

**2009 First Aid for the USMLE Step 1**  
**Official Updates, Corrections, and Clarifications**  
**Updated 05/19/09**

Despite our best efforts, errors do occur during the revision. If you see a verifiable error not on this list, please report it to our blog at [www.firstaidteam.com](http://www.firstaidteam.com). If you are the first to report the error, you will receive a **\$10 gift certificate**. Every submission is reviewed, and only those that reflect content errors are posted here. This list reflects all submissions before May 11, and will be updated again on **June 15, 2009**. All updates are available at [www.firstaidteam.com](http://www.firstaidteam.com). Good luck!

–The First Aid/USMLERx Team

Page #	Entry Title	Correction/Clarification
p. 83	Cytoskeletal elements	The correct spelling of the fourth cytoskeletal element to the right of “actin and myosin” is “adherens junctions,” not “adhering junctions.”
p. 91	Autosomal-recessive diseases	“ $\alpha_1$ -antitrypsin deficiency” should be removed from the list of autosomal-recessive diseases, as it is considered to be codominantly inherited.
p. 99	Rate-determining enzymes of metabolic processes	(1) The enzyme listed for gluconeogenesis should be “fructose-1,6-bisphosphatase,” not “fructose bisphosphatase-2.” (2) The enzyme listed for de novo pyrimidine synthesis should be “carbamoyl phosphate synthetase II,” not “aspartate transcarbamoylase.”
p. 109	Phenylketonuria	In the diagram, “DHP” should be changed to “DHB.”
p. 111	Orotic aciduria	The description should read, “Inability to convert orotic acid to UMP...”
p. 129	Posterior fossa malformations	The description for Dandy-Walker should read, “large posterior fossa; absent cerebellar vermis, with cystic enlargement of the 4th ventricle.”
p. 232	$\beta$ -blockers	In the listing of drugs, the last drug should be spelled “labetalol.”
p. 245	Auscultation of the heart	The circle corresponding to the mitral area should be moved down to the fifth intercostal space, not the fourth intercostal space as shown.
p. 264	Cardiomyopathies	For the entry “Dilated (congestive) cardiomyopathy,” it should be made clear that only wet beriberi causes dilated cardiomyopathy, whereas dry beriberi does not.
p. 275	Cardiac drugs: sites of action	Description of $\beta_1$ -receptors should read, “phosphorylates L-type $\text{Ca}^{2+}$ channels,” not “phosphorylates L-type and $\text{Ca}^{2+}$ channels.”
p. 282	Adrenal steroids	Label B in the key at the bottom of the page refers to 21-hydroxylase deficiency. The Greek letter “ $\alpha$ ” should be removed.
p. 288	Toxic multinodal goiter	Replace the first line with the following: “Focal patches of hyperfunctioning follicular cells working independently of TSH due to mutation in TSH receptor. Increases release of $\text{T}_3$ and $\text{T}_4$ . Nodules are not malignant.”
p. 293	Demeclocycline	(1) “Diabetes insipidus” should be removed from the “clinical use” section. (2) “Nephrogenic diabetes insipidus” should be added to the “toxicity” section.
p. 304	Salivary secretion	(1) In the third column, “more time to reabsorb $\text{H}_2\text{O}$ ” should be changed to “more time to reabsorb $\text{Na}^+$ and $\text{Cl}^-$ .” (2) In the third column, the phrase “less time to reabsorb $\text{H}_2\text{O}$ ” should be changed to “less time to reabsorb $\text{Na}^+$ and $\text{Cl}^-$ .”
p. 311	Gastritis	In the entry for “acute gastritis,” the text should state that uremia (not uricemia) is one of the causes.

p. 326	Blood cell differentiation	The “myeloid stem cell” box should be extended to the left to include the erythrocyte lineage.
p. 329	Platelet coagulation	In the lower right corner of the diagram, in the “inside endothelial cells” bubble, the “2” of “PGI <sub>2</sub> ” should be subscript.
p. 339	Non-Hodgkin's lymphoma	The phrase “Most common (adult).” in the “comments” column should be moved from follicular lymphoma to diffuse large cell lymphoma.
p. 350	Epithelial cell junctions	In the “Integrin” entry, “lamin” should be changed to “laminin.”
p. 356	Muscle conduction to contraction	In part B of the diagram, to the right of the myofiber, the bracket delineating the H zone should be extended in both directions to the proximal ends of the actin filaments.
p. 368	Skin disorders ( <i>continued</i> )	In the entry for “miscellaneous disorders,” acanthosis nigricans is associated with hyperinsulinemia, not hyperlipidemia.
p. 370	Gout drugs	(1) Colchicine does not directly depolymerize microtubules. It binds and stabilizes tubulin to inhibit polymerization. (2) Colchicine is used to treat acute (not chronic) gout.
p. 379	Parkinson's disease	Akinesia needs to be added to the mnemonic, so that it reads, “ <b>TRAP</b> ” = “ <b>T</b> remor (at rest), cogwheel <b>R</b> igidity, <b>A</b> kinesia, and <b>P</b> ostural instability (you are <b>TRAP</b> ed in your body).”
p. 399	Glaucoma	In closed angle glaucoma, the obstruction of flow is between the iris and the cornea, not the iris and the lens.
p. 399	Extraocular muscles and nerves	CN IV damage causes diplopia with a defective downward gaze. Please insert the word “defective.”
p. 401	Visual field defects	In the anatomical illustration, the line showing lesion 6 (left hemianopia with macular sparing) is incorrect. The line representing injury should go through both Meyer's loop and the dorsal optic radiation. A lesion corresponding to the currently drawn line would represent a left upper “pie in the sky” lesion with macular sparing.
p. 402	Dementia	In the penultimate line, the correct spelling is “multi-infarct.”
p. 429	Heroin addiction	In the “suboxone” entry, “naltrexone + buprenorphine” should be changed to “naloxone + buprenorphine.”
p. 439	Nephron physiology	Under the image of the proximal convoluted tubule (upper left), the description after AT II should read, “↑ Na <sup>+</sup> and H <sub>2</sub> O reabsorption,” not “↑ Na and H <sub>2</sub> O excretion.”
p. 440	Renin-angiotensin-aldosterone system	The left bubble should read, “↓BP (JG cells)” not “↑BP (JG cells).”
p. 449	Cysts	ADPKD is the result of an “autosomal-dominant mutation in <i>APKD1</i> or <i>APKD2</i> ,” not only in “ <i>APKD2</i> .”
p. 449	Electrolyte disturbances	The superscript for the phosphate ion should be 3-, not 2-.
p. 455	Male reproductive anatomy	Label should be “corpus spongiosum” instead of “corpus cavernosum of the urethra.”
p. 470 *	Control of reproductive hormones	In the image for “control of female hormones,” the arrow from clomiphene should point at the hypothalamus, not the anterior pituitary.
p. 472 *	Estrogen partial agonists (selective receptor modulators-SERMs)	The first line of the entry for “clomiphene” should read, “Partial agonist at estrogen receptors in gyothalamus” (not pituitary gland).
p. 478	Oxygen-hemoglobin dissociation curve	In the graph, the labels for cyanosis and hypoxemia are pointing to the wrong curve. The cyanosis label should be pointing to the dashed curve left of normal, and the hypoxemia label should be pointing to the dashed curve right of normal.
Color Plates	Image 25, Leukemia	The legend for image B states that AML can occur in adolescents to young adults. This is true, but misleading, as AML is most commonly diagnosed in older adults (median age of onset in the early 60s).

Color Plates	Image 44, Alzheimer's	<p>The first portion of the caption for this image should read as follows:</p> <p><b>Color Image 44. Alzheimer's disease.</b> Key histologic features include "senile plaques" (not pictured); a coronal section showing atrophy, especially of the temporal lobes (A); and focal masses of interwoven neuronal processes around an amyloid core (B; arrows mark neurofibrillary tangles).</p> <p>The remainder of the caption describing panel C is correct and should be left as is.</p>
Color Plates	Image 70, Pancreas	<p>In the legend for image B, the last phrase should read, "over time, islet cells are entirely replaced by fibrosis" (not amyloid). Type II diabetes is associated with amyloid replacement, but not type I disease.</p>

*\*corrections and clarifications added since May 1, 2009.*