

CBLM: SEXUAL HEALTH

INTRODUCTION

After suffering a spinal cord injury (SCI), issues pertaining to sexual health may affect an individual throughout one's life. The effects of SCI depend on the level and completeness of injury and can impact genital sensation, arousal, orgasm¹ and fertility. Behaviours, concerns and interests related to sex may change over time², and persons with SCI may benefit from having resources and information available to help them for this important topic.³

The example cases will highlight common issues, investigations and treatments related to sexual health. This module will enable clinicians to:

- Review the pathophysiology and the impact of SCI on sexual function
- Understand common sexual health issues affecting men and women with SCI and treatment options

CASES

Case 1: Glen, age 48

Glen is a 48-year-old paraplegic patient who is new to your family medicine practice. He has an incomplete injury at the T5 level sustained two years ago after falling 15 feet from a ladder. This is your second interaction with Glen and, at the urging of his wife, he has made an appointment to discuss some issues he is having. Glen tells you that he is unable to get an erection when attempting to have intercourse and is becoming increasingly frustrated. His wife is with him in your office.

What information should you ask for from Glen?

- *Complete history, with special attention paid to pre- and post-SCI conditions (sensation level; can he ejaculate), and current medications he is taking, smoking and substance use.*
- *Is Glen interested in discussing his sexual health?*
- *Does he have a history of erectile dysfunction? When did the problem first present?*
- *Is Glen ever able to obtain an erection? If so, for how long? Is he able to have intercourse, masturbate?*
- *Is there an issue with maintaining an erection?*
- *Has Glen ever experienced AD? Does he know what AD is?*
- *Is there a desire to biologically father any children?*
- *Has he ever experienced autonomic dysreflexia? Is he aware of how it presents?*
- *Does he have neurogenic bladder +/- bowel?*
- *Review cardiovascular risks (smoking, family hx, cardiac symptoms)*

You have established that Glen began to experience erectile dysfunction after sustaining his SCI, and is currently on Baclofen 10 mg qid for spasticity and Gabapentin 300 mg TID for neuropathic pain. Glen uses a condom catheter, and tells you that he has experienced urinary incontinence during intimate encounters, which now causes him significant anxiety. Glen rates sexual function and intimacy as very important, but really doesn't know much about possible treatment after SCI.

What investigations would you order?

- Serum glucose/A1C
- ECG
- Lipid profile testing
- Consider hormonal testing, TSH, electrolytes, eGFR
- Physical exam (genitalia and secondary sex characteristics); vascular; cardiac; BP

What management options are available to Glen?

- Sex therapy/counselling
- Self-catheterization prior to intercourse
- Education (i.e. exploration of erogenous zones; sex toys)
- PDE₅ inhibitors – Sildenafil (Viagra), Tadalafil (Cialis), Vardenafil (Levitra)
- Vacuum devices, penile rings
- Intracavernosal injections
- Surgery (implants)

Glen is interested in pharmaceutical options. What would you prescribe and advise Glen about his prescription? When would you follow up with Glen?

- PDE₅ inhibitor such as Sildenafil – 50 mg (see Treatment below)
- Make Glen aware of the side effects of the medication (orthostatic hypotension, headache, flushing, dizziness, runny nose, stomach pain)
- Educate about autonomic dysreflexia and inform Glen on methods to alleviate the symptoms, and that he should go to the hospital should these symptoms persist after steps taken to stop them
- Follow up in 1 month

Case 2: Meghan, age 26

Meghan is a 26-year-old paraplegic patient who suffered an incomplete SCI at T4 in a motor-vehicle accident 18 months ago. She has been your patient since she was 15 years old. Meghan tells you that she would like to start birth control again after stopping the OCP two years ago, but is unsure of her options.

What are some of the issues you are going to discuss with Meghan?

- *Complete history, with special attention paid to personal or family history of conditions, medications, and past medical and sexual history*
- *Ask about sexual experiences since her MVA, and make her aware that her erogenous zones may have changed, and she will need consider bowel, bladder, skin, and positioning issues that may arise*
- *Ask about Meghan's desire to biologically mother children & let her know it is still a possibility*
- *Educate about autonomic dysreflexia and raise Meghan's awareness of the condition*

What are you going to prescribe for Meghan? What side effects should Meghan be aware of?

- *Oral Contraceptive Pill*
- *Make her aware of VTE, abnormal abdominal pain, chest pain, and headaches, and the need to regularly inspect her legs*
- *Have her partner use a condom*

She tells you that she would like to have a child in the future. What will you discuss?

- *She is still able to have children, but there are issues she needs to be aware of (see Pregnancy CBLM)*
 - *You will refer Meghan to a specialized Obstetrician when she is ready to start a family*
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INFORMATION SECTION

Discussing the Topic of Sexual Health:

Sexuality plays a role in how every individual defines him- or herself, and despite the large problems associated with SCI, sexual health should be discussed. Sexual dysfunction has been significantly linked to health complications, relationship concerns, and reduced quality of life.⁴⁻⁶ Unfortunately, sexual health counseling appears largely neglected by clinicians⁷, particularly in vulnerable populations.⁸ Clark and Williams⁹ found that the majority of patients surveyed felt that their primary care provider should give all patients information about sexual dysfunction, and should ask all patients if they experience sexual dysfunction. Results of studies have differed with regards to patient preference to breeching the topic of sexual health post SCI. One study found that patients prefer their primary care provider to bring up the subject¹⁰; however, another study stated that patients prefer to initiate the topic, but do not object to physicians who bring up the subject.⁹ Therefore, it appears that by starting the discussion, the primary care provider will rarely go wrong.¹¹

With respect to the timing of presenting information to your patient, the first six months post-discharge from inpatient rehabilitation are a vital period for sexual health intervention as patients are more agreeable to sexual education and counseling.² Potential avenues to introduce the topic of sexual dysfunction include health surveys prior to consultations, discussion of complications of cardiovascular disease, diabetes and/or SCI, or as part of a general assessment.

Clinical Pearl: Sexual health is very important and often neglected by health care providers.

Fast Fact: a study showed, among people with paraplegia, that sexual function was the highest priority (higher than walking), and among individuals with tetraplegia, was second to regaining upper extremity function!⁶²

Pathophysiology:

The impact of SCI on sexual function in both men and women depends on the level and completeness of the injury.

Male

Three common reasons for the inability of a man with a SCI to father children via intercourse are: erectile dysfunction (pathophysiology explained below), ejaculatory dysfunction and semen abnormalities.²⁵ If a patient has a desire to biologically father children, referral to an urologist or fertility specialist may be necessary (preferably with experience with SCI if available).

Erection

In general, erection is attainable via psychogenic (i.e. erotic stimuli) or reflexogenic (secondary to manual stimulation) pathways for most men with SCI, but these erections are often unreliable or inadequate for sexual intercourse.^{12,24} The extent of erectile dysfunction (ED) will be impacted by the level and degree of SCI, and patients with incomplete lesions, upper motor neuron (UMN) lesions and higher cord lesions are more likely to retain the ability to achieve erection possible via psychogenic or reflexogenic pathways; however, these erections are incongruous with satisfactory sexual activity.^{12;24;32-36}

Percentage of Men Able to Obtain an Erection Following SCI ¹⁷⁻¹⁹				
	UMN Lesion		LMN Lesion	
	Type of Erection		Type of Erection	
	Psychogenic	Reflexogenic	Psychogenic	Reflexogenic
Complete SCI	9%	95%	24-25%	12%
Incomplete SCI	48-79%	90-95%		

Table 1: Erection following spinal cord injury

Treatment options for ED in an individual with SCI include behavioural interventions, phosphodiesterase-5 inhibitors (PDE-5), intracavernosal injections, vacuum erection devices or surgical therapies^{25,32,35,37-40} (see Table 3); however, as a primary care provider, any further treatment beyond PDE-5 inhibitor subscription will require a referral to an urologist. As per men without SCI, you may consider other causes for ED and investigate bloodwork (CBC, A₁C, TSH, cholesterol, free testosterone, and LH), and ECG.

Orgasm and Ejaculation

Five to twelve percent of men with a complete SCI and 70% with an incomplete SCI retain the ability to ejaculate.^{17,18,20} Current research concerning orgasm is composed of self-reports from surveys, or indirectly reported in literature on fertility⁶¹ (see Table 3).

Fertility

See Table 3.

Female

In women affected by SCI, sexual function is concentrated on the pathways of sexual arousal that are demonstrated by increases in vaginal vasocongestion, vasoconstriction and lubrication.²¹ Women with a complete SCI at T6 or higher are capable of reflexive genital responses, including increased vaginal vasocongestion and subjective arousal, but are not capable of psychogenic responses.²² In women with an incomplete SCI, if pinprick sensation is preserved in the T11-L2 dermatomes, psychogenic vaginal vasocongestion is possible²³; however, in women who lacked pinprick sensation in T11-L2 dermatomes, it is not. It should be noted that the greater the level of preserved pinprick sensation in the T11-L2 dermatomes, the greater the possibility of achieving psychogenic vaginal vasocongestion.²³ Achieving orgasm is less likely, and if orgasm is possible, time to orgasm significantly increased in women with SCI

when compared to able-bodied women.²¹Orgasm is dependent upon the integrity of the sacral reflex arc (S2-S4).²⁰ One study revealed that 59% compared to 17% of women with an UMN or LMN lesion, respectively, reported achievement of orgasm.²²

Considerations Prior to Sexual Activity

Developing a treatment plan based on a patient’s physical exam, sexual history, and personal concerns is something you, as a health-care provider, should develop with your patient, and if desired, his or her partner.²⁶ Further evaluation by specialists may be warranted, and you are encouraged to develop working relationships with specialists, such as physiatrists, urologists, gynecologists, psychiatrists, psychologists, sex therapists, and sexual health nurses.²⁶

Considerations²⁶	Advice
Bladder	<ul style="list-style-type: none"> • Encourage emptying of bladder prior to sexual activity (unless full bladder assists ability to achieve erection – see male sexual health below) • Mainstay of pharmacological intervention is anti-cholinergic medication • Intermittent catheterization is the most commonly used method to improve bladder emptying^{27,28} • If using a leg bag – empty prior to sexual activity to prevent spillage of urine if bag breaks • If using indwelling urethral catheter – use special precautions to prevent dislodging or contamination
Bowel	<ul style="list-style-type: none"> • Recommend coordinating bowel care prior to sexual activity • Educate that despite having an empty bowel, digital rectal stimulation or some medications, such as bisacodyl, may cause bowel emptying or mucus discharge
Skin	<ul style="list-style-type: none"> • Pre-existing pressure ulcers do not preclude participating in sexual activity, but activity will need to be modified and precautions taken in order to avoid further skin breakdown • Skin around the genitals, buttocks & knees may have received excessive friction, pressure or tears, so advise patients to inspect these insensate skin areas immediately post-sexual activity
Positioning	<ul style="list-style-type: none"> • With the limited range of motion or presence of contractures, limbs should be supported with pillows or bolsters • Patients may require assistance from caregivers in preparation for sexual activity • Consider referral to physical or occupational therapists
Autonomic Dysreflexia (AD)	<ul style="list-style-type: none"> • If the injury is at or above T6 (reported as low as T10),²⁹ the patient is at risk for AD • Sexual activity, orgasm, ejaculation, pressure ulcers, & unperceived noxious stimuli to the skin, bladder, joints or bones can precipitate AD • If AD occurs, stop activity immediately and sit person up – notify medical provider & call health-care provider (see AD CBLM for management)
Erogenous Zones	<ul style="list-style-type: none"> • Areas that may provide erotic pleasure include the head, hair, face, ears, neck, chest, abdomen, back, arms, under-arms, hands, fingers, legs, feet & toes • The “transition zone,” a region of skin just inferior to the last region of skin with pre-injury level of sensation typically has altered sensation & is often perceived as a source of erotic pleasure • Encourage patient to explore transition zone & discover & develop new areas of the body that may stimulate sexual arousal

Table 2: Considerations prior to sexual activity

In both men and women, psychological elements, such as body image, self-esteem and aspiration, and social elements, such as gender, age, and culture, all impact the sexual health of a person with a SCI.³⁰ After sustaining a SCI, men and women both report a decreased desire

and lower frequency of sexual activity.²⁴

Clinical Pearl: Methods of arousal will change post-SCI and will depend on the level of injury. Encourage patients to explore new erogenous zones that may stimulate sexual arousal.

Male Sexual Health

Issue	Notes and Treatment
<p>Erectile Dysfunction (ED)</p>	<p>Extent dependent upon level & degree of injury Having a full bladder may assist with achieving erection, but patient should be aware of increased risk of AD²⁶ Testosterone deficiency is common³¹ & may be a contributing factor to sexual dysfunction or decreased libido <u>PDE-5 inhibitors</u> - Must have intact sacral reflex arc (less likely to be effective if patient has LMN lesion or cauda equina – completeness of lesion had no impact)⁴⁰ Not recommended if patient has blood pressure instability</p> <ul style="list-style-type: none"> • Sildenafil (Viagra) – 50-100 mg • Tadalafil (Cialis) – 5-20 mg (option for daily dosing of 5 mg) • Vardenafil (Levitra) – 5-20 mg <p>Absolute contraindications – concomitant use of nitrates, alpha blockers or presence of retinitis pigmentosa²⁶ If PDE-5 inhibitors are not satisfactory to the patient, a referral to an urologist may be necessary <u>Other Options:</u></p> <ul style="list-style-type: none"> • Intracavernosal injection – typically papaverine, phentolamine, prostaglandin E1 or combinations or 2 or 3 of the agents³⁸ – side effects: hematoma & priapism³⁹ • Vacuum devices – produce erections sufficient for intercourse^{41,42} – side effects: petechiae, may experience premature loss of erection • Surgical therapies – semi-rigid penile implants (if needed to be removed, causes damage to penile tissue and will make patient unresponsive to intracavernous injections or vacuum devices)³⁸ – side effects: infection, extruded rods, erosion, pain⁴³⁻⁴⁷
<p>Ejaculatory Dysfunction</p>	<p>Most men with SCI cannot produce antegrade ejaculation and often experience retrograde ejaculation³⁸ Referral to an urologist Options for Sperm Retrieval^{25;26;39;48;49}</p> <ul style="list-style-type: none"> • Penile vibratory stimulation (PVS) • Electroejaculation (EEJ) • Prostate massage
<p>Semen Abnormalities</p>	<p>Men with a SCI have been shown to have normal sperm concentration, but abnormally low sperm motility & viability^{39;49;50-52} After acute SCI, sperm motility & viability improve temporarily before rapidly deteriorating⁵³ If biological fatherhood desired, refer to an urologist To retrieve sperm, use methods described above – if PVS or EEJ retrieve no sperm - sperm may be retrieved surgically³⁹</p>

Table 3: Male sexual health issues

Clinical Pearl: A man’s ability to biologically father a child after SCI may be difficult, but methods exist to increase the chances of conception.

Female Sexual Health

Unlike men who have sustained a SCI, the fertility of women is unaffected by SCI.^{1;26;54;55} Issues affecting the sexual health of women with a SCI include, but are not limited to initial transient amenorrhea, lack of lubrication during intercourse, contraceptive medication, and pregnancy (see Pregnancy below).

Issue	Notes and Treatment
Initial amenorrhea/Menstrual cycle	Menstruation typically ceases for 3-12 months, ^{56;57} but amenorrhea has been reported to last as long as 24 months ⁵⁴ Pathophysiology is not entirely understood but may be caused by increase in s-prolactin ⁵⁸ Patients may experience intensified premenstrual and menstrual symptoms such as dysmenorrhea, cramping, increased sweating, flushing, headaches, piloerection, bladder spasms or worsening spasticity ²⁶ Any changes in menstrual cycle after initial amenorrhea should be investigated ²⁶
Lack of lubrication	See pathophysiology above for cause Nearly ¼ of women with SCI experience inadequate vaginal lubrication ⁵⁹ Water-based lubricating jelly can alleviate this problem, ⁶⁰ and attention must be paid to skin for risk of increased friction & tears
Contraception	There is a patient preference for condoms, permanent sterilization if fertility is not desired and oral contraceptive pills (OCP) ⁵⁴ Risks of OCP use in women with a SCI do not appear to be greater than in general population ²⁶ Depot-medroxyprogesterone acetate (DMPA) are not recommended <ul style="list-style-type: none"> • Contraindicated within 1 year of injury, women who smoke or have a history of cardiovascular or circulatory disease⁵⁴ Intrauterine devices are not recommended as they may increase the risk of pelvic inflammatory disease due to sensation loss in the pelvic region ²⁶ Progesterone only preparations offer less risk of thrombosis ¹ Important considerations ²⁶ <ul style="list-style-type: none"> • Circulation in lower extremities • Clotting abnormalities • Genital sensation • Manual dexterity (for use of diaphragm or cervical cap) • Potential problems with menstrual hygiene

Table 4: Female sexual health considerations

Clinical Pearl: After an initial period of amenorrhea, fertility is not affected in a woman with SCI. If a woman with SCI is interested in becoming pregnant, referral to a specialized obstetrician is recommended as soon as possible.

Pregnancy

There can be significant complications during pregnancy and delivery that warrant attention and involvement of specialists familiar with pregnancy and SCI. The primary care provider (PCP) has an important pro-active role in pre-conception counselling, support and referral.

Preconception counseling should be discussed with all women of child-bearing age, including;

ensuring up-to-date immunizations, STI screening, 400 mcg folic acid supplementation (5 mg if high risk – eg diabetes mellitus, spina bifida, family history of neural tube defect(s), body mass index > 35 kg/m²), smoking cessation, and assessment for use of teratogenic medication. Since women with SCI face unique concerns, ideally they should have an understanding of these issues prior to pregnancy and **referral to a specialist (obstetrician and/or physiatrist) is essential** as they are considered high risk.

SCI and Disability	1. Discuss your understanding of her condition
	2. The nature and limitations imposed by her disability, autonomic dysreflexia, spasms, pelvic contractures, injury to pelvis
	3. Age and extent of spinal and pelvic injury
	4. Review her medication for potential teratogenicity (see below)
The effect of pregnancy	1. Mobility will worsen with advancing pregnancy
	2. Worsening breathing with advancing pregnancy (important for patients in wheelchairs to have regular seat adjustments as the pregnancy progresses)
	3. Possible change of bladder care (may require an indwelling catheter toward the end of the pregnancy)
Care during pregnancy	1. GP, specialist obstetrician, obstetric unit at place of delivery, occupational therapist
	2. Anaesthetic review early in pregnancy
	3. Carer support, social services
Delivery	1. Ideally, a vaginal delivery is planned (unless there is suspicion for cephalo-pelvic disproportion) ⁶⁴
	2. Admission to delivery suite early in labour (late in the 3 rd trimester, admission is recommended to prevent unattended delivery) ⁶⁴
	3. If your patient's lesion is above T10, there is a higher frequency of breech or transverse lie (may be related to decreased abdominal muscle tone) and perceptions of fetal movements are altered ⁶³
Postnatal	1. Information regarding websites
	2. Adaptive equipment (eg – low baby changing tables, wheelchair friendly cribs)

Table 5: Pre-conception & initial antenatal visit (Adapted from Dawood et al, 2014)⁶³

Common Issues

Your patient is likely to have her pregnancy complicated by medical problem(s), as they are more common in women with SCI. The conditions your patient may experience are;

Issue	Notes
Urinary Tract Infection (UTI)	Asymptomatic bacteriuria is common in pregnancy & carries a 20-65% risk of pyelonephritis. ^{65,66} During pregnancy, the risk of UTI is higher in women with SCI because of incomplete bladder emptying. ⁶⁷ Urine screening for able-bodied women during pregnancy is done at the first prenatal visit, & at least once per trimester for the rest of the pregnancy;

	Urine may be tested more frequently if there is an underlying condition (eg – renal disease or renal anomaly) or a recurrent history of a UTI.
Anemia	Currently, there is conflicting literature concerning prevalence & treatment of anemia requiring transfusion or iron supplementation in women with SCI during pregnancy. ⁶⁸⁻⁷¹ The risk of development of decubitus ulcers in individuals with SCI is increased when anemic. ⁷² There have not been any studies finding significant helpful or harmful effects on fetal growth or pregnancy result with iron supplementation. ⁷² If enteral iron supplementation is required to treat anemia, it should be given cautiously as it may cause difficulty with bowel evacuation. ⁶⁷
Thromboembolism	There may be concern for thromboembolism in the form of a deep vein thrombosis (DVT) or pulmonary embolism (PE) in a pregnant woman with SCI due to the hypercoagulable state of pregnancy & immobility, ⁶⁷ but few cases of DVT ^{70;73,74} or PE ^{64,75} have been reported. Edema commonly affects pregnant women with SCI & is a significant complaint ⁷³ Although prophylactic anticoagulation is not recommended, ⁶⁷ elastic stockings or calf compression devices have been suggested ⁷⁶ Use of compression devices must be monitored as a potential cause of AD (see AD CBLM). Education to the patient regarding DVT should be provided & referral to specialist if there is suspected higher risk (previous DVT).
Decubitus Ulcers	Pressure relief techniques may help prevent ulcers. During pregnancy, there may be an increased risk of decubitus ulcer formation ⁷⁷ due to weight gain, tissue edema & relative immobility. ⁶³ A larger wheelchair may be recommended to prevent pressure sores & methodical use of pressure techniques ⁶⁷ every 2 hours are encouraged. Consider referral to an occupational therapist, seating clinic or physiatrist.
Spasticity	Jackson and Wadley ⁷⁸ found an incidence of 12% of worsening spasticity during pregnancy. Intrathecal baclofen via pump is suggested to treat spasms during pregnancy ⁸⁰ , but consultation with a specialist obstetrician should be pursued prior to treatment. Oxybutinin can be used to treat bladder spasms. ⁶³
Pulmonary Function	Chest physiotherapy, continuous positive airway pressure (CPAP) & mechanical ventilation are recommended if there is suboptimal respiratory function. ⁸¹ Serial measurements of vital capacity to monitor ventilator function and assess your patient's need for assisted ventilation, ⁸² & a value below 12-15 ml/kg would require mechanical ventilation. ⁶³
Autonomic Dysreflexia (AD)	If SCI is above T6, AD is the most serious complication of pregnancy Risk of AD has been reported as high as 85-90% during labour and delivery in women with lesions at or above T6. ⁸⁶ (see AD CBLM) One of the chief signs of AD is the paroxysmal rise of systolic blood pressure (BP) to at least 20-30 mmHg above the patient's baseline (baseline systolic BP in a patient with SCI may be 90-100 mmHg or perhaps even lower in pregnancy), & must be distinguished from pregnancy-induced hypertension (preeclampsia). Pregnancy-induced hypertension usually (but not always) presents as a gradual & sustained rise in BP. ⁷⁷ Tetraplegic patients may be at risk AD for up to 5 days postpartum. ⁸⁵ Medications (eg. nifedipine) & epidural anaesthetics can help reduce episodes of AD. ⁸⁰ Women who have or are at risk of AD should managed by an obstetrician experienced in AD or have additional management with a rehab specialist.
Labour	Can go undetected in women with SCI, especially with in injury T10 & above due to lack of sensation Patient education & regular monitoring of cervix in later stages is important. ^{61,80} Literature concerning the risk of pre-term birth in a woman with SCI is conflicting, & uncertain. Preterm labour incidence has reported to have been reduced by frequent surveillance, appropriate use of tocolysis and adequate treatment of urinary tract infections & decubitus ulcers. ⁶³ There are higher rates of caesarean section & low birth weight babies in pregnancies of women with

	SCI ⁶¹ (SCIRE)
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Table 6: Conditions associated with pregnancy in a woman with SCI

Medication to be Considered During Pregnancy:

<u>Condition</u>	<u>Medication Guidelines</u>	<u>Effects</u>
Diabetes Mellitus	<i>Most oral treatments should be discontinued</i> Insulin treatment should be initiated Metformin may be continued in the pre-conception period ⁸⁶ (consult with an endocrinologist should be arranged)	
Hypertension	<i>Avoid use of:</i> ACE inhibitors, ARBs and atenolol	Renal anomalies and fetal death ⁸⁷
Spasticity	<i>Oral baclofen</i> should be discontinued <i>Clonidine and Tizanidine also not recommended in pregnancy</i> ⁶³	Associated with neonatal withdrawal symptoms (not seen with intrathecal baclofen) ⁶³
Thrombophilia	Warfarin should be avoided Heparin or LMWH is favoured	Warfarin is teratogenic ⁸⁸
Urinary Tract Infection (Symptomatic/Acute Cystitis)	<i>Avoid use of:</i> Ciprofloxacin Nitrofurantoin Trimethoprim-Sulfmethoxazole (TMP-SMX)	<i>Ciprofloxacin</i> associated with fetal arthropathy in animals and not compatible with breast feeding ^{89,90} <i>Nitrofurantoin</i> increases the risk of hemolysis and G6PD deficiency in neonates ⁹¹⁻⁹³ ; however, considered compatible with breast feeding unless the child has a G6PD deficiency ^{89,90} <i>TMP-SMX</i> – Sulfonamides associated with increased risk of kernicterus in neonates ⁹¹⁻⁹³ , but compatible with breast feeding, unless child is premature, jaundiced or has a G6PD deficiency ^{69,70}
	Fosfomycin trometamol – single dose (3g PO) Ceftibuten – 3 day course (400mg PO OD) Penicillins Oral cephalosporins Aztreonam	Considered safe in pregnancy ^{65,91-94}

Table 7: Medications to be considered during pregnancy

SUMMARY

- Sexuality plays a role in how an individual defines themselves, and sexual health should be discussed
- Three common reasons for the inability of a man with a SCI to father children via intercourse are erectile dysfunction, ejaculatory dysfunction and semen abnormalities
- Fertility of women is unaffected by SCI
- Issues affecting the sexual health of women with a SCI include, but are not limited to initial transient amenorrhea, lack of lubrication during intercourse, contraceptive medication, and pregnancy
- There can be significant complications during pregnancy and delivery that warrant attention and involvement of specialists familiar with pregnancy and SCI.
- If pregnancy is desired, as a physician, it is important to take pro-active role in pre-conception counselling, support and referral
- Developing a treatment plan based on a patient's physical exam, sexual history, and personal concerns should be developed with the individual with SCI, and if desired, his or her partner

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