Diarrhea
Adult After-Hours Version

- DEFINITION -

* Diarrhea is the sudden increase in the frequency and looseness of BMs (bowel movements, stools).

Diarrhea SEVERITY is defined as:
* MILD: Mild diarrhea is the passage of a few loose or mushy BMs.
* SEVERE: Severe diarrhea is the passage of many (e.g., more than 15) watery BMs.

- INITIAL ASSESSMENT QUESTIONS -

1. SEVERITY: "How many diarrhea stools have you had today?"
2. ONSET: "When did the diarrhea begin?"
3. BM CONSISTENCY: "How loose or watery is the diarrhea?"
4. FLUIDS: "What fluids have you taken today?"
5. VOMITING: "Are you also vomiting?" If so, ask: "How many times today?"
6. ABDOMINAL PAIN: "Are you having any abdominal pain?" If yes: "What does it feel like?" (e.g., crampy, dull, intermittent, constant)
7. ABDOMINAL PAIN SEVERITY: If present, ask: "How bad is the pain?" (e.g., Scale 1-10; mild, moderate, or severe)
   - MILD (1-3): doesn't interfere with normal activities, abdomen soft and not tender to touch
   - MODERATE (4-7): interferes with normal activities or awakens from sleep, tender to touch
   - SEVERE (8-10): excruciating pain, doubled over, unable to do any normal activities
8. HYDRATION STATUS: "Any sign of dehydration?" (e.g., thirst, dizziness) "When did you last urinate?"
9. EXPOSURE: "Have you traveled to a foreign country recently?" "Have you been exposed to anyone with diarrhea?" "Could you have eaten any food that was spoiled?"
10. OTHER SYMPTOMS: "Do you have any other symptoms?" (e.g., fever, blood in stool)
11. PREGNANCY: "Is there any chance you are pregnant?" "When was your last menstrual period?"

- BACKGROUND INFORMATION -

GENERAL
* The majority of adults with acute diarrhea (less than 14 days duration) have an infectious etiology for their diarrhea, and in most cases the infection is a virus. Other common causes of acute diarrhea are food poisoning and medications.
* Maintaining hydration is the cornerstone of treatment of adults with acute diarrhea.
* In general, an adult who is alert, feels well, and who is not thirsty or dizzy: is NOT dehydrated.
* Antibiotic therapy is only rarely required in the treatment of acute diarrhea. Two types of acute diarrhea that require antibiotic therapy are C. difficile diarrhea and (sometimes) Traveler's Diarrhea.

TRAVELER'S DIARRHEA
* Definition: Traveler's diarrhea typically begins within two weeks of traveling to a foreign country. There are bacteria in the water and food that the body is not used to and a diarrheal infection is the result. Traveler's Diarrhea is also called 'Mummy Tummy', 'Montezuma's revenge', and 'Turista'.
* Symptoms: Passage of at least three loose stools a day; accompanying symptoms may include nausea, vomiting, abdominal cramping, fecal urgency, and fever.
* Region and Risk: Traveler's to the following developing areas have a HIGH-RISK (40%) of getting Traveler's diarrhea: Latin America, Africa, Southern Asia. There is an INTERMEDIATE-RISK (15%) with travel to Northern Mediterranean countries, the Middle East, China, and Russia. Travelers to the
United States, Western Europe, Canada, and Japan have a LOW-RISK (2-4%) of getting Traveler's Diarrhea.

* Prevention: Diet: Avoid uncooked foods (salad). Cooked foods (served steaming hot) are usually safe as are dry foods (e.g., bread). Avoid ice cubes and tap water. Drink steaming beverages (e.g., coffee, tea) or carbonated drinks (e.g., bottled soft drinks, beer). Fruits that can be peeled are usually safe (e.g., oranges, bananas, apples).

* Prevention: Bismuth Subsalicylate: Bismuth (PeptoBismol 8 tablets daily PO) is approximately 65% effective at preventing Traveler's Diarrhea.

* Prevention: Antibiotics: Antibiotic chemoprophylaxis (prevention) during travel may be indicated in certain circumstances. Rifamixin (200 mg PO BID with meals) is approximately 70-80% effective at preventing Traveler's Diarrhea.

* Treatment - Anti-Diarrheal Agents: Bismuth subsalicylate (PeptoBismol) and loperamide (Imodium AD) are both effective at reducing the diarrhea symptoms.

* Treatment - Antibiotics: Antibiotic therapy is sometimes recommended to treat this type of diarrhea, especially if the symptoms are more than mild. There are a number of antibiotics that are effective including ciprofloxacin (Cipro), azithromycin (Zithromax), and Rifamixin (Rifaximin 200 mg PO TID for 3 days).

NORWALK VIRUS

* Definition: The Norwalk virus is one of a number of viruses that cause stomach flu (viral gastroenteritis). It is usually acquired through contaminated food or water. In 2002 and 2003 this received significant media attention when several cruise ships had outbreaks in which hundreds of passengers were affected.

* Symptoms: acute onset of diarrhea, vomiting, abdominal cramps. In adults there is usually more diarrhea than vomiting. The symptoms typically last 1 to 2 days.

* Epidemiology: The Norwalk virus is the number one cause of epidemic gastroenteritis. Outbreaks have been reported in restaurants, nursing homes, hospitals, and vacation settings like cruise ships.

* Incubation period: 1-3 days

* Prevention: How can one avoid exposure while on a vacation? Avoid uncooked food. Drink bottled water (avoid ice cubes). Wash your hands frequently. Do not share glassware or eating utensils.

* Treatment: Antibiotics are not helpful since this is a viral infection. Maintaining adequate hydration through intake of oral liquids is the most important thing. PeptoBismol can be used.

DEHYDRATION - ESTIMATION BY TELEPHONE...

MILD DEHYDRATION

* Urine Production: slightly decreased
* Mucous Membranes: normal
* Heart rate < 100 beats / minute
* Slightly thirsty.
* Capillary Refill: < 2 seconds
* Treatment: can usually treat at home

MODERATE DEHYDRATION

* Urine Production: minimal or absent
* Mucous Membranes: dry inside of mouth
* Heart rate 100-130 beats / minute
* Thirsty, lightheaded when standing
* Capillary Refill: > 2 seconds
* Treatment: must be seen; Go to ED NOW (or PCP Triage)

SEVERE DEHYDRATION

* Urine Production: none > 12 hours
* Mucous Membranes: very dry inside of mouth
* Heart rate > 130 beats / minute
* Very thirsty, very weak and lightheaded; fainting may occur
* Capillary Refill: > 2-4 seconds
* Treatment: must be seen immediately; Go to ED Now or CALL EMS 911 NOW

SIGNS OF SHOCK
* Confused, difficult to awaken, or unresponsive
* Heart rate (pulse) is rapid and weak
* Extremities (especially hands and feet) are bluish or gray, and cold
* Too weak to stand or very dizzy when tries to stand
* Capillary Refill: > 4 seconds
* Treatment: Lie down with the feet elevated; CALL EMS 911 NOW

FIRST AID
FIRST AID ADVICE FOR SHOCK: Lie down with the feet elevated.

REFERENCES


SEARCH WORDS
ABDOMEN
ABDOMINAL CRAMPING
ABDOMINAL CRAMPS
ACUTE GASTROENTERITIS
BACTERIAL DIARRHEA
BMS
BOWEL CONTROL
BOWEL MOVEMENTS
COLITIS
CRAMPS
CRUISE SHIP
DEHYDRATED
DEHYDRATION
DIARRHEA
DYSENTERY
EXPLOSIVE STOOLS
FOOD POISONING
FOREIGN TRAVEL
FREQUENT STOOLS
GASTROENTERITIS
LOOSE STOOLS
MUCUS IN STOOLS
NORWALK
NORWALK VIRUS
PERSISTENT DIARRHEA
PUS IN STOOLS
RECENT TRAVEL
RECTUM
SEVERE DIARRHEA
STOOLS
TRAVEL
TRAVELERS DIARRHEA
TRAVELER’S DIARRHEA
VIRAL DIARRHEA
WATER STOOLS

- TRIAGE -

Call EMS 911 Now
Shock suspected (e.g., cold/pale/clammy skin, too weak to stand)
   R/O: shock. FIRST AID: Lie down with the feet elevated.
   CA: 40, 22, 1

Difficult to awaken or acting confused (e.g., disoriented, slurred speech)
   R/O: shock. FIRST AID: Lie down with the feet elevated.
   CA: 40, 22, 1

Sounds like a life-threatening emergency to the triager
   CA: 40, 1

See More Appropriate Guideline
Vomiting also present and worse than the diarrhea
   Go to Guideline: Vomiting (Adult)

   Go to Guideline: Rectal Bleeding (Adult)

Go to ED Now
[1] SEVERE abdominal pain (e.g., excruciating) AND [2] present > 1 hour
   R/O: appendicitis or other acute abdomen
   CA: 41, 80, 81, 1

   Reason: higher risk of serious cause of abdominal pain, e.g. mesenteric ischemia
   CA: 41, 80, 81, 1

   R/O: severe Shigella, Salmonella, Campylobacter or E. coli 0157
   CA: 41, 80, 81, 1

Black bowel movements (EXCEPTION: chronic-unchanged black bowel movements AND is taking iron pills or peptobismol)
   R/O: gastritis, peptic ulcer disease
   CA: 41, 80, 81, 1

Go to ED Now (or PCP triage)
[1] Drinking very little AND [2] dehydration suspected (e.g., no urine > 12 hours, very dry mouth, very lightheaded)
   Reason: may need IV hydration
   CA: 42, 80, 1
Patient sounds very sick or weak to the triager

*R/O: severe dehydration, sepsis
*CA: 42, 80, 1

**See Physician within 4 Hours (or PCP triage)**

[1] Fever > 103 F (39.4 C) AND [2] not able to get the fever down using Fever Care Advice

*CA: 43, 20, 72, 73, 89, 1


*R/O: diverticulitis, appendicitis or other acute abdomen
*CA: 43, 89, 1


*Reason: high risk for dehydration
*CA: 43, 20, 89, 1


*Reason: severe diarrhea, higher risk of dehydration
*CA: 43, 20, 89, 1

**See Physician within 24 Hours**

Fever > 101 F (38.3 C)

*R/O: bacterial diarrhea
*CA: 44, 16, 20, 72, 73, 17, 1

Abdominal pain  (EXCEPTION: Pain clears with each passage of diarrhea stool)

*R/O: bacterial diarrhea
*CA: 44, 20, 89, 1


(EXCEPTION: only on toilet paper. Reason: diarrhea can cause rectal irritation with blood on wiping)

*R/O: bacterial diarrhea
*CA: 44, 20, 89, 1


*R/O: bacterial diarrhea
*CA: 44, 16, 17, 1

[1] Recent antibiotic therapy (i.e., within last 2 months) AND [2] > 3 days since antibiotic was stopped

*R/O: C. difficile diarrhea
*CA: 44, 15, 3, 4, 17, 1

Immunocompromised (e.g., HIV positive, cancer chemo, splenectomy, organ transplant, chronic steroids)

*Reason: broader range of causes
*CA: 44, 3, 4, 10, 17, 1

Tube feedings (e.g., nasogastric, g-tube, j-tube)

*R/O: osmotic diarrhea

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Diarrhea 2008
Age > 70 years
   Reason: higher morbidity
CA:  44, 20, 17, 1

Call PCP within 24 Hours
Travel to a foreign country in past month
   Reason: antibiotic therapy may be indicated for the treatment of Traveler's Diarrhea
CA:  50, 11, 12, 3, 4, 2, 5, 24, 25, 17, 1

See PCP When Office is Open (within 3 days)
Diarrhea present > 7 days
   R/O: bacterial cause or Giardia
CA:  45, 3, 4, 7, 17, 1

See PCP within 2 Weeks
Diarrhea is a chronic symptom (recurrent or ongoing AND lasting > 4 weeks)
CA:  46, 3, 4, 7, 18, 8, 1

Home Care
Mild diarrhea  (all triage questions negative)
   Reason: probably viral gastroenteritis
CA:  48, 9, 3, 4, 24, 25, 2, 5, 7, 6, 8, 1
1. CARE ADVICE given per Diarrhea (Adult) guideline.

2. OTC MEDS - Bismuth Subsalicylate (e.g., PeptoBismol):
   - Helps reduce diarrhea, vomiting, and abdominal cramping.
   - Adult dosage: two tablets or two tablespoons by mouth every hour (if diarrhea continues) to a maximum of 8 doses in a 24 hour period.
   - Do not use for more than 2 days.

3. FLUID THERAPY during MILD-MODERATE DIARRHEA:
   - Drink more fluids, at least 8-10 glasses (8 oz) daily.
   - For example: sports drinks, diluted fruit juices, soft drinks.
   - Supplement this with saltine crackers or soups, to make certain that you are getting sufficient fluid and salt to meet your body's needs.
   - Avoid caffeinated beverages (Reason: caffeine is mildly dehydrating).

4. NUTRITION during MILD-MODERATE DIARRHEA
   - Maintaining some food intake during episodes of diarrhea is important.
   - Ideal initial foods include boiled starches / cereals (e.g., potatoes, rice, noodles, wheat, oats) with a small amount of salt to taste.
   - Other acceptable foods include: bananas, yogurt, crackers, soup.
   - As your stools return to normal consistency, resume a normal diet.

5. CAUTION - Bismuth Subsalicylate (e.g., PeptoBismol):
   - May cause a temporary darkening of stool and tongue.
   - Do not use if allergic to aspirin.
   - Do not use in pregnancy.
   - Read and follow the package instructions carefully.

6. EXPECTED COURSE: Viral diarrhea lasts 4-7 days. Always worse on days 1 and 2.

7. CONTAGIOUSNESS:
   - Be certain to wash your hands after using the restroom.
   - If your work is cooking, handling, serving or preparing food, then you should not work until the diarrhea has completely stopped.

8. CALL BACK IF:
   - Signs of dehydration occur (e.g., no urine > 12 hours, very dry mouth, lightheaded, etc.)
   - Diarrhea persists > 7 days
   - You become worse.

9. REASSURANCE:
   - In healthy adults, most new onset diarrhea is caused by a viral infection of the intestines.
   - Diarrhea is the body's way of getting rid of the germs.
   - Here are some tips on how to keep ahead of the fluid losses.

10. DO NOT USE - Bismuth Subsalicylate (e.g., PeptoBismol):
    - Do not take Peptobismol for the diarrhea. (Reason: diarrhea in immunocompromised patients is often chronic and there could be side effects from taking it chronically)
11. TRAVELER’s DIARRHEA:
- Traveler’s diarrhea typically begins within two weeks of traveling to a foreign country. There are bacteria in the water and food that your body is not used to and a diarrheal infection is the result. Traveler’s Diarrhea is also called “Mummy Tummy”, “Montezuma’s revenge”, and Turista.
- Symptoms: Passage of at least three loose stools a day; accompanying symptoms may include nausea, vomiting, abdominal cramping, fecal urgency, and fever.
- Treatment: Antibiotic therapy is sometimes recommended to treat this type of diarrhea.

12. REGION and RISK:
- High-risk: travel to Latin America, Africa, Southern Asia - diarrhea occurs in 40% of travelers
- Intermediate-risk: travel to Northern Mediterranean countries, middle east, China, and Russia - diarrhea occurs in 10-15% of travelers
- Low-risk: travel to United States, Western Europe, Canada, Japan - diarrhea occurs in 2-4% of travelers.

13. PREVENTION during travel to high risk regions:
- Eat cooked foods (steaming hot) or dry foods (bread).
- Eat fruit that can be peeled (apples, bananas, oranges).
- Drink steaming hot beverages (coffee, tea) or carbonated drinks (bottled soft drinks, beer).
- Avoid uncooked foods (salad).
- Avoid ice cubes and tap water.

14. N/A

15. EDUCATION:
- Most diarrhea that occurs in association with taking antibiotics will resolve on its own. However, sometimes a patient can develop a type of bacterial diarrhea after taking antibiotics.
- You may need to provide a stool culture. Bring a sample of the diarrhea (e.g., in a container with a lid).

16. EDUCATION: Tell the caller: It could be bacterial diarrhea. You may need to provide a stool culture.

17. CALL BACK IF:
- Signs of dehydration occur (e.g., no urine > 12 hours, very dry mouth, lightheaded, etc.)
- Bloody stools
- Constant or severe abdominal pain
- You become worse.

18. DIARRHEA DIARY: Please keep a diary of the diarrhea each day. This can help make the correct diagnosis.

19. CLEAR LIQUIDS:
- Drink more fluids.
- Sip water or a sports-rehydration drink (Gatorade or Powerade)
- Other options - oral rehydration solution (Pedialyte or Rehydralyte)
21. CLEAR LIQUIDS:
   - Sip water or a sports - rehydration drink (Gatorade or Powerade)
   - Other options - oral rehydration solution (Pedialyte or Rehydralyte).

22. FIRST AID: Lie down with the feet elevated (Reason: counteract shock)

23. OPTION - CONTACT HOME HEALTH NURSE:
   - If patient is being followed by a home health nurse, a home visit may be an option instead of an office visit.
   - The home health nurse can assess the patient, check tube placement, and provide education.

24. OTC MEDS - Loperamide (Imodium AD):
   - Helps reduce diarrhea.
   - Adult dosage: two caplets or four teaspoonfuls initially PO. May take an additional caplet or 2 teaspoonfuls with each subsequent loose BM. Maximum of 4 caplets or 8 teaspoonfuls each day.
   - Do not use for more than 2 days.

25. CAUTION - Loperamide (Imodium AD):
   - Do NOT use if there is a fever >100 or if there is blood or mucus in the stools.
   - Read and follow the package instructions carefully.

40. CALL EMS 911 NOW: Immediate medical attention is needed. You need to hang up and call 911 (or an ambulance). (Triager Discretion: I'll call you back in a few minutes to be sure you were able to reach them.)

41. GO TO ED NOW: You need to be seen in the Emergency Department. Go to the ER at ___________ Hospital. Leave now. Drive carefully.

42. GO TO ED NOW (or PCP triage):
   - IF NO PCP TRIAGE: You need to be seen. Go to the ER/UCC at ___________ Hospital within the next hour. Leave as soon as you can.
   - IF PCP TRIAGE REQUIRED: You may need to be seen. Your doctor will want to talk with you to decide what's best. I'll page him now. If you haven't heard from the on-call doctor within 30 minutes, go directly to the ER/UCC at ___________ Hospital.

43. SEE PHYSICIAN WITHIN 4 HOURS (or PCP triage):
   - IF NO PCP TRIAGE: You need to be seen. Go to ___________ (ED/UCC or office if it will be open) within the next 3 or 4 hours. Go sooner if you become worse.
   - IF PCP TRIAGE REQUIRED: You may need to be seen. Your doctor will want to talk with you to decide what's best. I'll page the doctor now. If you haven't heard from the on-call doctor within 30 minutes, call again. (Note: If PCP can't be reached, send to ED/UCC or office.)
44. SEE PHYSICIAN WITHIN 24 HOURS:
   - IF OFFICE WILL BE OPEN: You need to be examined within the next 24 hours. Call your doctor when the office opens, and make an appointment.
   - IF OFFICE WILL BE CLOSED AND NO PCP TRIAGE: You need to be examined within the next 24 hours. Go to _________ at your convenience.
   - IF OFFICE WILL BE CLOSED AND PCP TRIAGE REQUIRED: You may need to be seen within the next 24 hours. Your doctor will want to talk with you to decide what's best. I'll page the doctor now. (EXCEPTION: from 10 pm to 7 am. Since this isn't serious, we'll hold the page until morning.)

45. SEE PCP WITHIN 3 DAYS: You need to be examined within 2 or 3 days. Call your doctor during regular office hours and make an appointment.

46. SEE PCP WITHIN 2 WEEKS: You need an evaluation for this ongoing problem within the next 2 weeks. Call your doctor during regular office hours and make an appointment.

47. INFORMATION OR ADVICE ONLY CALL.

48. HOME CARE: You should be able to treat this at home.

49. CALL PCP NOW: You need to discuss this with your doctor. I'll page him now. If you haven't heard from the on-call doctor within 30 minutes, call again.

50. CALL PCP WITHIN 24 HOURS: You need to discuss this with your doctor within the next 24 hours.
   - IF OFFICE WILL BE OPEN: Call the office when it opens tomorrow morning.
   - IF OFFICE WILL BE CLOSED: I'll page him now. (EXCEPTION: from 9 pm to 9 am. Since this isn't urgent, we'll hold the page until morning.)

51. CALL PCP WHEN OFFICE IS OPEN: You need to discuss this with your doctor within the next few days. Call him/her during regular office hours.

52. GO TO L&D NOW: You need to be seen. Go to the Labor and Delivery Unit or the Emergency Room at __________ Hospital. Leave now. Drive carefully.

72. FEVER MEDICINES:
   - Treat fevers above 101° F (38.3° C).
   - The goal of fever therapy is to bring the fever down to a comfortable level. Remember that fever medicine usually lowers fever 2-3° F (1-1.5° C).
   - ACETAMINOPHEN DOSING (e.g., Tylenol): 650 mg by mouth every 4 hours or 1,000 mg by mouth every 6 hours. Maximum dose per day = 4,000 mg.
   - IBUPROFEN DOSING (e.g., Motrin, Advil): 400 mg by mouth every 6 hours or 600 mg by mouth every 8 hours.
   - AGE > 65 YEARS: Acetaminophen is generally considered safer than ibuprofen. Acetaminophen dosing interval should be increased to every 8 hours because of reduced liver metabolism. Maximum dose per day = 3,000 mg.
   - Be certain to read the package instructions.

73. CAUTION - NSAIDS:
   - Do not take ibuprofen if you have stomach problems, kidney disease, or other contraindications to using nonsteroidal anti-inflammatory drugs.
   - Do not use if pregnant.
   - Do not use ibuprofen for >7 days without consulting your PCP.

80. DRIVING: Another adult should drive.
81. BRING MEDS: Be certain to bring your medications with you to the Emergency Department.

87. BRING MEDS: Be certain to bring your medications or a list of your meds with you, when you go to see the doctor.

89. CALL BACK IF:
   - You become worse.

Author: David A. Thompson, M.D.
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