

Supplementary S1:

Detailed responses by ChatGPT 3.5

Elementary:

1. What are urinary tract infections and what causes them?

Word count: 347 words. Overall grade: 5/5

A urinary tract infection (UTI) is an infection that affects any part of the urinary system, which includes the kidneys, bladder, ureters, and urethra. UTIs are one of the most common types of bacterial infections, and they can occur in people of all ages and genders. UTIs can range from mild to severe and can cause a variety of symptoms.

The most common cause of UTIs is the introduction of bacteria into the urinary tract. The urinary system is normally a sterile environment, but when bacteria enter the urethra and multiply, an infection can develop. The most common bacteria responsible for UTIs is Escherichia coli (E. coli), which is found in the gastrointestinal tract.

There are several factors and behaviors that can increase the risk of developing a UTI, including:

- 1. **Gender:** Women are more prone to UTIs than men due to their shorter urethra, which makes it easier for bacteria to enter the bladder.*
- 2. **Sexual Activity:** Sexual intercourse can introduce bacteria into the urethra, increasing the risk of infection.*
- 3. **Urinary Tract Abnormalities:** Structural issues in the urinary tract can make it easier for bacteria to multiply and cause infection.*
- 4. **Catheter Use:** People who use urinary catheters are at higher risk of UTIs because the catheter can introduce bacteria into the urinary tract.*
- 5. **Weakened Immune System:** Conditions or medications that weaken the immune system can make it more difficult for the body to fight off infections.*

Common symptoms of a UTI may include:

- Frequent urination*
- Pain or a burning sensation during urination*
- Cloudy, bloody, or strong-smelling urine*
- Pain or discomfort in the lower abdomen or back*
- Feeling the urge to urinate frequently but passing only small amounts of urine*

If you suspect you have a UTI, it's important to seek medical attention. UTIs are typically treated with antibiotics, which can help to clear the infection. Left untreated, a UTI can lead to more serious complications, such as a kidney infection. To prevent UTIs, it's recommended to maintain good hygiene, stay well-hydrated, urinate after sexual activity, and avoid irritants like strong soaps or perfumed products in the genital area.

2. How do I know if I have a urinary tract infection?

Word count: 345 words. Overall grade 1/5

I'm not a doctor, but I can offer some general information on the signs and symptoms of a urinary tract infection (UTI). If you suspect you have a UTI, it's important to consult a healthcare professional for a proper diagnosis and treatment. UTIs can be uncomfortable and, if left untreated, can lead to more serious complications, so it's crucial to seek medical advice.

Common signs and symptoms of a UTI may include:

- 1. Frequent Urination: You may feel the need to urinate more often than usual, even if there's only a small amount of urine.*
- 2. Pain or Burning Sensation: A burning sensation or pain during urination is a classic symptom of a UTI.*
- 3. Urgency: You may have a strong, sudden urge to urinate that's difficult to control.*
- 4. Lower Abdominal Pain: Some people with UTIs experience pain or discomfort in the lower abdomen or pelvic region.*
- 5. Cloudy, Bloody, or Strong-Smelling Urine: Your urine may appear cloudy, have a pinkish or reddish tint (indicating the presence of blood), or have a strong, unpleasant odor.*
- 6. Discomfort or Pressure in the Pelvic Area: You may feel pressure in your lower abdomen or experience discomfort.*
- 7. Fatigue or Shakiness: In some cases, UTIs can cause general feelings of fatigue or shakiness.*
- 8. Mild Fever or Chills: If the infection has spread to your kidneys, you might experience a mild fever or chills.*

It's essential to see a healthcare provider if you suspect you have a UTI. They can diagnose the infection through a physical examination, urine analysis, and possibly a urine culture to determine the specific type of bacteria causing the infection. If you do have a UTI, your healthcare provider will prescribe antibiotics to treat it.

It's important to complete the entire course of antibiotics, even if your symptoms improve, to ensure the infection is completely cleared. Drinking plenty of water can also help flush out bacteria and alleviate some symptoms.

If you have recurrent UTIs or if the symptoms worsen despite treatment, your healthcare provider may investigate further to identify any underlying causes or risk factors that need to be addressed.

UTIs are not diagnosed through physical examination. They are diagnosed based off symptoms and a positive urine culture.

3. How can I prevent urinary tract infections?

Word count: 445 words. Overall grade 4/5

Preventing urinary tract infections (UTIs) involves adopting healthy habits and making lifestyle changes to reduce the risk of bacterial infections in the urinary tract. Here are some steps you can take to prevent UTIs:

- 1. **Stay Hydrated:** Drinking plenty of water helps flush bacteria out of the urinary tract. Aim for at least 8-10 cups of water per day.*
 - 2. **Urinate Regularly:** Don't hold in urine for extended periods. Empty your bladder when you feel the urge to urinate to prevent the buildup of bacteria.*
 - 3. **Wipe Front to Back:** After using the toilet, always wipe from front to back to prevent the spread of bacteria from the anal area to the urethra.*
 - 4. **Empty Your Bladder Before and After Sexual Activity:** Urinating before and after sexual intercourse can help flush out bacteria that may have entered the urethra during sex.*
 - 5. **Choose Appropriate Birth Control:** Diaphragms and spermicides can increase the risk of UTIs. Discuss alternative birth control methods with your healthcare provider if you're prone to UTIs.*
 - 6. **Avoid Irritating Feminine Products:** Some feminine hygiene products, like douches and powders, can irritate the urethra and increase the risk of infection. Avoid using them.*
 - 7. **Wear Breathable Underwear:** Choose cotton underwear and avoid tight-fitting pants and underwear, as these can trap moisture and create a favorable environment for bacterial growth.*
 - 8. **Avoid Harsh Soaps and Perfumes:** Use mild, unscented soap for genital hygiene. Harsh soaps and perfumed products can irritate the genital area and disrupt the natural balance of bacteria.*
 - 9. **Take Showers Instead of Baths:** Baths can potentially introduce bacteria into the urinary tract, so opt for showers when possible.*
 - 10. **Cranberry Products:** Some studies suggest that cranberry products, like cranberry juice or supplements, may help prevent UTIs by inhibiting the adhesion of bacteria to the urinary tract lining. However, the evidence is not conclusive.*
 - 11. **Antibiotics (Prescribed by a Doctor):** If you have a history of recurrent UTIs, your healthcare provider may prescribe low-dose antibiotics to take after sexual activity or on a daily basis to prevent infections. Do not use antibiotics without a prescription.*
 - 12. **Manage Underlying Health Conditions:** Conditions like diabetes or kidney stones can increase the risk of UTIs. Managing these conditions with the help of a healthcare provider can reduce your susceptibility to infections.*
 - 13. **Maintain Good Hygiene:** Regularly wash the genital area with mild soap and water. Keep the area clean and dry.*
 - 14. **Stay Regular with Bowel Movements:** Constipation can put pressure on the bladder and increase the risk of UTIs. Maintain regular bowel habits through a healthy diet and lifestyle.*
- If you experience recurrent UTIs, it's essential to consult a healthcare professional. They can evaluate your specific situation and recommend appropriate preventive measures or treatments tailored to your needs.*

There are some good answers, however the highlighted answers all either have no or low-level supporting evidence in the literature. Additionally, the question does not differentiate male and female risk factors.

Response does not go into hiprex, vitamin C, D-mannose, probiotics or vaccines.

4. How many is too many urinary tract infections?

Word count: 182 words. Overall grade 3/5

The number of urinary tract infections (UTIs) that is considered "too many" can vary from person to person and depends on various factors, including an individual's overall health, age, and underlying medical conditions. In general, a single UTI is common and not usually a cause for concern. However, if someone experiences recurrent UTIs, it may indicate an underlying issue that needs to be addressed.

Medical professionals typically define recurrent UTIs as:

- 1. Two or more UTIs within six months.*
- 2. Three or more UTIs within one year.*

If you or someone you know is experiencing recurrent UTIs, it is essential to consult a healthcare provider. They can evaluate the individual's medical history, perform tests, and determine potential underlying causes or risk factors. Treatment options and preventive measures, such as lifestyle changes or medication, can then be discussed based on the specific circumstances.

It's crucial to address recurrent UTIs because untreated or frequent UTIs can lead to complications or discomfort. Preventive strategies may include staying hydrated, practicing good hygiene, urinating before and after sexual activity, and taking prescribed medications as directed by a healthcare professional.

Overall, this response is correct for female patients. However, a gold standard answer would also address male patients and would have explored the impact of severity of infections.

5. How do you treat urinary tract infections?

Word count: 388 words. Overall grade 1/5

I am not a doctor, but I can offer some general information on how urinary tract infections (UTIs) are typically treated. It's crucial to consult a healthcare professional for an accurate diagnosis and personalized treatment plan. The treatment for UTIs often involves antibiotics, and the specific antibiotic prescribed can depend on factors such as the type of bacteria causing the infection and its sensitivity to antibiotics. Here is a general outline of how UTIs are typically treated:

*1. **Diagnosis:** Your doctor will perform a physical examination and may request a urine sample for laboratory analysis to confirm the presence of a UTI. They may also take into account your medical history and any symptoms you're experiencing.*

*2. **Antibiotics:** If a UTI is confirmed, antibiotics are usually prescribed. The choice of antibiotic may depend on factors such as the severity of the infection, the type of bacteria causing it, and any known drug allergies. Commonly prescribed antibiotics for UTIs include trimethoprim-sulfamethoxazole (TMP-SMX), nitrofurantoin, ciprofloxacin, and others.*

*3. **Take Antibiotics as Prescribed:** It's essential to take the full course of antibiotics as prescribed by your healthcare provider, even if your symptoms improve before you finish the medication. Failure to complete the full course could allow the infection to return and potentially become more resistant to treatment.*

*4. **Symptom Relief:** To alleviate discomfort and pain associated with UTIs, you can take over-the-counter pain relievers like ibuprofen or acetaminophen. Drinking plenty of water can also help flush bacteria out of your urinary tract.*

*5. **Avoid Irritants:** During treatment, it's advisable to avoid substances that can irritate the bladder, such as caffeine, alcohol, and spicy foods. Additionally, it may be helpful to avoid sexual activity until the infection has cleared to prevent further irritation.*

*6. **Follow-Up:** Your healthcare provider may recommend a follow-up appointment or urine test to ensure that the infection has cleared completely. This is particularly important if you continue to experience symptoms after completing the antibiotic course.*

*7. **Preventive Measures:** After a UTI, your healthcare provider may offer advice on preventive measures, such as drinking plenty of water, urinating regularly, wiping from front to back, and practicing good hygiene.*

It's crucial to seek medical attention if you suspect you have a UTI, as untreated UTIs can lead to more severe complications, such as kidney infections. Always follow your healthcare provider's advice and take prescribed medications as directed.

UTIs are not diagnosed through physical examination. They are diagnosed based off symptoms and a positive urine culture.

The preventative measures described are not all supported by high quality evidence.

6. When should I see my doctor to find out if I have a urinary tract infection?

Word count: 312 words. Overall grade 5/5

If you suspect you have a urinary tract infection (UTI), it's important to see a doctor for a proper diagnosis and treatment. Here are some signs and symptoms that may indicate a UTI and when you should consider making an appointment with your healthcare provider:

- 1. Frequent Urination: If you find yourself needing to urinate more frequently than usual, and it's accompanied by a burning sensation, it could be a sign of a UTI.*
- 2. Pain or Burning Sensation: A burning sensation or pain while urinating is a common symptom of a UTI.*
- 3. Urgency to Urinate: Feeling a strong and sudden urge to urinate, even if you've just emptied your bladder, can be a sign of a UTI.*
- 4. Cloudy, Bloody, or Strong-Smelling Urine: Changes in the color, clarity, or odor of your urine may indicate an infection.*
- 5. Lower Abdominal Pain or Discomfort: Pain or pressure in your lower abdomen or back could be a symptom of a UTI, especially if it's accompanied by other urinary symptoms.*
- 6. Fever or Chills: In some cases, a UTI can cause a fever or chills, indicating that the infection may have reached your kidneys, which can be a more serious condition.*

If you experience any of these symptoms, it's advisable to contact your doctor as soon as possible. UTIs are typically treated with antibiotics, and early treatment can help prevent the infection from spreading to the kidneys or causing more serious complications.

Additionally, if you are pregnant, have a history of recurrent UTIs, or have diabetes or other underlying health conditions, you should seek medical attention promptly when you suspect a UTI, as these factors may increase your risk of complications.

It's important not to ignore the symptoms of a UTI, as untreated infections can lead to more serious health issues. Your doctor can perform tests, such as a urine culture, to confirm the diagnosis and prescribe appropriate treatment.

7. Do urinary tract infections cause cancer?

Word count: 258 words. Overall grade 4/5

Urinary tract infections (UTIs) themselves do not cause cancer, but there is a potential link between chronic or recurrent UTIs and an increased risk of certain types of cancer, specifically bladder cancer.

Here's how the connection works:

1. Chronic Inflammation: Chronic or recurrent UTIs can lead to persistent inflammation in the urinary tract. Prolonged inflammation can damage the cells lining the urinary tract, potentially increasing the risk of mutations that could lead to cancer over time.

2. Risk Factors: While UTIs themselves do not cause cancer, they can be associated with risk factors for cancer, such as smoking, exposure to certain chemicals, or a history of prior cancer treatment. These risk factors may contribute to the development of cancer in individuals who have had UTIs.

3. Long-term Catheter Use: Some individuals with chronic UTIs may require long-term catheter use. This can increase the risk of developing bladder cancer, as the presence of a catheter can irritate the bladder lining and potentially lead to cell changes.

It's important to note that the link between UTIs and cancer is not fully understood, and the majority of people who have UTIs do not develop cancer. Bladder cancer, in particular, can have several risk factors, and UTIs are just one of many potential factors.

If you are concerned about your risk of cancer or have a history of chronic UTIs, it's essential to consult with a healthcare professional who can provide personalized guidance, monitor your health, and recommend appropriate preventive measures. Early detection and regular medical check-ups are crucial for managing any potential health risks.

The wording in this sentence is a little confusing. Having a UTI is not associated with smoking, chemicals or prior cancer treatment.

8. How much water do I need to drink to prevent urinary tract infections?

Word count: 369 words. Overall grade 4/5

Drinking an adequate amount of water can help reduce the risk of urinary tract infections (UTIs) by flushing bacteria out of the urinary tract and promoting overall urinary tract health. However, there isn't a specific one-size-fits-all answer to how much water you should drink to prevent UTIs because individual needs can vary based on factors like age, sex, activity level, and climate.

Here are some general guidelines:

- 1. **Stay Hydrated:** Aim to drink enough water to stay properly hydrated throughout the day. This typically means drinking at least 8 glasses (about 2 liters) of water per day, but your specific needs may vary.*
- 2. **Listen to Your Body:** Pay attention to your body's signals. Thirst is a good indicator that you need to drink more water. Your urine can also provide clues – it should be pale yellow. Dark yellow or concentrated urine can be a sign that you need to drink more water.*
- 3. **Consider Lifestyle Factors:** Factors like physical activity, climate, and dietary choices can affect your water needs. If you're physically active, you'll generally need to drink more to replace fluids lost through sweat. In hot weather, you may also need more water to stay properly hydrated.*
- 4. **Cranberry Juice:** Some studies suggest that cranberry juice may help prevent UTIs by preventing bacteria from sticking to the urinary tract walls. Drinking cranberry juice in moderation can be beneficial, but it should not replace plain water.*
- 5. **Limit Caffeine and Alcohol:** Caffeine and alcohol can act as diuretics, increasing urine production. While moderate consumption is generally fine, excessive consumption can lead to dehydration, so it's important to balance these beverages with water.*
- 6. **Maintain Good Hygiene:** Proper hygiene practices, such as wiping from front to back after using the toilet and urinating before and after sexual activity, can also help prevent UTIs.*

It's important to note that while staying well-hydrated is beneficial for overall health and may reduce the risk of UTIs, it may not completely eliminate the risk. Other factors, such as personal hygiene and genetic predisposition, can also play a role. If you have a history of frequent UTIs or are concerned about UTI prevention, it's a good idea to consult with a healthcare professional who can provide personalized advice and recommendations.

Low level evidence and not related to the question posed to ChatGPT.

Advanced:

9. What is the best at preventing urinary tract infections? Ural, cranberry juice, D-mannose, Hiprex or probiotics?

Word count: 408 words. Overall grade 1/5

Preventing urinary tract infections (UTIs) involves a combination of strategies, and the effectiveness of these strategies can vary from person to person. Here's a breakdown of the options you mentioned:

*1. **Cranberry Juice:** Cranberry juice has long been associated with UTI prevention due to compounds that may inhibit bacteria from adhering to the urinary tract. However, the evidence for its effectiveness is mixed, and it's often recommended as a complementary measure rather than a primary prevention method. If you choose cranberry juice, opt for unsweetened varieties.*

*2. **D-Mannose:** D-mannose is a natural sugar that is sometimes used as a supplement for UTI prevention. Some studies suggest it may help by preventing bacteria from sticking to the urinary tract walls. It's generally considered safe and may be effective for some individuals.*

*3. **Hiprex (Methenamine Hippurate):** Hiprex is an antibiotic that, when taken as a preventive measure, can help suppress bacterial growth in the urinary tract. It's often prescribed for people with recurrent UTIs but should be used under a doctor's supervision.*

*4. **Probiotics:** Probiotics, specifically those containing Lactobacillus species, may help maintain a healthy balance of beneficial bacteria in the urinary tract, potentially reducing the risk of UTIs. However, more research is needed to establish their efficacy definitively.*

*5. **Ural:** Ural is a urinary alkalinizer that helps make the urine less acidic. It's typically used to relieve symptoms of urinary tract irritation but is not a primary preventive measure for UTIs.*

It's important to note that the best approach to preventing UTIs often involves a combination of strategies. Here are some general tips for UTI prevention:

*- **Stay Hydrated:** Drinking plenty of water helps flush bacteria out of the urinary tract.*

*- **Good Hygiene:** Practice good genital hygiene, wipe from front to back after using the toilet, and avoid using irritating feminine products.*

*- **Urinate Regularly:** Don't hold in urine for extended periods, and make sure to empty your bladder before and after sexual intercourse.*

*- **Cranberry Products:** Consider incorporating cranberry juice or supplements into your routine if they work for you, but remember they should not replace other preventive measures.*

*- **Consult a Healthcare Provider:** If you have recurrent UTIs, consult a healthcare provider. They can help determine the underlying causes and recommend appropriate preventive measures or medications.*

The effectiveness of these prevention methods can vary among individuals, so it's essential to discuss your specific situation with a healthcare professional to develop a personalized UTI prevention plan. They can provide guidance based on your medical history and needs.

Hiprex is not an antibiotic but rather an antiseptic. It's mechanism of action is the acidification of urine + sterilisation of urine via formation of formaldehyde.

Details described in this answer are generally not very detailed in nature.

Low evidence for hygiene in literature for preventing UTIs.

10. I am about to start chemotherapy for my lung cancer. Should I be on prophylactic antibiotics during my course of chemotherapy for urinary tract infections?

Word count: 386 words. Overall grade 5/5

I'm not a doctor, but I can offer some general information that you may find helpful. It's important to discuss your specific medical situation and concerns with your oncologist or healthcare provider, as they can provide you with personalized advice and recommendations based on your condition, treatment plan, and medical history. Prophylactic antibiotics are antibiotics prescribed to prevent infections, such as urinary tract infections (UTIs), before they occur. Whether or not you should be on prophylactic antibiotics during chemotherapy for lung cancer depends on several factors, including your individual risk factors for infection, the specific chemotherapy regimen you are receiving, and your medical history.

Here are some factors to consider:

- 1. Risk of Infection: Chemotherapy can weaken the immune system, making you more susceptible to infections. Your healthcare provider will assess your overall risk of infection, taking into account factors like the type and duration of chemotherapy and your current health status.*
- 2. Neutropenia Risk: Chemotherapy can lead to a decrease in white blood cell count, a condition called neutropenia, which can increase the risk of infections. If you are at a higher risk of neutropenia, your healthcare provider may be more likely to recommend prophylactic antibiotics.*
- 3. Specific Chemotherapy Drugs: Some chemotherapy drugs have a higher risk of causing certain types of infections. Your healthcare provider may take this into consideration when deciding whether prophylactic antibiotics are necessary.*
- 4. Prior Infections: If you have a history of frequent or severe infections, your healthcare provider may be more inclined to prescribe prophylactic antibiotics.*
- 5. UTI Risk: If you have a history of UTIs or are at a higher risk due to factors like urinary tract abnormalities or catheter use, your healthcare provider may consider prophylactic antibiotics.*

Ultimately, the decision to use prophylactic antibiotics should be made in consultation with your healthcare team. They will carefully assess your individual risk factors and weigh the potential benefits and risks of antibiotic prophylaxis. If prophylactic antibiotics are recommended, it's important to follow your healthcare provider's instructions regarding the medication's dosage and duration.

Remember that preventing infections during chemotherapy involves various strategies, such as good hygiene practices, monitoring for symptoms of infection, and prompt reporting of any concerning symptoms to your healthcare team. Regular communication with your oncologist and healthcare team is essential to ensure that you receive the most appropriate care during your treatment.

11. I got a random urine culture performed and it came back as positive for E. Coli, but I don't have any symptoms. Should I get antibiotic treatment for this, and if so, which antibiotic is best for me?

Word count: 261 words. Overall grade 1/5

I'm not a doctor, but I can provide some general information that may be helpful. If you have received a positive urine culture for E. coli but don't have any symptoms (asymptomatic bacteriuria), it's important to consult with a healthcare professional, such as a urologist or infectious disease specialist, to determine the appropriate course of action.

In some cases, asymptomatic bacteriuria may not require treatment, especially if you don't have any underlying medical conditions, are not pregnant, and are not about to undergo certain urological procedures. Antibiotic treatment for asymptomatic bacteriuria is typically recommended for specific groups of individuals, such as pregnant women, people who are about to undergo urological surgery, and individuals with certain medical conditions (e.g., kidney transplant recipients, those with spinal cord injuries).

The choice of antibiotic, if treatment is deemed necessary, would depend on factors such as local antibiotic resistance patterns, your medical history, and any allergies you may have. Common antibiotics used to treat E. coli in urinary tract infections include:

- 1. Nitrofurantoin*
- 2. Trimethoprim-sulfamethoxazole (TMP-SMX)*
- 3. Ciprofloxacin*
- 4. Levofloxacin*
- 5. Amoxicillin*
- 6. Ceftriaxone*

Your healthcare provider will determine the most appropriate antibiotic based on factors such as the sensitivity of the bacteria to antibiotics, your age, any allergies, and potential drug interactions.

It's essential to follow your healthcare provider's advice and complete the prescribed course of antibiotics if treatment is recommended. Also, it's a good idea to discuss with your doctor whether any further evaluation or monitoring is necessary to rule out underlying urinary tract issues.

Please consult a healthcare professional for personalized advice and recommendations based on your specific situation.

Guidelines state that renal transplant patients with asymptomatic bacteria should not be treated with antibiotics.

The list of antibiotics listed do not follow specific guidelines. Furthermore, ceftriaxone is also not a common antibiotic used in the community as it cannot be administered orally (it needs to be administered via intravenous or intramuscular injection).

12. I am a spinal cord injured patient and I perform intermittent self-catheterisation, however I keep developing urinary tract infections despite the educator's saying I have excellent sterile intermittent self-catheterisation technique. What are the other causes for me to have these urinary tract infections? Should I take antibiotics during my catheter insertions?

Word count: 394 words. Overall grade 2/5

I'm not a doctor, but I can provide you with some general information that might help you understand why you're experiencing recurrent urinary tract infections (UTIs) despite having what appears to be a good technique for intermittent self-catheterization (ISC). However, it's crucial to consult with a healthcare professional who specializes in spinal cord injury (SCI) and UTIs for personalized advice and treatment options.

Here are some potential reasons for recurrent UTIs in SCI patients, even with proper catheterization technique:

- 1. Residual urine: Even with ISC, a small amount of urine may remain in the bladder after catheterization. This residual urine can become a breeding ground for bacteria and lead to UTIs.*
- 2. Catheter material and hygiene: Ensure that you're using a sterile catheter made of the appropriate material (usually silicone or hydrophilic-coated) and that you're following strict hygiene practices during catheter insertion. Contaminated equipment or unclean hands can introduce bacteria into the urinary tract.*
- 3. Catheterization frequency: Make sure you're catheterizing at the recommended intervals to prevent overstretching the bladder and to minimize the risk of urinary retention, which can lead to UTIs.*
- 4. Bladder management: Discuss your bladder management plan with your healthcare provider. They may recommend techniques such as timed voiding, anticholinergic medications, or muscle relaxants to improve bladder function.*
- 5. Urine flow: Check with your healthcare provider to ensure that your urine flow is adequate. Slow or incomplete emptying can contribute to UTIs.*
- 6. Bowel routine: Constipation and fecal impaction can increase the risk of UTIs in SCI patients. Maintaining regular bowel movements and practicing good anal hygiene can help reduce this risk.*
- 7. Anatomy and underlying conditions: Structural abnormalities in the urinary tract or other underlying medical conditions may predispose you to UTIs. Discuss any concerns with your healthcare provider and consider further evaluation, such as imaging studies.*

Regarding taking antibiotics during catheter insertions, it's generally not recommended to use antibiotics routinely for ISC unless advised by a healthcare professional. Overuse of antibiotics can lead to antibiotic resistance and other health issues. However, if you have a confirmed UTI, your doctor will prescribe the appropriate antibiotics to treat the infection.

In summary, while proper technique is crucial for ISC, recurrent UTIs in SCI patients can have multiple causes. Work closely with a healthcare provider experienced in SCI care to identify and address the specific factors contributing to your UTIs, and follow their recommendations for prevention and treatment.

Patients undergoing intermittent self-catheterisation should not have a urinary flow rate to measure.

An advanced answer for this question would also educate regarding the difference between a urinary tract infection and asymptomatic bacteriuria.

13. My doctor said my urine culture was contaminated. What does this mean?

Word count: 247 words. Overall grade 3/5

When a doctor says that a urine culture is contaminated, it means that the urine sample provided for testing contains external substances or bacteria from the surrounding area that could affect the accuracy of the test results. Urine cultures are typically performed to identify and diagnose urinary tract infections (UTIs) by determining the presence of specific bacteria in the urine.

Contamination of a urine culture can occur if:

- 1. Inadequate cleanliness: The person collecting the urine sample or the patient didn't clean the genital area properly before collecting the sample. This can introduce external bacteria into the sample.*
- 2. Improper collection technique: If the urine sample is collected incorrectly, it may contain bacteria from the skin, genital area, or other external sources.*
- 3. Delayed testing: Urine samples should ideally be tested shortly after collection. If there is a significant delay, bacterial growth from external sources can contaminate the sample.*
- 4. Use of a non-sterile container: The urine sample should be collected in a sterile container to prevent contamination. Using a non-sterile container can introduce external bacteria.*

Contaminated urine cultures can lead to false-positive results, meaning that the test may suggest the presence of a urinary tract infection when there isn't one. To avoid contamination, it's important to follow the instructions provided by your healthcare provider for collecting a clean urine sample. If a urine culture is indeed contaminated, your doctor may recommend retesting with a properly collected sample to obtain accurate results and determine the appropriate course of treatment if necessary.

Whilst the information was grossly accurate, the use of the word "contaminated" in the explanation, whilst technically accurate, can be received by patients as "blaming", as it appears to place a significant amount of culpability upon the collector of the urine sample. The urologist expert panel in this study based on clinical experience recommend use of more patient-centred caring terminology when describing "contaminated" urine results, to maintain patient-clinician rapport whilst maintaining accuracy.

14. I am a teenager with recurrent urinary tract infections. Will this continue as I grow older?

Word count: 306 words. Overall grade 3/5

I'm not a doctor, but I can try to provide you with some general information that might help. Recurrent urinary tract infections (UTIs) can be frustrating and uncomfortable, but they may not necessarily continue as you grow older. Many factors can contribute to UTIs, and addressing these factors can often reduce the frequency of infections. Here are a few things to consider:

- 1. **Hygiene:** Good hygiene practices, especially after using the bathroom, can help prevent UTIs. Make sure you are wiping from front to back to avoid introducing bacteria from the rectal area to the urethra.*
- 2. **Fluid Intake:** Staying well-hydrated can help flush bacteria out of your urinary tract.*
- 3. **Emptying the Bladder:** Make sure you empty your bladder regularly and completely. Holding in urine for extended periods can increase the risk of infection.*
- 4. **Urinate Before and After Intercourse:** Urinating before and after sexual activity can help flush out bacteria that might enter the urethra during sex.*
- 5. **Avoid Irritants:** Avoid irritating substances like perfumed soaps, bubble baths, and strong detergents in your genital area, as they can disrupt the natural balance of bacteria.*
- 6. **Cranberry Products:** Some people find that cranberry juice or supplements may help prevent UTIs by preventing bacteria from sticking to the urinary tract walls.*
- 7. **Consult a Healthcare Provider:** If you continue to experience recurrent UTIs, it's essential to consult a healthcare provider. They can assess your specific situation, run tests if necessary, and recommend appropriate treatments or preventive measures. In some cases, underlying medical conditions may contribute to recurrent UTIs, and these should be addressed.*

Remember that while recurrent UTIs can be common, they can often be managed with the right strategies. Your healthcare provider will be the best resource for addressing your specific situation and providing guidance on prevention and treatment options. It's essential to follow their recommendations and seek medical advice when needed.

Low level evidence. Does not address anatomical variations as a common cause for UTIs in this age group as a concern (particularly in children).

Does not address increased risk of post-coital UTIs.

15. I have a long-term indwelling catheter and keep getting recurrent urinary tract infections. Should I be on prophylactic antibiotics to prevent urinary tract infections?

Word count: 320 words. Overall grade 4/5

I'm not a doctor, but I can offer some general information that may help you when discussing this issue with your healthcare provider. Recurrent urinary tract infections (UTIs) can be challenging, especially for individuals with long-term indwelling catheters. Prophylactic antibiotics are one approach that some healthcare providers consider in specific situations, but they should be prescribed and monitored by a healthcare professional. Here are some factors to consider:

- 1. Risks and Benefits: Prophylactic antibiotics can help prevent UTIs, but they also come with potential risks. Long-term antibiotic use can lead to antibiotic resistance and side effects. Your doctor will assess whether the potential benefits outweigh the risks.*
- 2. Alternative Strategies: Your healthcare provider may explore alternative strategies to reduce the risk of UTIs, such as optimizing catheter care, using sterile techniques during catheter changes, or considering intermittent catheterization if it's suitable for your condition.*
- 3. Catheter Maintenance: Proper care and maintenance of the indwelling catheter are crucial. Ensure that it is regularly changed according to your healthcare provider's recommendations and that you maintain good hygiene around the catheter site.*
- 4. Hydration: Staying well-hydrated can help flush bacteria out of the urinary tract. Drinking an adequate amount of water may be beneficial in reducing the risk of UTIs.*
- 5. Urinary Tract Health: Maintaining overall urinary tract health is important. Your healthcare provider may recommend certain lifestyle changes or dietary modifications to support this.*
- 6. Consultation with a Specialist: In cases of recurrent UTIs with indwelling catheters, it may be helpful to consult with a urologist or infectious disease specialist who can provide specialized guidance and treatment recommendations.*

Ultimately, the decision to use prophylactic antibiotics should be made in consultation with your healthcare provider. They will consider your medical history, the specific circumstances surrounding your recurrent UTIs, and the potential risks and benefits of antibiotic use. It's essential to have a thorough discussion with your healthcare team to determine the most appropriate course of action for your situation.

Guidelines are generally in consensus that long term IDCs should not have prophylactic antibiotics.

An advanced answer for this question would also discuss bladder rinses and mucous/sediment management.

16. I am about to undergo a cystoscopy and left ureteropyeloscopy and laser lithotripsy next week. I have a stent in now and need to urinate all the time. How do I know if I have a urinary tract infection or not?

Word count: 274 words. Overall grade 2/5

I'm not a doctor, but I can offer some general information that might help you understand whether you might have a urinary tract infection (UTI) or not. It's important to consult with your healthcare provider for specific advice and diagnosis.

Common symptoms of a UTI include:

*1. **Frequent and Urgent Urination:** If you're already experiencing frequent urination due to the stent, it can be challenging to differentiate between the stent's effects and a potential UTI. However, if you notice a sudden and significant increase in frequency or urgency, it could be a sign of infection.*

*2. **Burning Sensation:** Pain or a burning sensation when urinating can be indicative of a UTI.*

*3. **Cloudy or Bloody Urine:** UTIs can sometimes cause changes in the appearance of your urine, such as cloudiness or blood.*

*4. **Foul Odor:** Foul-smelling urine can be a symptom of infection.*

*5. **Pelvic Pain:** You may experience discomfort or pain in your lower abdomen or pelvic region.*

*6. **Fever or Chills:** A fever, along with other symptoms, can be a sign that the infection has spread to the kidneys. If you suspect you have a UTI, it's important to contact your healthcare provider promptly. They can perform tests such as a urine culture to confirm the diagnosis and prescribe appropriate antibiotics if necessary. Since you are already scheduled for a procedure, it's crucial to ensure you are infection-free before the cystoscopy and ureteropyeloscopy to minimize complications.*

In the meantime, make sure to stay well-hydrated, follow any stent care instructions provided by your healthcare team, and maintain good hygiene to reduce the risk of infection. Always consult your healthcare provider for personalized advice and guidance regarding your specific situation.

Most of these symptoms can be related to stent irritation or post urological procedure symptoms. If a patient sees blood in the urine, this is usually due to the stent and not a UTI.

The question itself does not address the stent specifically enough regarding stent irritation symptoms.