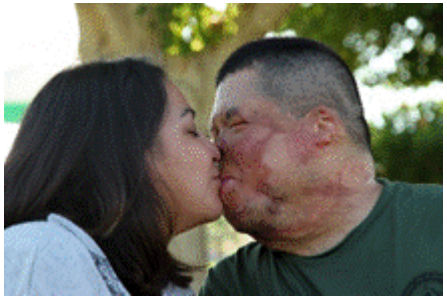
Stock photo courtesy of VA

DoD photo by Donna Miles

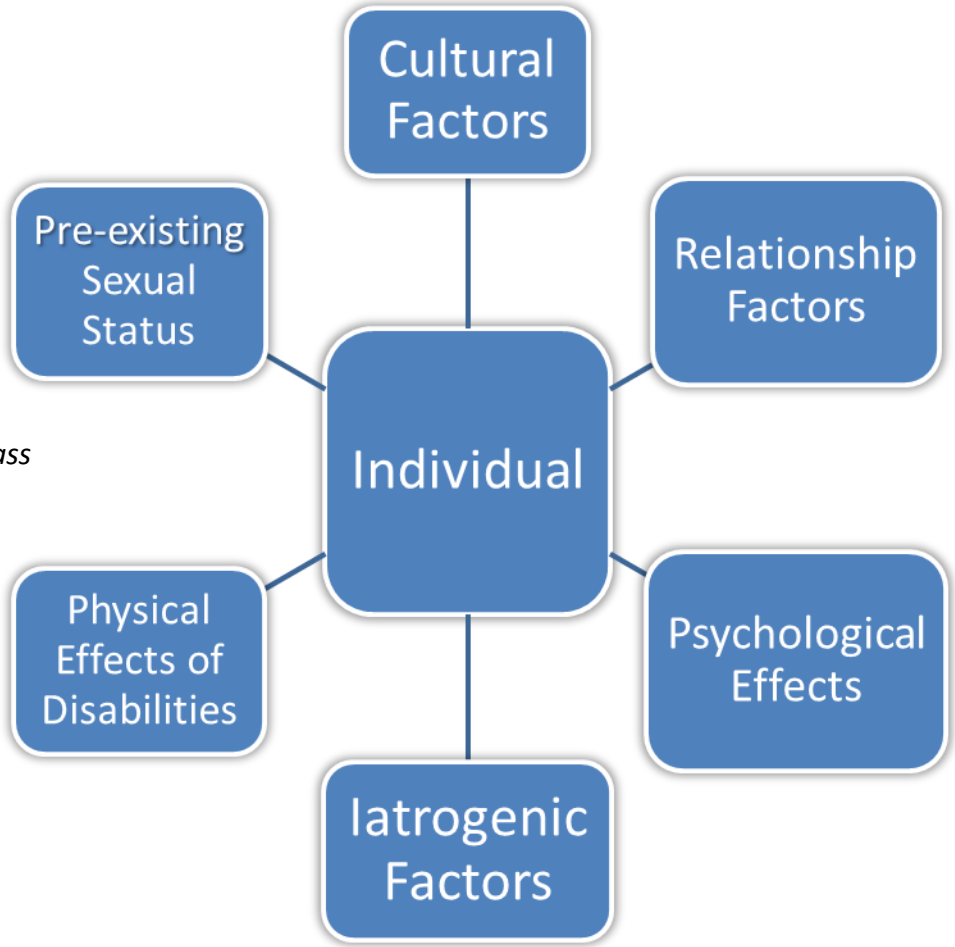
U.S. Army photo

Issues With Sexuality and TBI

U.S. Army photo by Sgt. 1st Class Stanley Maszczak



U.S. Marine Corps photo by Lance Cpl. D.J. Wu



U.S. Marine Corps photo by Cpl. Jeffrey Drew

U.S. Army photo illustration by Peggy Frierson

Recipe for Sustaining Sexuality After TBI

- Let the patient/partner know you will help them with sexual concerns.
- Ask about issues before injury.
- Do a complete exam, so any other potential sources of sexual dysfunctions are ID'd.
- Educate patient/partner about impact of TBI.

U.S. Army photo by Spc. Tegan Kucera

- Routine: Ask how things are going in this area.
- Try to promote wellness therapies as opposed to medical solutions.
- Treat first with the basics and then with other techniques.
- Don't forget the partner.

Talking About Sex

U.S. Army photo

Your comfort level affects people's ability to communicate about sex. If you don't feel comfortable talking, use audiovisuals or discussion groups. Seek help!

Patient Name _____

Examiner Name _____ Date/Time of Exam _____

ASIA AMERICAN SPINAL INJURY ASSOCIATION

STANDARD NEUROLOGICAL CLASSIFICATION OF SPINAL CORD INJURY

ISCOS

MOTOR

KEY MUSCLES (scoring on reverse side)

	R	L	
C5			Elbow flexors
C6			Wrist extensors
C7			Elbow extensors
C8			Finger flexors (distal phalanx of middle finger)
T1			Finger abductors (little finger)
UPPER LIMB TOTAL (MAXIMUM)		+	=

Comments:

Source: American Spinal Injury Association: International Standards for Neurological Classification of Spinal Cord Injury, revised 2013; Atlanta, GA. Reprinted 2013

	R	L	
L2			Hip flexors
L3			Knee extensors
L4			Ankle dorsiflexors
L5			Long toe extensors
S1			Ankle plantar flexors

Voluntary anal contraction (Yes/No)

LOWER LIMB TOTAL (MAXIMUM) + =

SENSORY

KEY SENSORY POINTS

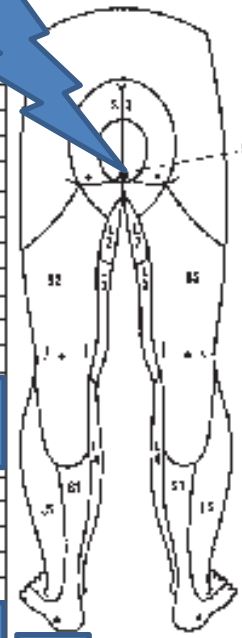
0 = absent
1 = impaired
2 = normal
NT = not testable

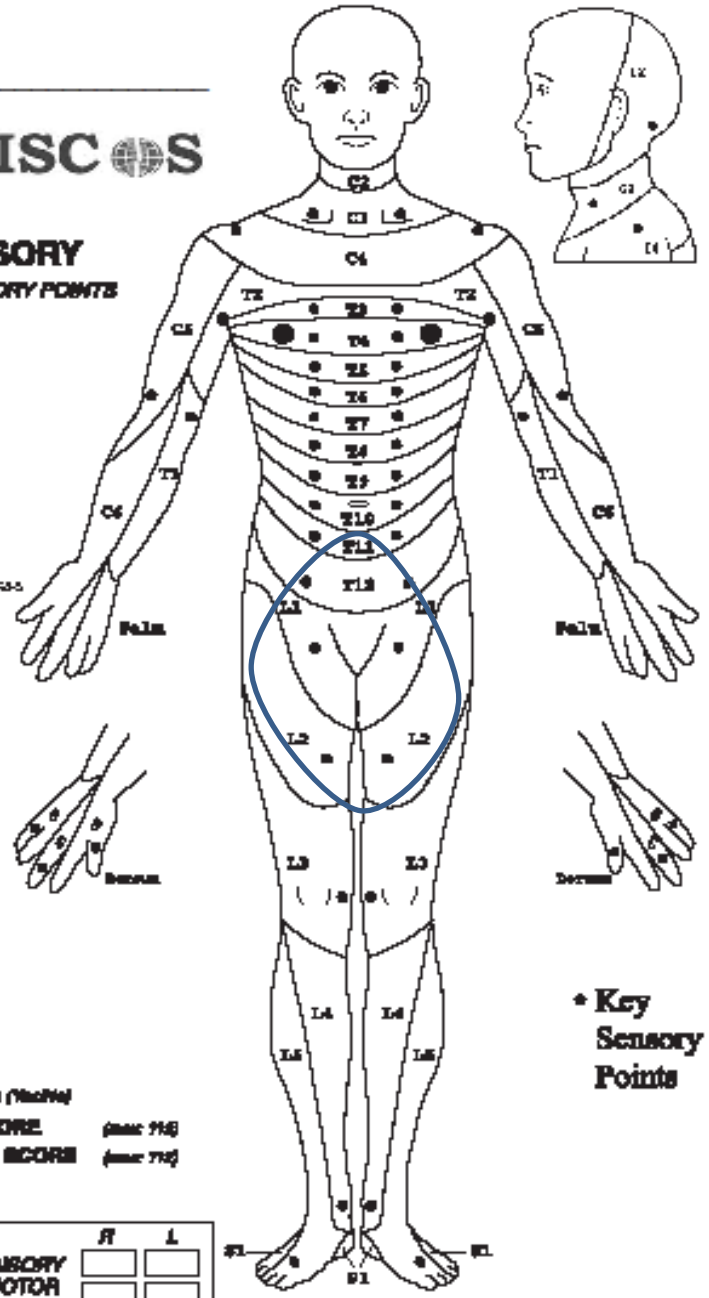
	LIGHT TOUCH R	LIGHT TOUCH L	PIN PRICK R	PIN PRICK L
C2				
C3				
C4				
C5				
C6				
C7				
C8				
T1				
T2				
T3				
T4				
T5				
T6				
T7				
T8				
T9				
T10				
T11				
T12				
L1				
L2				
L3				
L4				
L5				
S1				
S2				
S3				
S4-5				

Any anal sensation (Yes/No)

TOTALS { + = PIN PRICK SCORE (max 112)

+ = LIGHT TOUCH SCORE (max 112)





* Key Sensory Points

NEUROLOGICAL LEVEL (The most caudal segment with normal function)

	R	L
SENSORY		
MOTOR		

COMPLETE OR INCOMPLETE? (If complete – key motor or sensory function in S4-5)

ASIA IMPAIRMENT SCALE

ZONE OF PARTIAL PRESERVATION (Caudal most of partially innervated segments)

	R	L
SENSORY		
MOTOR		

This form may be copied freely but should not be altered without permission from the American Spinal Injury Association.

REV 02/06

History and Physical Exam

Look/listen for the following:

- absence of pulses
- hypersensitivity
- evidence of neuropathy, previous surgeries, other endocrine dysfunction
- significant cardiovascular disease
- other meds/treatments

Stock photo

Education Precedes Treatment

- Be **POSITIVE**!
- Educate patient and partner on the effect of TBI on communication, self-esteem, relationship dynamics, fatigue, movements during sexual activities, erection, orgasm, etc.
- **Solutions:** Recommend timing of encounters, positioning, and planning for romance.
- **Treatment:** Start basic. For example, suggest relaxation, lubricant, exercise, or decreasing medications rather than just adding new drugs or prescribing more stuff!

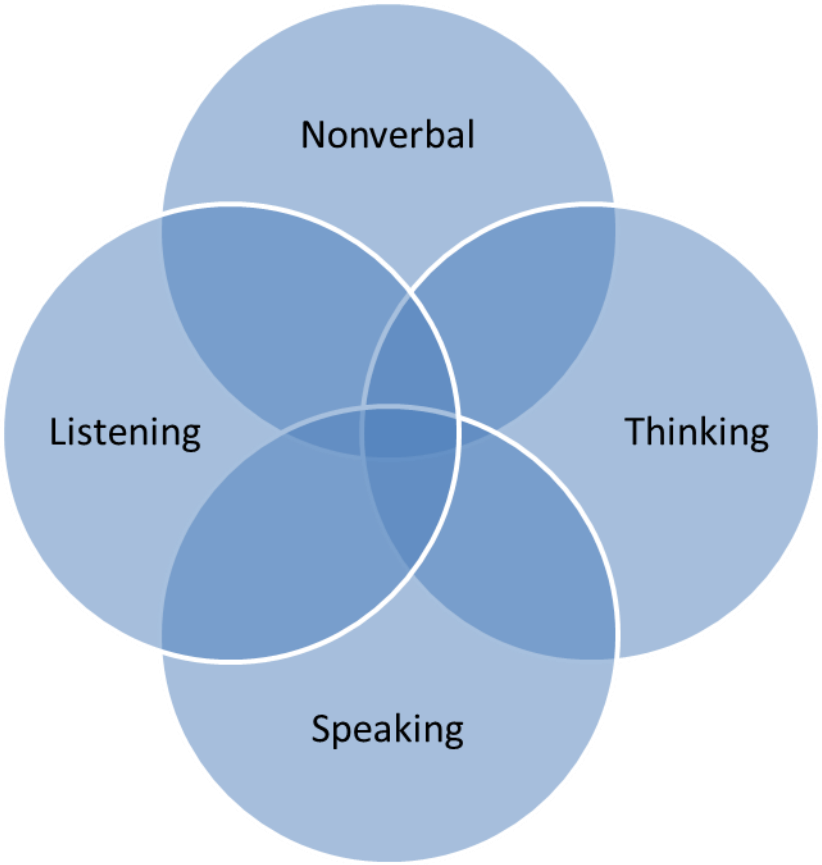
Recipe for Sustaining Sexuality After TBI

- Let the patient/partner know you will help them with sexual concerns.
- Ask about issues before injury.
- Do a complete exam, so any other potential sources of sexual dysfunctions are ID'd.
- Educate patient/partner about impact of TBI.

U.S. Army photo by Spc. Tegan Kucera

- Routine: Ask how things are going in this area.
- Try to promote wellness therapies as opposed to medical solutions.
- Treat first with the basics and then with other techniques.
- Don't forget the partner.

The Four Communication Skills



U.S. Air Force photos by Louis A. Arana-Barradas

Basic Treatments for Both Sexes

- Decrease medications that can cause problems.
- Bring couples together to communicate.
- Provide further education and solutions to problems such as scheduling sex to avoid fatigue, and using lubricants and positioning.
- Promote wellness, exercise and mindfulness.
- Discourage use of illicit drugs.

U.S. Army Photo by Sgt. 1st Class Sheryl L. Lawry

Dysfunction in Women

- hypoactive sexual desire
- arousal dysfunction
- orgasm dysfunction
- sexual pain disorder
- women need to experience distress as a result of the dysfunction

U.S. Army photo

New Treatments for Women (and ones that didn't pass…)

226 Studies on ClinicalTrials.gov

- water-based lubricant
- vibratory stimulation
- Eros therapy device
- ospemifene

Eros Therapy device
Photo courtesy of NuGyn Inc.

Under evaluation or previously evaluated

- flibanserin
- testosterone
- bremelanotide
- exercise
- mindfulness
- alprostadil
- sildenafil, tadalafil
- midodrine

Type of Dysfunction in Men

U.S. Army photo by Spc. Clifford Coy

- decreased libido
- erectile dysfunction
- premature, retrograde ejaculation
- ejaculatory insufficiency
- orgasmic dysfunction

Medications for Male Dysfunction

- sildenafil, vardenafil: 1-4 hours side effects include dizziness, headache, visual changes; contraindicated with nitrates
- watch out for alpha blockers, antiarrhythmics, antiseizure meds, HIV drugs, antibiotics
- also used for pulmonary hypertension
- tadalafil: 15 minutes to 36 hours

U.S. Air Force Photo

Other Options

Penile Prosthetics

Good News	Bad News
work well	infection/extrusion
technology has evolved	permanent
	high cost

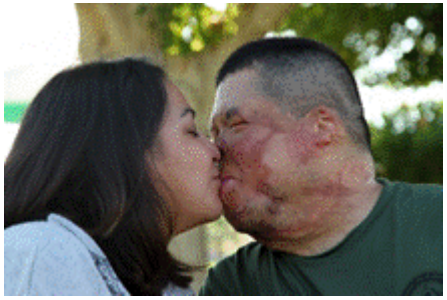
Images © 2014 American Medical Systems Inc.

For Other Dysfunctions

1. promescent lidocaine spray
2. midodrine to improve orgasmic capability
   - being used in Canada and France

Issues With Sexuality and TBI

U.S. Army photo by Sgt. 1st Class Stanley Maszczak



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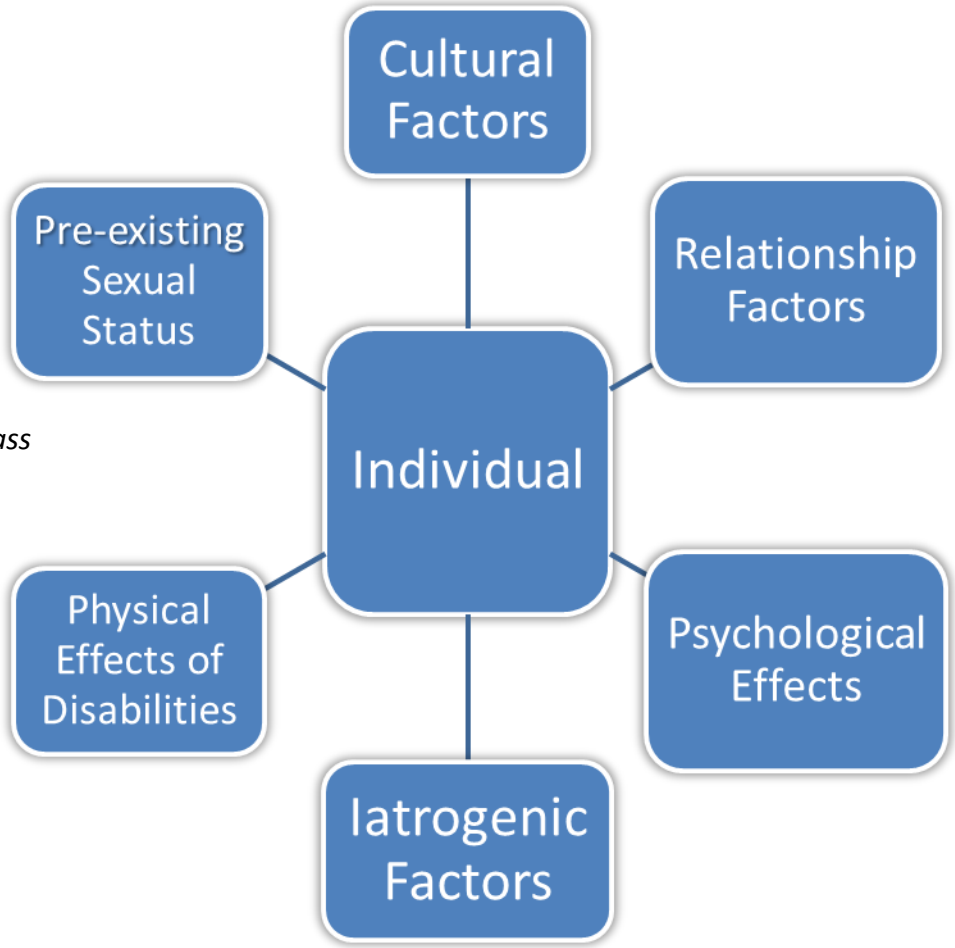

U.S. Marine Corps photo by Cpl. Jeffrey Drew

U.S. Army photo illustration by Peggy Frierson

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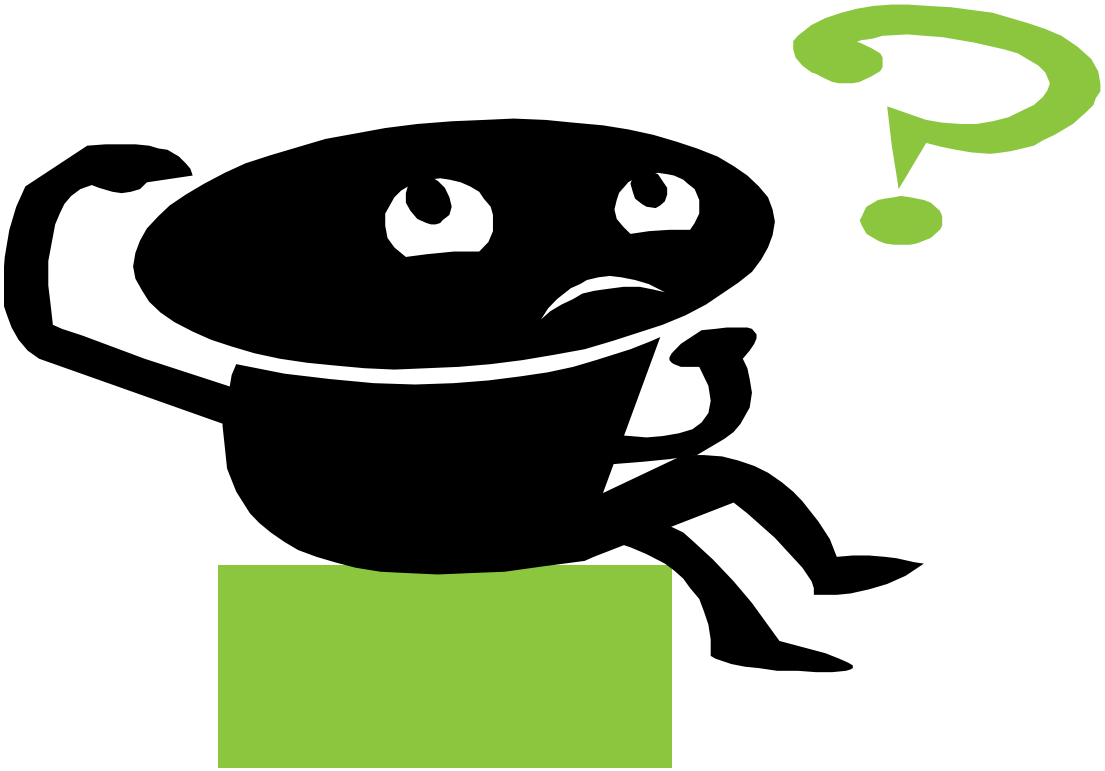
Questions



Continuing Education Details

- In order to qualify for CEUs, the program evaluation and post test must be completed by **December 7, 2014** with a passing score of 80%.

- **VHA** participants:
  - **Must be preregistered** to complete the evaluation and post test in TMS.
  - Email Christopher.white3@va.gov if you were unable to register before the webinar started.
  - Certificate of completion may be printed through TMS upon successful completion.
- **Non-VA** participants:
  - Complete and email the program's fillable PDF Non-VA Evaluation Form to EESEPC@va.gov

Save the Date

DCoE TBI Webinar: "Technology Interventions for TBI"
David C. Cooper, Psy.D.
November 13, 2014
1:00-2:30 p.m. (EST)

VA/DVBIC TBI Clinical Grand Rounds Webinar:
Tracey Covassin, Ph.D.
Feb 3, 2015
12:00-1:15 p.m. (EST)

VA/DVBIC TBI Clinical Grand Rounds POCs

- **DOD:**

Sherray Holland Sherray.L.Holland.ctr@mail.mil and Maureen Dawson Maureen.Dawson@gdit.com

- **VHA and all other federal partners:**

Christopher White Christopher.white3@va.gov