

**2017 First Aid for the USMLE Step 1**  
**Official Updates, Corrections, and Clarifications**  
**March 31, 2017**

Despite our best efforts, errors do occur during the revision process. This list primarily addresses content errors that may create confusion. **Red signifies specific text to be deleted** and **green is specific text to be added**. We check every submission against your reference(s), authoritative references, and expert faculty to maximize clarity and accuracy. Please note that our goal is to provide a high-yield framework for optimal exam preparation and not a comprehensive textbook. If you were the first individual to submit a referenced correction or clarification to us at [www.firstaidteam.com](http://www.firstaidteam.com) that appears in the errata or in the next edition, you will receive a gift certificate in thanks. Good luck with your studies!

–The First Aid/USMLE-Rx Team

## CATEGORIES OF UPDATES

<b>Major Corrections</b>	Factual errors that could interfere with comprehension
<b>Minor Corrections</b>	Less significant errors that may cause confusion
<b>Clarifications</b>	The text is accurate, but could be written more clearly or minor formatting issues (misalignments, indents, etc) that may confuse

## MAJOR CORRECTIONS

Page	Fact Name	Revision
33	<b>Nucleotides</b>	In column 2, replace the lines: "Deamination of adenine makes <b>guanine</b> ." With the following: "Deamination of adenine makes <b>hypoxanthine</b> . <b>Deamination of guanine makes xanthine</b> . <b>Deamination of 5-methylcytosine makes thymine</b> ."
69	<b>Enzyme terminology</b>	The definitions for synthase/synthetase are inaccurate. The text should read, " <b>Combines 2 molecules into 1 (condensation reaction) either using energy from ATP or other high-energy phosphates (synthetase, eg, PRPP synthetase) or energy from other sources (synthase, eg, citrate synthase, glycogen synthase)</b> ."
109	<b>Hypersensitivity types</b>	For Type IV: 1) In column 3, delete " <b>Example: Type 1 diabetes mellitus</b> " 2) In column 3, move "Examples: Contact dermatitis, Graft-versus-host disease" to the top of the column, so as to not specifically confine them to CD4 <sup>+</sup> -mediated or CD8 <sup>+</sup> -mediated. They are simply clinical examples of Type IV hypersensitivity reactions.
291	<b>Hyperlipidemia signs</b>	In the tendinous xanthoma row, image C is a <b>tuberous xanthoma</b> , not a <b>tendinous xanthoma</b> .
383	<b>Laxatives</b>	In the emollients row under mechanism, replace " <b>Osmotic draw into lumen → ↑ water absorption by stool</b> " with " <b>Promotes incorporation of water and fat into stool</b> ."
515	<b>Benzodiazepines</b>	In column 3 of the mechanism row, replace "Oxazepam, Temazepam, and Lorazepam <b>are metabolized Outside The Liver</b> " with "Oxazepam, Temazepam,

		and Lorazepam undergo first-pass metabolism Outside The Liver (ie, do not undergo P450 oxidation)."
551	<b>Glomerular filtration barrier</b>	In column 3, replace "all 3 layers contain $\ominus$ charged glycoproteins preventing $\oplus$ charged molecule entry (eg, albumin)" with "all 3 layers contain $\ominus$ charged glycoproteins preventing $\ominus$ charged molecule entry (eg, albumin)."
553	<b>Filtration</b>	In column 3, replace " <b>ACE inhibitors</b> Constrict Efferent arteriole ( <b>ACE</b> )" with " <b>Angiotensin II</b> Constricts Efferent arteriole ( <b>ACE</b> )."

#### MINOR CORRECTIONS

Page	Fact Name	Revision
60	<b>Genetic disorders by chromosome</b>	In the chromosome 11 row, the close parenthesis in the column 3 text should move to read, "Wilms tumor, $\beta$ -globin gene defects (eg, sickle cell disease, $\beta$ -thalassemia), MEN 1."
86	<b>Ketone bodies</b>	In the last sentence of column 2, replace "Both processes cause a buildup of acetyl-CoA, which shunts glucose and FFA toward the production of ketone bodies" with "Both processes cause a buildup of acetyl-CoA, which shunts amino acids and FFA toward the production of ketone bodies."
105	<b>Respiratory burst (oxidative burst)</b>	For the italic text under "(5) Glutathione reductase," replace "requires selenium" with "requires riboflavin."
106	<b>Cell surface proteins</b>	Under T cells, delete "CXCR4/CCR5" from the cytotoxic T cells row, and add "CXCR4/CCR5" to the helper T cells row.
110	<b>Blood transfusion reactions</b>	Under pathogenesis in the febrile nonhemolytic transfusion reaction row, replace, "Type II hypersensitivity reaction. Host antibodies against donor HLA antigens and WBCs." with "Two known mechanisms: 1) Type II hypersensitivity reaction with host antibodies against donor HLA antigens and WBCs; 2) induced by cytokines which are created and accumulate during the storage of blood products."
123	<b>Anaerobes</b>	In column 3 of the facultative anaerobes row, replace "Streptococci, staphylococci, and enteric gram $\oplus$ bacteria." with "Streptococci, staphylococci, and enteric gram $\ominus$ bacteria."
297	<b>Cardiomyopathies</b>	In column 3 of the restrictive/infiltrative cardiomyopathy row, replace " <b>Löffler syndrome—endomyocardial fibrosis with a prominent eosinophilic infiltrate</b> " with " <b>Loeffler endocarditis—associated with hypereosinophilic syndrome, histology shows eosinophilic infiltrates in myocardium.</b> "
312	<b>Thyroid development</b>	At the bottom of column 2, note that parafollicular (C cells) are derived from neural crest, not endoderm. The last sentence of column 2 should read, "Thyroid follicular cells are derived from endoderm; parafollicular cells (aka, C cells, produce Calcitonin) are derived from neural crest."
324	<b>Hyperaldosteronism</b>	In column 2, replace "No edema due to aldosterone escape mechanism" with "Primary hyperaldosteronism does not directly cause edema due to aldosterone escape mechanism. However, certain 2° causes of hyperaldosteronism (eg, heart failure) impair the aldosterone escape mechanism, leading to edema."
340	<b>Diabetes mellitus</b>	In column 4 of the biguanides (metformin) row, replace "(thus contraindicated in renal insufficiency)" with "(thus use with caution in renal insufficiency)."

398	<b>Macrocytic (MCV &gt; 100 fL) anemia</b>	In column 3 of the orotic aciduria row, replace "Treatment: uridine <b>monophosphate...</b> " with "Treatment: uridine <b>triacetate...</b> "
410	<b>Leukemias</b>	In column 2 of the acute lymphoblastic leukemia/lymphoma row, replace " <b>Associated</b> with Down syndrome." with " <b>B-cell ALL associated</b> with Down syndrome."
411	<b>Chronic myeloproliferative disorders</b>	In column 2, replace "Associated with V617F <b>JAK2</b> mutation." with "Associated with V617F <b>JAK2</b> mutation, <b>with the exception of CML.</b> "
418	<b>Alkylating agents</b>	In column 4 of the cyclophosphamide, ifosfamide row, replace " <b>or N-acetylcysteine.</b> " with " <b>or adequate hydration.</b> "
419	<b>Microtubule inhibitors</b>	In the drug column, replace "Paclitaxel, other <b>taxols</b> " with "Paclitaxel, other <b>taxanes.</b> "
421	<b>Tumor lysis syndrome</b>	Replace " <b>Treatments</b> include aggressive hydration, allopurinol, rasburicase." with " <b>Prevention and treatment</b> include aggressive hydration, allopurinol, rasburicase."
432	<b>Signs of lumbosacral radiculopathy</b>	In the disc level column, replace " <b>L5–S1</b> " with " <b>S1–S2</b> " to correspond with "Weakness of plantar flexion, difficulty in toe-walking, and ↓ Achilles reflex."
435	<b>Achondroplasia</b>	Replace "Membranous ossification <b>is</b> affected →" with "Membranous ossification <b>is not</b> affected →"
495	<b>Neurocutaneous disorders</b>	In the tuberous sclerosis row, replace " <b>TSC1/TSC2</b> mutation on chromosome 16" with " <b>TSC1</b> mutation on chromosome 9 or <b>TSC2</b> mutation on chromosome 16."
498	<b>Childhood primary brain tumors</b>	In column 3 of the ependymoma row, replace "Characteristic perivascular <b>rosettes</b> " with "Characteristic perivascular <b>pseudorosettes.</b> "
505	<b>Aqueous humor pathway</b>	The placement of the " <b>Posterior chamber</b> " label is actually where the " <b>Vitreous humor</b> " should be located.
521	<b>Pentazocine</b>	In the adverse effects row, replace "Can cause opioid withdrawal symptoms if patient is also taking full opioid <b>antagonist</b> " with "Can cause opioid withdrawal symptoms if patient is also taking full opioid <b>agonist.</b> "
530	<b>Schizophrenia</b>	In column 3, replace " <b>(males = females)</b> " to " <b>(males &gt; females).</b> "
533	<b>Generalized anxiety disorder</b>	In the adjustment disorder definition, replace "If <b>stressor lasts</b> > 6 months and <b>causes</b> continual impairment..." with "If <b>symptoms last</b> > 6 months and <b>cause</b> continual impairment..."
537	<b>Eating disorders</b>	1) In the Anorexia nervosa row, replace "pharmacotherapy includes <b>SSRIs</b> " to "pharmacotherapy includes <b>SSRIs for comorbid anxiety and/or depression.</b> " 2) In the Bulimia nervosa row, revise "Treatment... <b>antidepressants</b> " to "Treatment... <b>antidepressants (ie, SSRIs).</b> "
551	<b>Glomerular filtration barrier</b>	In column 3, replace "Size barrier—fenestrated capillary <b>epithelium</b> " with "Size barrier—fenestrated capillary <b>endothelium.</b> "
567	<b>Kidney stones</b>	In the x-ray findings column for cystine, change " <b>Radiolucent</b> " to " <b>Faintly radiopaque.</b> "
641	<b>Mesothelioma</b>	In column 3, delete " <b>Cytokeratin and</b> "; the sentence will read, "Calretinin ⊕ in almost all...."

## CLARIFICATIONS

Page	Fact Name	Revision
51	<b>Cloning methods</b>	Replace "Cloning is the production of a recombinant DNA molecule <b>that is self perpetuating</b> " with "Cloning is the production of a recombinant DNA molecule <b>in a bacterial host</b> ."
55	<b>Modes of inheritance</b>	Under mitochondrial inheritance, column 3, replace "MELAS syndrome (mitochondrial <b>encephalopathy</b> , lactic acidosis, and stroke-like episodes)" with "MELAS syndrome (mitochondrial <b>myopathy</b> , <b>encephalopathy</b> , lactic acidosis, stroke-like episodes)."
117	<b>Immunosuppressants</b>	On the upper right of the illustration, replace "Daclizumab" with "Daclizumab, <b>basiliximab</b> ," as both are IL-2R inhibitors discussed in the chapter.
123	<b>Anaerobes</b>	Clarify "Examples include <i>Clostridium</i> , <i>Bacteroides</i> , <i>Fusobacterium</i> , and <i>Actinomyces</i> " with "Examples include <i>Clostridium</i> , <i>Bacteroides</i> , <i>Fusobacterium</i> , and <i>Actinomyces israelii</i> ."
154	<b>Protozoa—others</b>	Under transmission in the <i>Trypanosoma cruzi</i> row, clarify "Reduviid bug ( <b>"kissing bug"</b> )" with " <b>Triatomine bugs</b> , a type of reduviid bug ( <b>"kissing bug"</b> )."
163	<b>RNA viruses</b>	In column 5, under medical importance, add a superscript "a" to "Zika virus <sup>a</sup> " in the Flaviviruses row and to "Chikungunya virus <sup>a</sup> " in the Togaviruses row.
165	<b>Rubella virus</b>	Change "... fine, <b>confluent</b> rash..." to "... fine, <b>maculopapular</b> rash..."
205	<b>Necrosis</b>	Replace all instances of the term " <b>malignant hypertension</b> " with " <b>hypertensive emergency</b> " (see pages 205, 290, 401, 562, 745).
304	<b>Calcium channel blockers</b>	In first line of the adverse effects row, replace "... <b>constipation</b> ." with "... <b>constipation</b> , <b>gingival hyperplasia</b> ." In the second line of the adverse effects row, delete " <b>gingival hyperplasia</b> ."
326	<b>Pheochromocytoma</b>	In the findings row, replace "↑ catecholamines and <b>metanephrines</b> in urine and plasma." with "↑ catecholamines and <b>catecholamine metabolites</b> (eg, <b>metanephrines</b> ) in urine and plasma."
370	<b>Polyposis syndromes</b>	In the familial adenomatous polyposis row, replace "Autosomal dominant mutation of <i>APC</i> tumor suppressor gene of chromosome <b>5q</b> " with "Autosomal dominant mutation of <i>APC</i> tumor suppressor gene of chromosome <b>5q21</b> ."
501	<b>Brown-Séquard syndrome</b>	There is an extraneous leader line pointing to the right hand in the illustration. This leader line should be disregarded.
589	<b>Genital embryology</b>	In the illustration, replace " <b>Testis-development</b> factor" with " <b>Testis-determining</b> factor."
599	<b>Apgar score</b>	Replace "Assessment of newborn vital signs following <b>labor</b> ..." with "Assessment of newborn vital signs following <b>delivery</b> ..."