

## Learning Objective

Evaluate the developmental status of a child at 24 months of age.

## Question

A 24-month-old boy is brought for a well-child evaluation. He began walking at 18 months of age and falls frequently. He has been unable to climb up on the couch or get down without help from his parents. He is able to stack six cubes and roll a ball to the examiner. He is unable to kick a ball. He has a vocabulary of more than 50 words and can combine them in two-word phrases. He follows simple two-step commands.

Which of the following best describes this child's developmental status?

A. Global developmental delay

**B. Gross motor delay**

C. Language delay

D. Normal development

## References

Centers for Disease Control and Prevention. Learn the Signs. Act Early. Important Milestones: Your Child By Two Years. Available at: <http://www.cdc.gov/ncbddd/actearly/milestones/milestones-2yr.html>. Accessed October 5, 2016.

Feigelman S. The Second Year. In: Kliegman RM, Stanton BM, Schor NF, St. Geme J, Behrman RE, eds. *Nelson Textbook of Pediatrics*. 20th ed. Philadelphia, PA: Elsevier; 2016:70-76.

## Rationale

The normal development of a child includes skills that fall into several categories, such as cognitive and adaptive skills, language and communication skills, social and emotional skills, and gross and fine motor skills. When assessing the development of any child, knowing what is normal is crucial to determining the next steps in caring for the patient.

At 24 months of age, a child should be displaying increasing independence but still imitating those around him/her. He/she is starting to exhibit defiance when told what to do. The beginnings of cooperative play (as opposed to parallel play) are starting to appear. Self-help skills appropriate for a 24-month-old child would include taking off pants and helping to take off shirts without buttons. In the area of language and communication, a 24-month-old child should have a vocabulary of at least 50 words. His/her speech should be understandable to strangers about 50% of the time; he/she should be able to point to objects when identified and should follow two-step commands. From a motor development standpoint, a 24-month-old child should be able to run, stand on tiptoe, kick a ball, climb on and off furniture, and walk up and down stairs while holding onto support. He/she should be able to pick things up from a standing position without falling over. He/she can copy a straight line and can stack at least six blocks.

The child in the vignette seems to be showing appropriate language and communication skills but is exhibiting isolated gross motor delay. Global developmental delay is present when two or more of the major categories show delay.

## Learning Objective

Evaluate the developmental status of a child at 24 months of age.

## Question

A 24-month-old boy is brought for his 2-year physical examination. His mother reports that he is often unsteady when he walks and recently tripped on a toy and broke his wrist. He does not run and prefers to crawl up and down stairs.

During the examination, the boy does not want to separate from his mother and tries to get his mother's attention by pointing to his cup. When he speaks, only the word "mama" is understandable. His mother thinks he knows about 25 to 30 words, uses them singly, sometimes can point to things in books, and stacks three blocks together. He does not help with dressing himself.

Which of the following best describes this child's development?

### A. Global developmental delay

B. Gross motor delay

C. Language delay

D. Normal development

## References

Centers for Disease Control and Prevention. Learn the Signs. Act Early. Important Milestones: Your Child By Two Years. Available at: <http://www.cdc.gov/ncbddd/actearly/milestones/milestones-2yr.html>. Accessed October 5, 2016.

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## Rationale

The normal development of a child includes skills that fall into several categories, such as cognitive and adaptive skills, language and communication skills, social and emotional skills, and gross and fine motor skills. When assessing the development of any child, knowing what is normal is crucial to determining the next steps in caring for the patient.

At 24 months of age, a child should be displaying increasing independence but still imitating those around him/her. He/she is starting to exhibit defiance when told what to do. The beginnings of cooperative play (as opposed to parallel play) are starting to appear. Self-help skills appropriate for a 24-month-old child would include taking off pants and helping to take off shirts without buttons. In the area of language and communication, a 24-month-old child should have a vocabulary of at least 50 words. His/her speech should be understandable to strangers about 50% of the time; he/she should be able to point to objects when identified and should follow two-step commands. He/she should be starting to sort shapes and colors. From a motor development standpoint, a 24-month-old child should be able to run, stand on tiptoe, kick a ball, climb on and off furniture, and walk up and down stairs while holding onto support. He/she should be able to pick things up from a standing position without falling over. He/she can copy a straight line or circle and can stack at least six blocks.

The child described seems to be showing delays in areas of language and communication, adaptive skills, and gross and fine motor skills. There are no clues about social and emotional development other than the fact that the child does not want to separate from his mother, which may be a situational phenomenon. Global developmental delay is present when two or more of the major categories show delay. This child is therefore exhibiting global developmental delay.



# SAMPLE QUESTIONS

## Learning Objective

Know the differential diagnosis of acute abdominal pain.

## Question

Abdominal pain and vomiting developed in a 3-year-old girl within 2 hours of eating at a fast-food restaurant. She then had one diarrheal stool, following which she did not have a bowel movement for 2 days, although she continued to have intermittent vomiting.

Physical examination reveals a crying patient who appears approximately 5% dehydrated. Temperature is 38.5°C. The abdomen is slightly distended. Bowel sounds are diminished. No masses are palpated, but right lower quadrant tenderness is present. Rectal examination yields loose stool that contains no blood. Urinalysis discloses 5 to 8 leukocytes/hpf; leukocyte esterase activity is negative.

Which of the following is the most likely diagnosis?

- A. Intestinal malrotation
- B. Intussusception
- C. Urinary tract infection
- D. Salmonella gastroenteritis

## E. Acute appendicitis

## References

Kim JS. Acute abdominal pain in children. *Pediatr Gastroenterol Hepatol Nutr*. 2013;16:219-224.

Leung AK, Sigalet DL. Acute abdominal pain in children. *Am Fam Physician*. 2003;67:2321-2326. Available at: <http://www.aafp.org/afp/2003/0601/p2321.html>. Accessed November 9, 2016.

## Rationale

A pediatrician should be well versed in the differential diagnosis of acute abdominal pain, as it is a common condition of childhood. It can also be one of the most difficult symptoms to diagnose, necessitating a detailed history, thoughtful physical examination, and selective laboratory and radiologic studies. Differentiation between surgical and non-surgical causes is critical. Conditions associated with significant morbidity, such as appendicitis, intussusception, volvulus, ovarian torsion, and incarcerated inguinal hernia, require expeditious diagnosis and prompt consultation. Non-surgical causes of abdominal pain, such as gastroenteritis, constipation, genitourinary tract infections, ovarian cysts, and anxiety, are common but can also be challenging to diagnose.

Appendicitis is the most common surgical cause of abdominal pain in childhood. Classic symptoms include anorexia, fever, vomiting, periumbilical pain that shifts to the right lower quadrant, and signs of peritoneal irritation (guarding, rebound tenderness, and Rovsing, obturator, or iliopsoas signs). Appendicitis is a difficult diagnosis to establish in infants and young children. Diffuse abdominal pain, fever, and vomiting are the most common symptoms in children younger than 5 years of age; localized right lower quadrant tenderness occurs < 40% of the time in this age-group. It can also be difficult to differentiate appendicitis from gastroenteritis, intestinal obstruction, mesenteric lymphadenitis, or ovarian torsion.

In the vignette presented, the patient appears moderately ill but has only had one episode of diarrhea, making gastroenteritis less likely. The degree of illness and the mildly abnormal urinalysis findings do not strongly support a urinary tract infection. Intestinal obstructions, such as malrotation or intussusception, typically present with other symptoms such as significant distention, bilious vomiting, or bloody stool.



# SAMPLE QUESTIONS

## Learning Objective

Know the differential diagnosis of acute abdominal pain.

## Question

A 3-year-old boy has a 3-day history of intermittent abdominal pain. The parent reports small amounts of liquid stools in the boy's pull-up diaper pants for the last 10 days. For several minutes every day the boy bends over, crosses his legs, and holds his stomach in pain. He has also had cold symptoms for the past week but has not had fever, vomiting, or a change in appetite.

Physical examination reveals a well-appearing child with normal vital signs and clear rhinorrhea. The abdomen is slightly distended, but there are no masses or tenderness. Firm stool is palpable on rectal examination. The stool tests negative for occult blood.

Which of the following is the most likely diagnosis?

### A. Constipation

- B. Gastroenteritis
- C. Mesenteric lymphadenitis
- D. Intussusception
- E. Henoch-Schönlein purpura

## References

Leung AK, Sigalet DL. Acute abdominal pain in children. *Am Fam Physician*. 2003;67:2321-2326. Available at: <http://www.aafp.org/afp/2003/0601/p2321.html>. Accessed November 9, 2016.

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Constipation often presents with abdominal pain in a toilet-training toddler, who may be fearful of painful defecation and chooses to withhold stool. Stool leakage then occurs around the obstructive stool, which is palpable on digital examination. There is no history of fever, vomiting, or frequent diarrhea as would be expected with gastroenteritis. The affected child appears well, and there is no history of bloody mucus in the stools, making intussusception unlikely. Purpura in dependent areas such as the buttocks and legs is the hallmark of Henoch-Schönlein purpura and is not described in this case. Abdominal pain secondary to mesenteric adenitis may present in the setting of a viral upper respiratory tract infection, but constipation is a much more likely diagnosis based on the history and physical findings described.