

Worksheet Key

Urinary System

True or False

Examine the following statements. Identify if the statement is true or false.		True	False
1. Urine is formed by nephrons.		✓	✓
2. Each kidney is connected to the urinary bladder by a urethra.		✓	✓
3. The kidneys are retroperitoneal.		✓	✓
4. Renin lowers blood pressure by inhibiting angiotensin.		✓	✓
5. Another term for urination is micturition.		✓	✓
6. Infection of the urinary bladder is termed pyelonephritis.		✓	✓
7. Nocturia means “micturition during the night.”		✓	✓
8. Blood filtration occurs through the glomerulus.		✓	✓
9. ADH causes the kidneys to put out more urine.		✓	✓
10. The passage of small amounts of urine is called polyuria.		✓	✓

Fill-in-the-Blank

Complete the sentence with the correct term(s).	Answers
11. The inner region of an organ is called the _____.	<i>medulla</i>
12. The microscopic working units of the kidney are the _____.	<i>nephrons</i>
13. The tube that carries urine from the kidney to the bladder is the _____.	<i>ureter</i>
14. The cluster of capillaries that filters the blood is the _____.	<i>glomerulus</i>
15. Any disease of the kidney is termed a(n) _____.	<i>nephropathy</i>
16. A physician who specializes in study of the urinary system is a(n) _____.	<i>urologist</i>
17. Inflammation of the urethra is termed _____.	<i>urethritis</i>
18. A small mold of a kidney tubule is called a(n) _____.	<i>cast</i>
19. Excessive acidity of body fluids is termed _____.	<i>acidosis</i>
20. Excessive thirst is termed _____.	<i>polydipsia</i>
21. Dilatation of the renal pelvis is termed _____.	<i>pyelectasis</i>
22. With reference to the urinary system, the root vesic/o means _____.	<i>urinary bladder OR bladder</i>
23. Angiotensin is activated by the renal enzyme _____.	<i>renin</i>
24. The opposite of polyuria is _____.	<i>oliguria</i>
25. Urine's specific gravity can be measured using a(n) _____.	<i>urinometer</i>
26. The _____ carries blood into the kidney.	<i>renal artery</i>
27. The glomerular capsule is in the _____ kidney.	<i>cortex</i>
28. _____ is an inability to retain urine.	<i>Incontinence</i>
29. _____ is a collection of urine in the renal pelvis caused by obstruction that can result in distention and renal atrophy.	<i>Hydronephrosis</i>
30. The cluster of capillaries within the glomerular capsule is known as the _____.	<i>glomerulus</i>
31. The term _____ means nearer to the point of attachment or to a given reference point.	<i>proximal</i>

32. A(n) _____ is a triangular structure in the renal medulla composed of the nephrons' loops and collecting ducts.	<i>renal pyramid</i>
33. _____ is a nitrogenous by-product of muscle metabolism.	<i>Creatinine</i>
34. A hormone released from the pituitary gland that causes water reabsorption in the kidneys, thus concentrating the urine, is _____ hormone.	<i>antidiuretic</i>
35. A hormone secreted by the adrenal gland that regulates electrolyte excretion by the kidneys is _____.	<i>aldosterone</i>
36. A substance that increases blood pressure, is activated in the blood by renin, and is an enzyme produced by the kidneys is _____.	<i>angiotensin</i>

Matching

Match the following terms and write the appropriate letter next to each term.

Term	Answers	Definition
37. nephromalacia	<i>D</i>	A. method for cleansing the blood
cystotomy	<i>B</i>	B. incision of the urinary bladder
hemodialysis	<i>A</i>	C. surgery to remove a stone
lithotomy	<i>C</i>	D. softening of the kidney
38. hydronephrosis	<i>C</i>	A. study of urine
hematuria	<i>B</i>	B. presence of blood in the urine
EPO	<i>D</i>	C. collection of urine in the renal pelvis
UA	<i>A</i>	D. hormone that stimulates erythrocyte production
39. anuria	<i>A</i>	A. lack of urine formation
uropoiesis	<i>C</i>	B. involuntary urination
nocturia	<i>D</i>	C. formation of urine
enuresis	<i>B</i>	D. excessive urination at night
40. calculus	<i>C</i>	A. a measure of the amount of fluid entering the nephron
GFR	<i>A</i>	B. a form of dialysis
CAPD	<i>B</i>	C. stone
natriuresis	<i>D</i>	D. excretion of sodium in the urine

Pronounce It

For each phonetic transcription in this section, pronounce the term aloud and write it in the space provided, being careful to spell it correctly.

	Answers
41. bak-te-re-U-re-ah	<i>bacteriuria</i>
42. sis-TI-tis	<i>cystitis</i>
43. glo-mer-u-lo-nef-RI-tis	<i>glomerulonephritis</i>
44. kath-eh-ter-ih-ZA-shun	<i>catheterization</i>
45. he-mo-di-AL-ih-sis	<i>hemodialysis</i>
46. pi-eh-LOG-rah-fe	<i>pyelography</i>
47. sis-TEK-to-me	<i>cystectomy</i>
48. KON-du-it	<i>conduit</i>
49. al-DOS-ter-one	<i>aldosterone</i>
50. kre-AT-in-in	<i>creatinine</i>

	Answers
51. de-TRU-sor	<i>detrusor</i>
52. SIS-to-sele	<i>cystocele</i>
53. KA-lik	<i>calyx</i>
54. pol-e-DIP-se-ah	<i>polydipsia</i>
55. sis-to-meh-TROG-rah-fe	<i>cystometrography</i>
56. di-u-RE-sis	<i>diuresis</i>
57. eh-rith-ro-POY-eh-tin	<i>erythropoietin</i>
58. glo-MER-u-lus	<i>glomerulus</i>
59. NEF-ron	<i>nephron</i>
60. mik-tu-RISH-un	<i>micturition</i>

Word Building

For each item in this section, select the correct word parts from the bank below to form the term that matches the definition. Word parts may be used more than once.

Part 1	Answers
61. Congenital absence of the urinary bladder	<i>a-cyst-ia</i>
62. Surgical fixation of the urinary bladder	<i>cyst-o-pexy</i>
63. Inflammation of the glomeruli and kidney	<i>glomerul-o-nephritis</i>
64. Inflammation of the renal pelvis and kidney	<i>pyel-o-nephritis</i>
65. Radiograph of the urinary tract	<i>ur-o-gram</i>
66. Surgical fixation of the urethra	<i>urethr-o-pexy</i>
67. Dilatation of the renal pelvis	<i>pyel-ectasis</i>
68. Inflammation of the urethra	<i>urethr-itis</i>
69. Presence of cells in the urine	<i>cyt-ur-ia</i>
70. Radiograph of the renal pelvis	<i>pyel-o-gram</i>

Part 1 Word Bank

a	pyel	neph
gram	cyt	urethr
pexy	itis	glomerul
cyst	ur	o
ia	ectasis	

Sorting

For each word part category in this section, list the corresponding word parts from the bank below.

Part 1 Word Bank

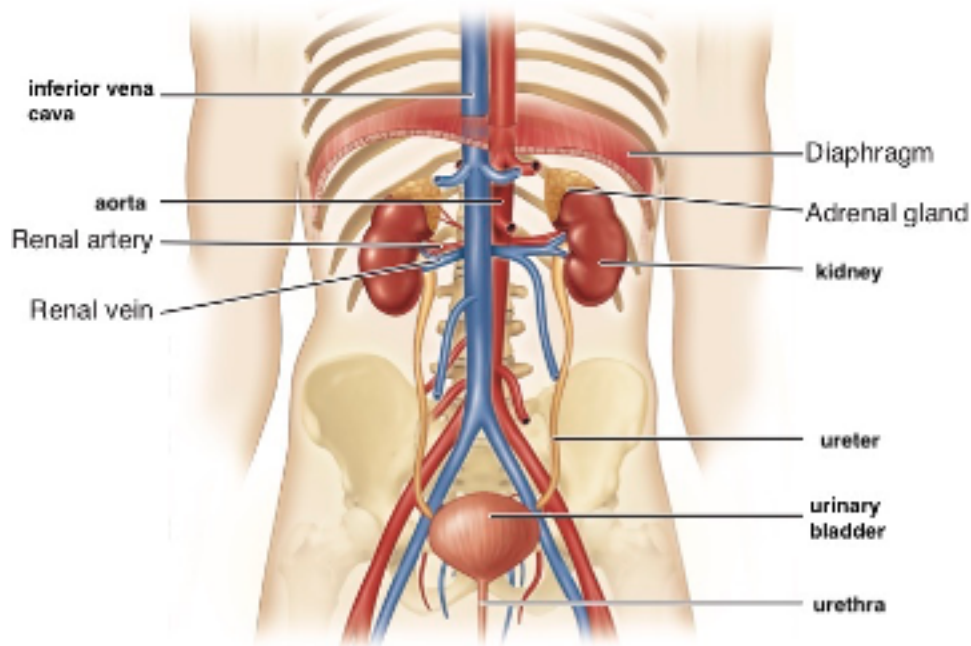
calyx	hemodialysis	oliguria	renal pelvis
catheterization	lithotripsy	pyelonephritis	renal transplantation
cystitis	nephron	renal medulla	uremia

Part 1	Answers
71. parts of the kidney	<i>nephron, calyx, renal medulla, renal pelvis</i>
72. urinary disorders	<i>oliguria, cystitis, pyelonephritis, uremia</i>
73. treatment of urinary system	<i>lithotripsy, hemodialysis, catheterization, renal transplantation</i>

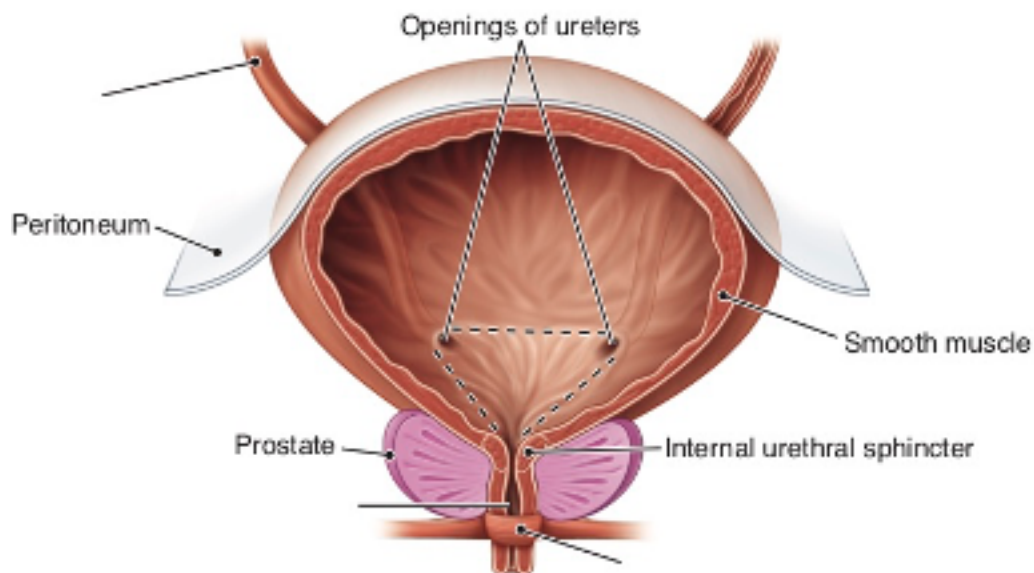
Look and Label

For each image in this section, write each label indicated on the image in the correct location or near the image with a line pointing from the label to the correct location on the image.

74. Labels: aorta, inferior vena cava, kidney, ureter, urethra, urinary bladder



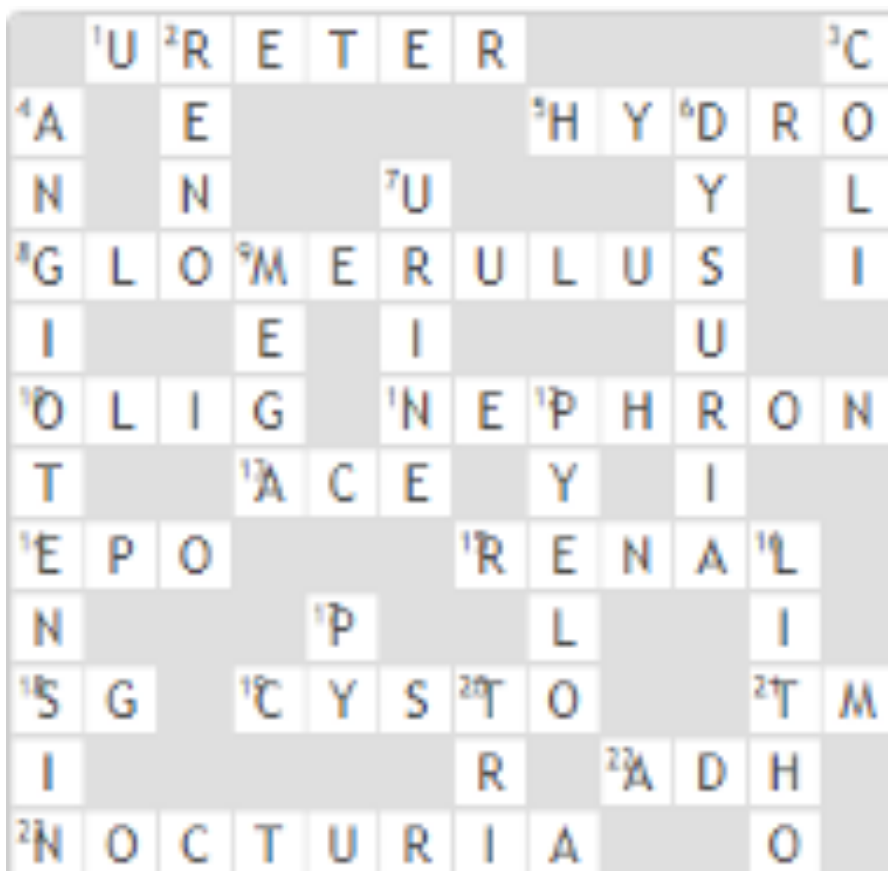
75. Labels: external urethral sphincter, trigone, ureter, urethra



Crossword Puzzle

Complete the crossword puzzle using the clues provided.

76.



Across

1. Tube that carries urine from the kidney to the bladder
5. Water; fluid: combining form
8. Cluster of capillaries in the glomerular capsule
10. Few; scant: prefix
11. Microscopic functional unit of the kidney
13. Drug that reduces blood pressure, ___inhibitor: abbreviation
14. Hormone that stimulates red-cell production: abbreviation
15. Pertaining to the kidney
18. Measure of the weight of a substance as compared to water: abbreviation
19. Urinary bladder: combining form
21. Maximum amount of a substance that can be reabsorbed: abbreviation
22. Pituitary hormone that regulates water reabsorption: abbreviation
23. Excessive urination at night

Down

2. Kidney: combining form
3. Organism often involved in urinary tract infections, E.
4. Substance produced in response to renin that increases blood pressure
6. Painful or difficult urination
7. The fluid excreted by the kidneys
9. Large or abnormally large: prefix
12. Renal pelvis: combining form
16. Calculus (stone): combining form
17. Pus: root
20. Three: prefix

Case Studies

Read the following case studies carefully. Complete the sentence with the correct term(s).

Case Study 1: Operative Report

OPERATION PERFORMED: Urodynamic evaluation.

DESCRIPTION OF PROCEDURE: The patient was placed in the urodynamic chair in the sitting position and prepped with Betadine. Surface perianal electrodes, transrectal balloon, and Bard triple-lumen catheter were placed in the standard fashion. A urodynamic examination was performed, which showed a maximum flow rate of only 6.1 mL per second, a maximum detrusor pressure of 100 cm of water, a small amount of initial residual urine due to the presence of an indwelling catheter, and a residual urine at maximum cystometric capacity of 150 cc. His maximum cystometric capacity was 300 cc with no evidence of sphincter dyssynergia. The day before, he had undergone a cystourethroscopy and retrograde pyeloureterogram and had been found to have evidence of outlet obstruction from prostatic hyperplasia.

These findings were described to both him and his wife. The catheter was left out for a trial. The wife states that the catheter had initially been placed based upon urinary incontinence and the frequent changing of clothing at home. I explained to her that based upon today's findings, he has evidence of outlet obstruction with hyperreflexia to the urinary bladder and residual urine, all of which can result in urinary incontinence. I have asked them to consider some alternatives such as alpha blockade, interstitial laser coagulopathy, and other possible therapies to reduce prostatic obstruction.

He is currently on aspirin. I suggested that they remain throughout the evening for voiding trials. He was placed on Bactrim double-strength tablets every 12 hours. He is to consider discontinuing the aspirin and having interstitial laser coagulopathy after 10 days.

	Answers
77. Perianal electrodes were placed _____ the anus.	<i>around</i>
78. A transrectal balloon is placed _____ the rectum.	<i>through</i>
79. Detrusor pressure refers to pressure of the _____.	<i>bladder muscle</i>
80. Cystometry measures functions of the _____.	<i>bladder</i>
81. A sphincter is a circular _____.	<i>muscle</i>
82. A term in the history that refers to "uncoordinated muscle action" is _____.	<i>dyssynergia</i>
83. A pyeloureterogram images the _____ and _____.	<i>renal pelvis; ureter</i>
84. The term retrograde refers to _____.	<i>backflow</i>
85. Prostatic hyperplasia is _____ of prostatic tissue.	<i>overgrowth</i>