

Research and Nursing Interventions of Constipation and Sepsis

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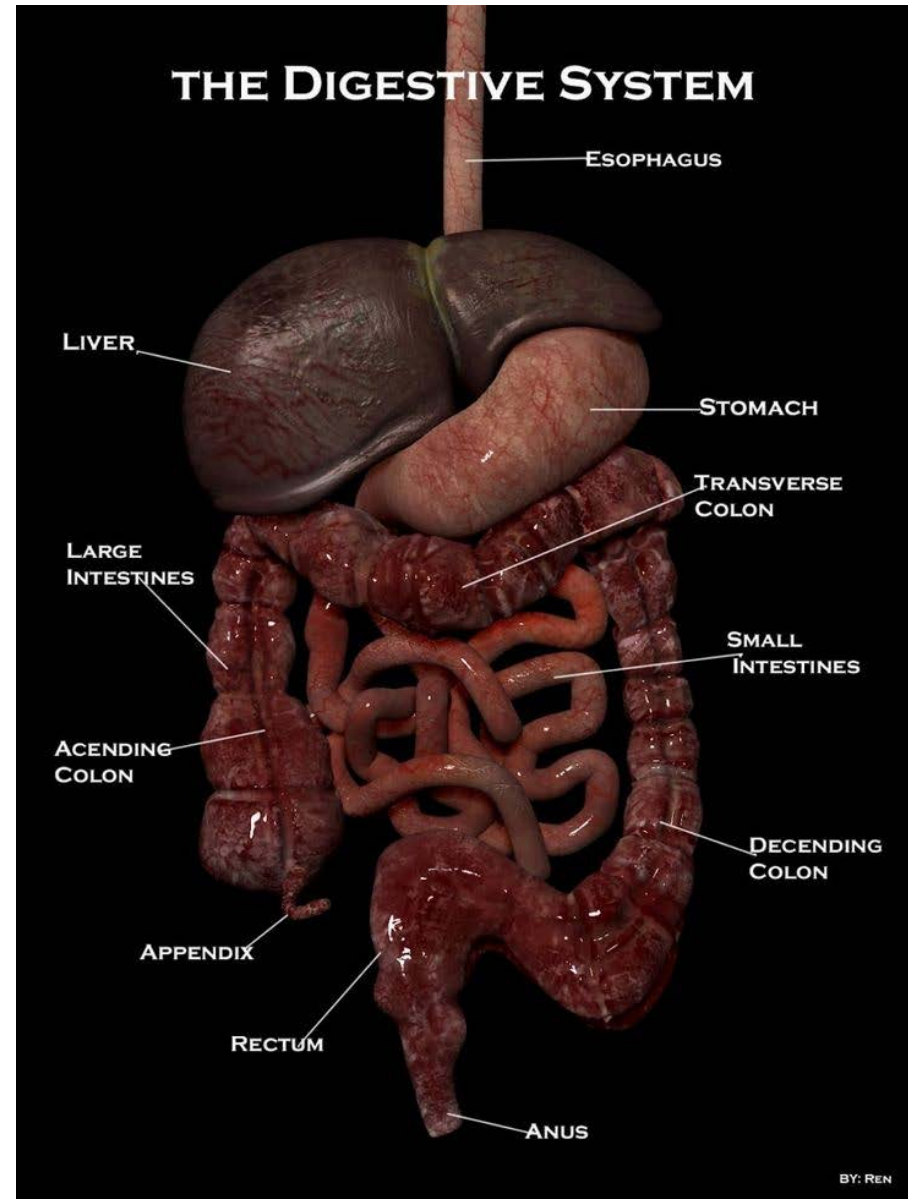


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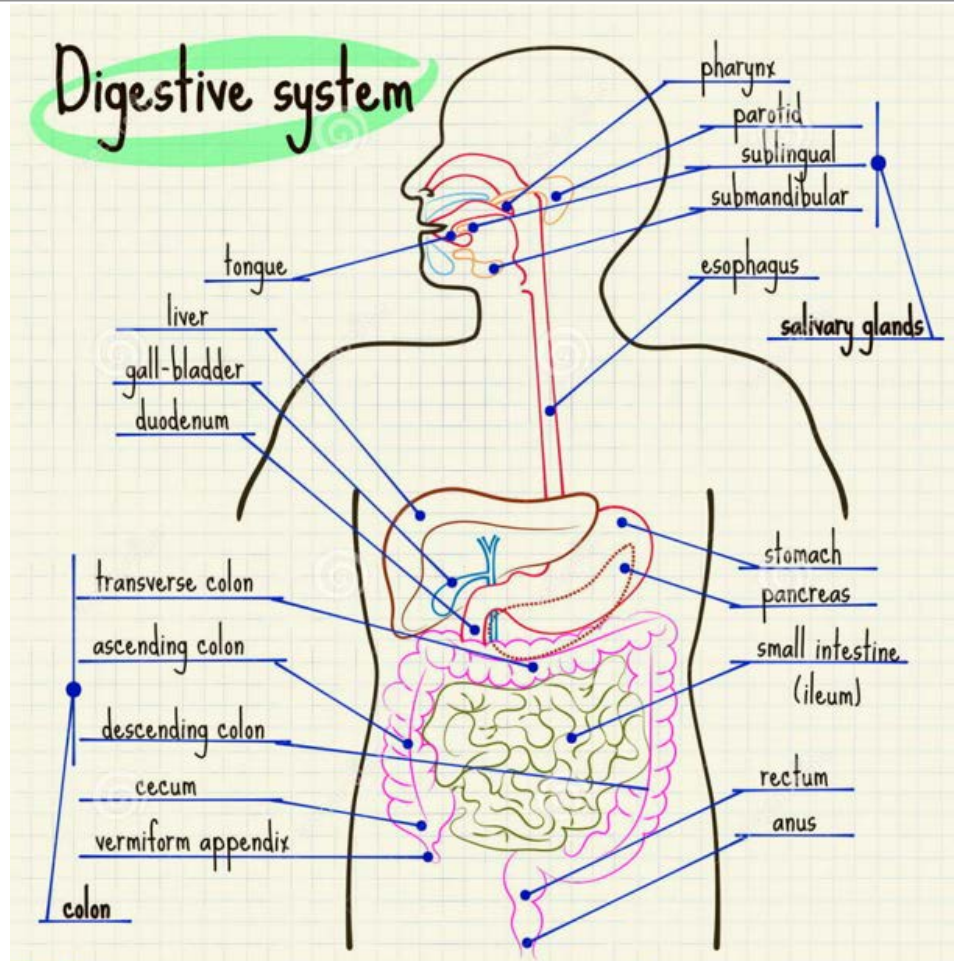
Constipation



Objectives

- The nurse will be able to list at least three of the parameters for diagnosis of constipation
- ❖ The nurse will be able to defend the resulting confusion between not understanding or knowing the definition of constipation, and poor self-reporting.
- ❖ The nurse will be able to recommend further discussion/description of constipation and how to determine if a person receiving services is considered constipated.

Your digestive system



Questions

What is the definition of constipation?

What is a “normal” frequency for bowel movements?

What is a “normal” consistency?



Definition

Constipation

- Fewer than three bowel movements per week

Chronic constipation

- Infrequent bowel movements
- Difficult passage of stool for several weeks
- Interference with daily activities
- Excessive straining
- Treatment depends on the cause

Retrieved from <http://www.mayoclinic.org/diseases-conditions/constipation/home/ovc-20252671> on April 10, 2017.

Definition

Constipation

- Rome III Criteria
 - At least two of the following present for at least two month duration
 - Two or fewer defecations per week
 - At least one episode of fecal incontinence per week
 - History of retentive posturing or excessive volitional stool retention
 - History of painful or hard bowel movements
 - Presence of a large fecal mass in the rectum
 - History of large-diameter stool that may obstruct the toilet

Leung, L., Riutta, T., Kotecha, J., and Rosser, W. 2011. "Chronic constipation: an evidence-based review. Journal of the American Board of Family Medicine. Pages 436-451. July-August 2011. Volume 24. Number 4. Retrieved from <http://www.jabfm.org/content/24/4/436.full.pdf+html>








What are some nursing interventions for preventing constipation?



What are some nursing interventions for preventing constipation?



Research

BRISTOL STOOL CHART			
	Type 1	Separate hard lumps	Very constipated
	Type 2	Lumpy and sausage like	Slightly constipated
	Type 3	A sausage shape with cracks in the surface	Normal
	Type 4	Like a smooth, soft sausage or snake	Normal
	Type 5	Soft blobs with clear-cut edges	Lacking fibre
	Type 6	Mushy consistency with ragged edges	Inflammation
	Type 7	Liquid consistency with no solid pieces	Inflammation

Self-reporting Deficits

- Concerns with
 - Consistency
 - Frequency
 - Accuracy
 - Willingness to share

Markland A. D., Palsson, O., Goode, P.S., Burgio, K.L., Busby-Whitehead, J., and Whitehead, W.E. 2013. "Association of low dietary intake of fiber and liquids with constipation: evidence from the National Health and Nutrition Examination Survey". American Journal of Gastroenterology. 2013 May;108(5):796-803.

Decreasing these deficits by:

- Bristol Stool Chart
- Frequency of bowel movements per week
- Dietary recall
 - Dietary fiber
 - Liquid intake



Findings

- More prevalent in women



Findings

- Conclusions

- No significance between increasing age and more frequent bouts of constipation



- The rates of reported constipation remain the same (people under 60 versus people over 60)

Findings

- Despite the Bristol stool chart, there were discrepancies defining constipation.
- Differences in final reporting noted when constipation was defined by stool consistency and stool frequency.



Conclusions

- Women
 - African-American ethnicity
 - Education
 - Obesity
 - Less consumption of liquids
- Men
 - Low consumption of liquids

(NOT low fiber or lack of vigorous physical activity)



Conclusions

- If we are going to support and teach that more fiber and more fluid intake prevents constipation, then:
 - More research is needed
 - More evidence is necessary



Research

- Various definitions for constipation
 - Medical personnel say:
 - Less than three bowel movements per week
 - Three days without a bowel movement



Leung, L., Riutta, T., Kotecha, J., and Rosser, W. 2011. "Chronic constipation: an evidence-based review. Journal of the American Board of Family Medicine. Pages 436-451. July-August 2011. Volume 24. Number 4. Retrieved from <http://www.jabfm.org/content/24/4/436.full.pdf+html>

Research

- Various definitions for constipation
 - Patients say:
 - Stool consistency
 - Feelings of incomplete emptying
 - Straining
 - Urge for defecation



Research

Evidence suggests people underestimate the frequency of bowel movements when self-reporting

Question

What do you think the finding was for a “normal” range for bowel movements?



Normalcy

“Normalcy” ranges between three bowel movements a day to three a week (!)

Rome III Criteria

- Constipation

- Rome III Criteria – (released in 2006) having at least two of the following:
 - Straining
 - Lumpy or hard stools
 - Sensation of incomplete evacuation
 - Sensation of anorectal obstruction/blockage
 - Manual removal
 - Less than three defecations per week

Rome III Criteria

- Constipation
 - (all six of them are greater than or equal to 25% of defecation)
- Chronic constipation would be having the symptoms for at least 6 months

Findings

- Range of prevalence of constipation:
 - 1.9% to 27.2%
- Daily laxative use by the elderly:
 - 50 – 74%
- Women
 - 2-3 times more likely to report constipation
 - Pelvic floor injury from childbirth
 - Willingness to report personal information
- Age
 - Largest increase in prevalence is after 70 years of age
 - May be due to medication, immobility, decreased urge to have a bowel movement

Conclusion

- Many aspects contribute to constipation
 - Insufficient dietary fiber
 - Low fluid volume intake
 - Decreased exercise



Prevalence

More prevalent in women, older adults over 70 years old, and people within a lower socioeconomic status



Effects

Quality of life

Health-care costs

Work absences



Doctor visits

Approximately half of people with constipation report not being satisfied with their body's response to the treatment



Prevalence

People of all ages, cultures, sizes, and colors



Thoughts on both articles

- More research needed
- More education on signs and symptoms of constipation
- Ask more questions to get more information.

BRISTOL STOOL FORM SCALE





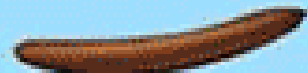


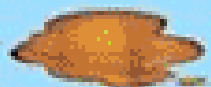
The Bristol Stool Form Scale was developed at the University of Bristol in the United Kingdom. It is a medical tool designed to classify one's bowel movements into seven distinct categories. There is a direct correlation between the form of the stool and the amount of time food wastes have spent in the gastrointestinal tract.

If stools stay in the gut for too long, the body may not be able to eliminate wastes efficiently.

If stools are runny and hard to contain, the body is unable to fully absorb water and nutrients from food.

Type 1		Separate hard lumps, hard to pass, known as "rabbit droppings"	CONSTIPATION These stools are difficult to pass and require a lot of straining. Constipation could be caused by many reasons, including: <ul style="list-style-type: none"> • Imbalanced diet lacking in fruit and vegetable fibre and high in animal proteins, fats, processed foods; • Stress both physical and emotional often causing Irritable Bowel Syndrome (IBS); • Scarring or adhesions in the bowel; • Parasites; • Street drugs and some medications; • Imbalance of gut flora (bacterial dysbiosis); • Allergies and intolerances; • Long-term laxative abuse etc.
Type 2		Sausage-shaped, lumpy, uncomfortable to pass	
Type 3		Like a sausage, with cracks on its surface	HEALTHY STOOLS This type of stool slides out easily without leaving marks or strong smells. There is no need to strain. It is typical of people on a balanced vegetarian diet.
Type 4		Like a sausage or snake, smooth and soft	HEALTHY STOOLS This type of stool also slides out easily without leaving marks or strong smells. There is not need to strain either. It is typical of people on a balanced diet including a small amount of high-quality animal food.
Type 5		Soft blobs with clear-cut edges, passes easily	PRECURSOR TO DIARRHOEA Although occasionally everyone has soft blobby skiddy foul-smelling stools, if this is a regular occurrence then one should re-evaluate their diet: reduce intake of alcohol, processed products, animal fats; in some rare cases reduce fruit intake; watch sugar intake and make sure that there is an overall balance of proteins, vegetables and grains in the diet.
Type 6		Fluffy pieces with ragged edges, a mushy stool	DIARRHOEA This type of stools is difficult to control. There is always urgency and immediacy associated with diarrhoea. Watery stools mean that the body was unable to extract water, electrolytes and nutrients from the food, causing malnutrition and dehydration. In severe diarrhoea, a medical practitioner needs to be consulted immediately. Some causes of diarrhoea include: <ul style="list-style-type: none"> • Food poisoning; • Stress both physical and emotional often causing Irritable Bowel Syndrome (IBS); • Allergies and intolerances; • Parasitic invasions; • Use of antibiotics; • Laxative abuse; • Anorexia, bulimia and other psychosomatic disorders.
Type 7		Watery stool, virtually no solid pieces, entirely liquid	

Stool Form Correlates to Intestinal Transit Time

THE BRISTOL STOOL FORM SCALE			
SLOW TRANSIT  RAPID TRANSIT	Type 1		Separate hard lumps, like nuts
	Type 2		Sausage-like but lumpy
	Type 3		Like a sausage but with cracks in the surface
	Type 4		Like a sausage or snake, smooth and soft
	Type 5		Soft blobs with clear-cut edges
	Type 6		Fluffy pieces with ragged edges, a mushy stool
	Type 7		Watery, no solid pieces

Lewis SJ, Heaton KW. *Scand J Gastroenterol.* 1997;32:920-924.

Heaton KW, O'Donnell LJ. *J Clin Gastroenterol.* 1994;19:26-30.

50 FIBER-RICH FOODS

THIS LIST IS FOR INFORMATIONAL AND ENTERTAINMENT PURPOSES ONLY AND IS NOT MEANT TO BE A SUBSTITUTE FOR MEDICAL ADVICE, DIAGNOSIS, OR TREATMENT.

FRUITS

Prunes	7.7 g per cup
Pear	5.1 g
Mango	3.3 g
Apple	3.3 g
Raspberries	8 g per cup
Raw blackberries	3.8 g per half cup
Raw strawberries	3.3 g per cup
Raisins, seedless	5.4 g per cup

BREADS

Rye	5.6 g for 2 slices
Bran flakes	5.2 g per cup
Wheat bread	5.2 g for 2 slices

NUTS & SEEDS

Almonds	3.5 g per oz (24 nuts)
Pistachios	3 g per oz (47 nuts)
Peanuts	4.6 g per 2 oz (56 nuts)
Walnuts	4 g per 2 oz (30 halves)
Pecans	5.4 g per 2 oz (40 halves)

LEGUMES

Navy beans	19 g per cup	Lima beans, cooked	6.6 g half cup
Pinto beans, cooked	15.4 g per cup	Split peas, cooked	16.3 g per cup
Kidney beans	13 g cup		
Baked beans, canned	5.2 g half cup		
Lentils, cooked	7.8 g half cup		
Black beans, cooked	7.5 g half cup		

Half cup bean with ham soup	19 g
One cup whole wheat pasta and a half cup broccoli	9 g
Tomato paste, canned	5.4 g per half cup
Pumpkin, canned	13 g per half cup

MEALS & CANNED FOOD

Best Low-Carb High-Fiber Foods

everyday we need
25-35g of fiber



Psyllium husks
78g fiber per 100g



Chia seeds
34g fiber per 100g



Flaxseeds
27g fiber per 100g



Almonds
12g fiber per 100g



Avocados
7g fiber per 100g



Raspberries
7g fiber per 100g



Artichokes
5g fiber per 100g



Blackberries
5g fiber per 100g



Brussels sprouts
4g fiber per 100g

Source: USDA

More info: low-carb-support.com

— Infographics —

FIBER IN FOODS

(per100g)



BEANS

FIBER
16
(g)



ALMONDS

FIBER
12
(g)



AVOCADO

FIBER
7
(g)



RASP
BERRY

FIBER
6
(g)



GUAVA

FIBER
5
(g)



GREEN
PEAS

FIBER
5
(g)



KIWI

FIBER
3
(g)



BROCCOLI

FIBER
2.6
(g)



ORANGES

FIBER
2.4
(g)



KALE

FIBER
2
(g)



BROWN
RICE

FIBER
1.8
(g)



OATMEAL

FIBER
1.7
(g)

References

Atay, Orhan. 2016. "Gastrointestinal Issues". Rubin, Merrick, Greydanus. Health care for people with intellectual and developmental disabilities across the lifespan Part II Rubin and Crocker 3rd edition Springer Springer International Publishing Switzerland.

Leung, L., Riutta, T., Kotecha, J., and Rosser, W. 2011. "Chronic constipation: an evidence-based review. Journal of the American Board of Family Medicine. Pages 436-451. July-August 2011. Volume 24. Number 4. Retrieved from <http://www.jabfm.org/content/24/4/436.full.pdf+html>

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Retrieved from <http://www.mayoclinic.org/diseases-conditions/constipation/home/ovc-20252671> on April 10, 2017.



Suspect
SEPSIS



Save Lives

Objectives

- The nurse will be able to list possible vital signs indicative of sepsis.
- The nurse will be able to explain why diagnosing sepsis is difficult.
- ❖ The nurse will be able to outline a strategic plan of action when they believe a person receiving services might be septic.

What is sepsis?



Know the signs and symptoms of sepsis.



Shivering, fever,
or very cold



Extreme pain
or discomfort



Clammy
or sweaty skin



Confusion
or disorientation



Short of breath



High heart rate

If suspected, get medical care immediately.

SOURCE: CDC Vital Signs, August 2016

#VitalSigns

Vital^{CDC}signs™

<http://www.cdc.gov/vitalsigns/sepsis>



Sepsis

- Sepsis is a potentially life-threatening complication of an infection. Sepsis occurs when chemicals released into the bloodstream to fight the infection trigger inflammatory responses throughout the body. This inflammation can trigger a cascade of changes that can damage multiple organ systems, causing them to fail.
- If sepsis progresses to septic shock, blood pressure drops dramatically, which may lead to death.
- Anyone can develop sepsis, but it's most common and most dangerous in older adults or those with weakened immune systems. Early treatment of sepsis, usually with antibiotics and large amounts of intravenous fluids, improves chances for survival.

(Retrieved from <http://www.mayoclinic.org/diseases-conditions/sepsis/home/ovc-20169784> on April 19, 2017.)

How would someone tell you they are in pain, feeling feverish, dizzy, or weak?





Warning signs of sepsis

- Recent diagnoses
 - Pneumonia
 - UTI
 - Infections of skin and gut
- Edema at infection site (Swelling)
- Pain
- Febrile (Fever)
- Tachypnea (High respiratory rate)
- Hypotension (Low blood pressure)
- Too high or too low white blood cell count

(NPR. “Doctor turns up possible treatment for deadly sepsis.” March 23, 2017.)

(Sepsis Alliance. “Sepsis is a medical emergency, CDC says. It can be stopped if caught in time.” August 23, 2016.)

Common infections can lead to sepsis.

Among adults with sepsis:



had a lung infection
(e.g., pneumonia)



had a urinary tract infection
(e.g., kidney infection)



had a type of gut infection



had a skin infection

Rates of Sepsis Diagnosis and Mortality

- Approximately one million Americans are diagnosed with sepsis annually
- 258,000 Americans die each year
(more than the number of people dying from MIs)
- In-hospital deaths in 2009
 - 128,766
- In-hospital deaths in 2013
 - 159,690

(Karidis, A. 2016. “Sepsis is a medical emergency, CDC says. It can be stopped if caught in time.” Sepsis Alliance - Health and Science.)

Problem with these numbers

- Death certificates
 - Agency for Healthcare Research and Quality
 - These numbers are **only for primary sepsis diagnoses** and not secondary sepsis diagnoses

(Karidis, A. 2016. “Sepsis is a medical emergency, CDC says. It can be stopped if caught in time.” Sepsis Alliance - Health and Science.)

Education

- Fewer than half of the American population knows what sepsis is
- Nursing intervention – EDUCATE

(Karidis, A. 2016. “Sepsis is a medical emergency, CDC says. It can be stopped if caught in time.” Sepsis Alliance - Health and Science.)

What do we do?

- Identify it
 - Look for signs
 - Listen to complaints
 - Check temperature, pulse, blood pressure, and respirations.
- Act
- Get treatment
 - IV fluids
 - Antibiotics

Review of Research

- Masking the symptoms
 - Multiple conditions
 - Effects of medications
- Varying responses for each person
- 49.1 % in 2004 to 7 % in 2015

Review of Research

- “not from medical breakthroughs but from persistent efforts to catch it early and treat it quickly and aggressively”

(Karidis, A. 2016. “Sepsis is a medical emergency, CDC says. It can be stopped if caught in time.” Sepsis Alliance - Health and Science.)

Review of Research

- Prognosis can be good when caught early
- Mortality climbs to 25 to 30% for severe sepsis
- 40 to 70% for septic shock

(Karidis, A. 2016. "Sepsis is a medical emergency, CDC says. It can be stopped if caught in time." Sepsis Alliance - Health and Science.)

How long do you have to act
for positive results with septic shock?

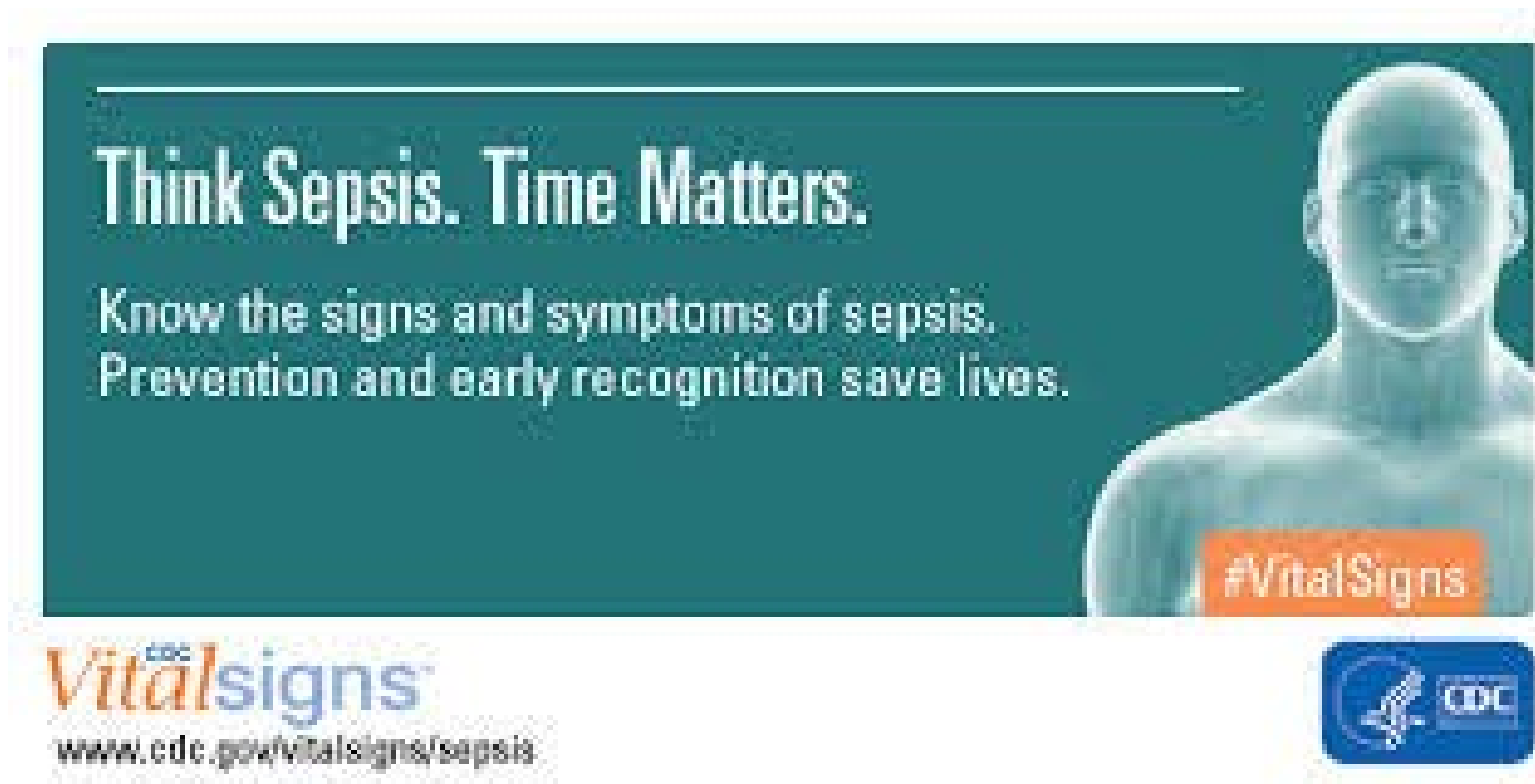


How long?

- Chance of survival decreases 7.6% every hour that septic shock goes untreated

(Karidis, A. 2016. “Sepsis is a medical emergency, CDC says. It can be stopped if caught in time.” Sepsis Alliance - Health and Science.)

- Its ok to ask “Is this sepsis?”



(Karidis, A. 2016. “Sepsis is a medical emergency, CDC says. It can be stopped if caught in time.” Sepsis Alliance - Health and Science.)

Review of Research

- Vaccinations for flu
- Vaccination for pneumonia if older than 65
- Vaccinated for meningococcal meningitis if a teenager

Review of Research

- NICE (National Institute for Health and Care Excellence)
- “People should be reviewed and treated within an hour”

(Wise, J. 2017. “Sepsis should be treated within one hour, says NICE”. BMJ: page 356.)

Review of Research

- Warning signs
 - Signs of high risk of severe illness or death
 - Mottled or ashen appearance
 - Cyanosis of the skin, lips, or tongue
 - Non-blanching rash of the skin
 - Objective evidence of altered mental state or the person does not wake up or stay awake
 - No urination in the past 18 hours (or less than 0.5 ml/kg/h if catheterized)
 - Tachycardia (increased heart rate; 130 beats a minute or more))
 - Increased respiratory rate (25 breaths a minute or more)

(Wise, J. 2017. "Sepsis should be treated within one hour, says NICE". BMJ: page 356.)

Review of Research

- Treatment
 - Anyone with **at least one criterion** should be reviewed by a **senior clinician** within **one hour**
 - Receive antibiotics and intravenous fluids within an hour of being identified as high risk
 - If hospital is not accessible, then antibiotics should be given in general practice or by an EMS employee

(Wise, J. 2017. "Sepsis should be treated within one hour, says NICE". BMJ: page 356.)

Review of Research

- 40% - “did not have a timely review by a senior clinician”
- Nearly 1/3 experienced delays receiving antibiotics
- Early use of intravenous fluid was inconsistent

(Wise, J. 2017. “Sepsis should be treated within one hour, says NICE”. BMJ: page 356.)

Review of Research

- Sepsis→

Time→

QUICK increase in severity of
symptoms

- Debilitating problems
- Organ dysfunction or failure
- Death

(Wise, J. 2017. “Sepsis should be treated within one hour, says NICE”. BMJ: page 356.)

(Karidis, A. 2016. “Sepsis is a medical emergency, CDC says. It can be stopped if caught in time.” Sepsis Alliance - Health and Science.)

Review of Research

- Presented with indications of sepsis
- IV vitamin C, and added corticosteroids and thiamine
- 47 out of 50 lived (three died from other diseases)
- Out of 150 people, only one died of sepsis
- NIH granted \$3.2 million for this study
- Will end later this year

Special Considerations for People with I/DD

- Five areas placing them at increased risk
 - Environmental/living settings
 - Cognitive limitations
 - Physical skill limitations
 - Special health risks
 - Problems in obtaining health services

Directly quoted from the following:

(Roth, S. and Clausen, P. 1994. "The Role of the Nurse in Infection Control". A Life-Span Approach to Nursing Care for Individuals with Developmental Disabilities". Baltimore, MD: Brookes Publishing Co., Inc.)

Special Considerations for People with I/DD

- Environmental
 - Group living naturally leads to exposure of infectious diseases
 - Places may inadvertently promote the transmission of infection
 - Poor sanitation, sharing personal care items

(Roth, S. and Clausen, P. 1994. "The Role of the Nurse in Infection Control". A Life-Span Approach to Nursing Care for Individuals with Developmental Disabilities". Baltimore, MD: Brookes Publishing Co., Inc.)

Special Considerations for People with I/DD

- Cognitive limitations
 - Varying degrees of ability to engage in healthy practices
 - Difficulties in personal hygiene
 - Continuing risk of infection
 - Decision-making skills may be altered
- Physical skill limitations
 - Difficulty with personal hygiene could lead to increased susceptibility to infections

(Roth, S. and Clausen, P. 1994. "The Role of the Nurse in Infection Control". A Life-Span Approach to Nursing Care for Individuals with Developmental Disabilities". Baltimore, MD: Brookes Publishing Co., Inc.)

Special Considerations for People with I/DD

- Special Health Risks
 - Down Syndrome
 - Respiratory infections
 - Spina bifida
 - UTIs
- Problems in Obtaining Health Services
 - Obstacles preventing high quality care
 - Coordination of care services

(Roth, S. and Clausen, P. 1994. "The Role of the Nurse in Infection Control." A Life-Span Approach to Nursing Care for Individuals with Developmental Disabilities". Baltimore, MD: Brookes Publishing Co., Inc.)

Nursing Interventions for Prevention of Sepsis

- Infection control practices
 - Home
 - School
 - Employment
 - Recreational environments

(Barks, L. 2010. "Physical Care of Individuals with Intellectual and Developmental Disabilities". Nursing care for Individuals with Intellectual and Developmental Disabilities-An Integrated Approach. Brookes Publishing Co., Inc.: Baltimore, MD)

Nursing Interventions for Prevention of Sepsis

- At home:
 - Teach good hygiene to people with disabilities
AND people providing care
 - Provide support
 - Hand, oral, and personal hygiene
 - Teach why cleanliness/disinfection is essential
 - Disinfect the showers to avoid fungal and bacterial infections
 - Clean the sinks to avoid bacterial infections (drop the toothbrush in the sink, pick it up, put it in mouth)

(Barks, L. 2010. "Physical Care of Individuals with Intellectual and Developmental Disabilities". Nursing care for Individuals with Intellectual and Developmental Disabilities-An Integrated Approach. Brookes Publishing Co., Inc.: Baltimore, MD)

Nursing Interventions for Prevention of Sepsis

- At home:
 - Routine immunizations
 - Influenza vaccinations
 - Periodic immunizations

(Barks, L. 2010. "Physical Care of Individuals with Intellectual and Developmental Disabilities". Nursing care for Individuals with Intellectual and Developmental Disabilities-An Integrated Approach. Brookes Publishing Co., Inc.: Baltimore, MD)

Nursing Interventions for Prevention of Sepsis

- At school, employment, and recreational environments:
 - Methods of managing infection control depends on the situation
 - Educate all care providers on disinfection

(Barks, L. 2010. "Physical Care of Individuals with Intellectual and Developmental Disabilities". Nursing care for Individuals with Intellectual and Developmental Disabilities-An Integrated Approach. Brookes Publishing Co., Inc.: Baltimore, MD)

Case study

A DSP calls you and says that one of the people she is accompanying is verbally complaining of abdominal pain. He finished eating lunch 15 minutes ago, and is now breathing at 22-24 breaths per minute and a temperature of 100.2. He is a 55 year old male with a history of CHF and was discharged from the hospital two and a half weeks ago with a diagnosis of pneumonia. He finished his antibiotics two days ago.

Case study

Based on what we have reviewed during this presentation:

- What are some of the potential signs of sepsis?
- What is a likely nursing intervention to address the fever?
- When would you go to the person to perform a nursing assessment?

Case study

You authorized a PRN medication to reduce his fever. Within 45 minutes, the DSP calls you to say his temperature is 99.0. His complaints of abdominal pain have stopped.

Two hours later you receive a call that his temperature spiked to 101.3, his respirations are 25-27 breaths per minute, and his abdominal pain has returned. He just vomited twice in the past five minutes, and is diaphoretic.

Case study

Based on what we have reviewed during this presentation:

- What changes, if any, are indicative of potential sepsis?
- What are your thoughts that this might be sepsis?
- What are your next steps?

SYMPTOMS OF SEPSIS

S
E
P
S
I
S

Shivering, fever, or very cold

Extreme pain or general discomfort (“worst ever”)

Pale or discolored skin

Sleepy, difficult to rouse, confused

“I feel like I might die”

Short of breath



Watch for a combination of these symptoms. If you suspect sepsis, see a doctor urgently, CALL 911 or go to a hospital and say, “I AM CONCERNED ABOUT SEPSIS.”

SEPSIS.ORG

WHAT CAN YOU DO TO **PREVENT** SEPSIS?



1 Get vaccinated against the flu, pneumonia, and any other infections that could lead to sepsis. Talk to your doctor for more information.



2 Prevent infections that can lead to sepsis by

- **Cleaning** scrapes and wounds
- Practicing good **hygiene** (e.g., hand washing)



3 Know that time matters. If you have a severe infection, **look for signs** like: shivering, fever, or very cold, extreme pain or discomfort, clammy or sweaty skin, confusion or disorientation, short of breath, rapid breathing, and high heart rate.

Healthcare providers are key to preventing infections and illnesses that can lead to sepsis.

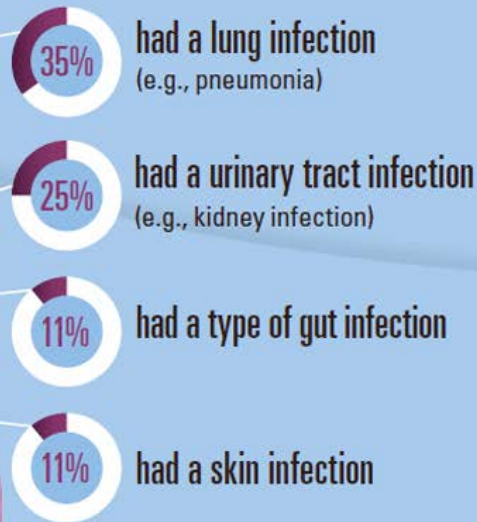
EDUCATE patients and their families about the early symptoms of severe infection and sepsis, and when to seek care for an infection, especially those at higher risk.

REMIND patients that taking care of chronic illnesses helps prevent infections.

ENCOURAGE infection prevention measures, such as hand hygiene and vaccination against infections.

Common infections can lead to sepsis.

Among adults with sepsis:



Know the signs and symptoms of sepsis.



Shivering, fever,
or very cold



Extreme pain
or discomfort



Clammy
or sweaty skin



Confusion
or disorientation



Short of breath



High heart rate

SOURCE: CDC Vital Signs, August 2016.

References

Barks, L. 2010. "Physical Care of Individuals with Intellectual and Developmental Disabilities". Nursing care for Individuals with Intellectual and Developmental Disabilities-An Integrated Approach. Brookes Publishing Co., Inc.: Baltimore, MD.

Mayo Clinic <http://www.mayoclinic.org/diseases-conditions/sepsis/home/ovc-20169784>

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