

**2015 First Aid for the USMLE Step 1**  
**Official Updates, Corrections, and Clarifications**  
**Final December 31, 2015**

Despite our best efforts, errors do occur during a revision. This list addresses content errors that may create confusion. If you are the first individual to submit a referenced correction or clarification to us at [www.firstaidteam.com](http://www.firstaidteam.com) that appears in the next edition, you will receive up to a \$20 gift certificate. We check every submission against your reference(s) and other authoritative references to ensure accuracy. Please note that our goal is to provide a high-yield framework for studying and not a comprehensive textbook. Good luck with your studies!

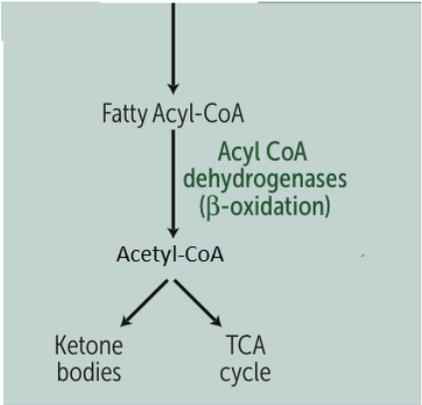
–The First Aid/USMLE-Rx Team

**CATEGORIES OF UPDATES**

<b>Major Corrections</b>	<ul style="list-style-type: none"> <li>• Factual errors that could interfere with comprehension</li> </ul>
<b>Minor Corrections</b>	<ul style="list-style-type: none"> <li>• Less significant errors that may cause confusion</li> </ul>
<b>Clarifications</b>	<ul style="list-style-type: none"> <li>• The text is accurate, but could be written more clearly</li> <li>• Minor formatting issues (misalignments, indents, etc) that may confuse</li> </ul>

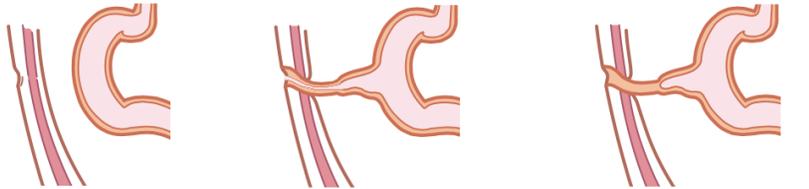
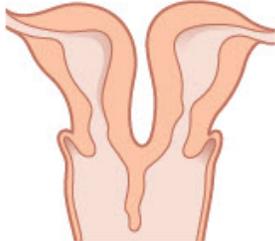
**MAJOR CORRECTIONS**

<b>Page</b>	<b>Fact Name</b>	<b>Revision</b>
57	<b>Advance directives</b>	In the entry for Medical power of attorney, replace "Can be revoked anytime patient wishes (regardless of competence)." with "Can be revoked by patient if decision-making capacity is intact."
83	<b>Autosomal dominant disorders</b>	(1) In the entry for Marfan syndrome, replace "defective fibrin" with "defective fibrillin" (2) In the entry for Tuberous Sclerosis, remove "Incomplete penetrance" from the last sentence, as most sources now characterize it as having complete or near-complete penetrance.
112	<b>Fatty acid metabolism</b>	In the lower-right side of the figure, replace "Acyl-CoA" with "Acetyl-CoA," as shown in the image below, to reflect that it is Acetyl-CoA that can be

		<p>used to form ketone bodies or enter into the TCA cycle.</p>  <pre> graph TD     A[Fatty Acyl-CoA] --&gt; B[Acetyl-CoA]     subgraph Enzyme     C[Acyl CoA dehydrogenases (β-oxidation)]     end     A -- C --&gt; B     B --&gt; D[Ketone bodies]     B --&gt; E[TCA cycle] </pre>
294	<b>Evolution of MI</b>	In the row for 4-24 hr, in the column for LIGHT MICROSCOPE, change "Reperfusion injury may cause contraction bands (due to free radical damage)" to "Reperfusion injury, associated with generation of free radicals, leads to hypercontraction of myofibrils through ↑ free calcium influx"
337	<b>Multiple endocrine neoplasias</b>	In the entry for MEN 2A, replace "Associated with marfanoid habitus; mutation in <i>RET</i> gene (codes for receptor tyrosine kinase)" with "Associated with mutation in <i>RET</i> (codes for receptor tyrosine kinase) in cells of neural crest origin"
379	<b>Octreotide</b>	In the row for MECHANISM, replace "... inhibits actions of many splanchnic vasoconstriction hormones." with "... inhibits secretion of various splanchnic vasodilatory hormones."
460	<b>Aphasia</b>	In the entry for Mixed transcortical, replace "Broca and Wernicke areas involved; arcuate fasciculus not involved." with "Broca and Wernicke areas and arcuate fasciculus remain intact; surrounding watershed areas affected."
499	<b>Baclofen</b>	In the row for MECHANISM, replace "Inhibits GABA <sub>B</sub> ..." with "Activates GABA <sub>B</sub> ..."
500	<b>Parkinson disease drugs</b>	In the row for Prevent dopamine breakdown, replace the two bullet points with the following: <ul style="list-style-type: none"> <li>• Selegiline—blocks conversion of dopamine to DOPAC by selectively inhibiting MAO-B.</li> <li>• Tolcapone—blocks conversion of dopamine to 3-OMD by inhibiting central COMT.</li> </ul>
524	<b>Atypical antidepressants</b>	In the entry for Trazodone, replace "Primarily blocks 5-HT <sub>2</sub> and α <sub>1</sub> -adrenergic receptors." with "Primarily blocks 5-HT <sub>2</sub> , α <sub>1</sub> -adrenergic, and H <sub>1</sub> receptors; also weakly inhibits 5-HT reuptake." The blockade of 5-HT reuptake is believed to be on the components most responsible for the antidepressant effect at higher dosages.



313	<b>Pituitary gland</b>	In the entry for Posterior pituitary (neurohypophysis), replace "...(supraoptic and paraventricular nuclei, respectively)..." with "...(supraoptic and paraventricular nuclei)...."
328	<b>Hypothyroidism</b>	In the entry for Hashimoto thyroiditis, replace "...an autoimmune disorder (antithyroid peroxidase, antimicrosomal and antithyroglobulin antibodies)." with "... an autoimmune disorder with antithyroid peroxidase (antimicrosomal) and antithyroglobulin antibodies."
330	<b>Thyroid cancer</b>	Make the following changes to clarify the common pathways of metastasis in different types of thyroid cancer: <ul style="list-style-type: none"> <li>• In the entry for Follicular carcinoma, change text so that it reads "Good prognosis, invades thyroid capsule and vasculature (unlike follicular adenoma), uniform follicles; hematogenous spread is common."</li> <li>• In the entry for Medullary carcinoma, remove "hematogenous spread common."</li> </ul>
380	<b>Metoclopramide</b>	In the row for TOXICITY, replace "...(due to D <sub>1</sub> -receptor blockade)" with "...(due to D <sub>2</sub> -receptor blockade)." As described in the row for MECHANISM, the major effect is that of D <sub>2</sub> -receptor antagonism.
390	<b>Microcytic, hypochromic (MCV &lt; 80 fL) anemia</b>	In the entry for Iron deficiency, under FINDINGS, replace "...Plummer-Vinson syndrome (triad of iron deficiency anemia, esophageal webs, and atrophic glossitis)." with "...Plummer-Vinson syndrome (triad of iron deficiency anemia, esophageal webs, and dysphagia)."
393	<b>Nonhemolytic, normocytic anemia</b>	In the entry for Aplastic anemia, in the second bullet, replace "Viral agents (parvovirus B19, EBV, HIV, HCV)" with "Viral agents (parvovirus B19, EBV, HIV, hepatitis viruses)".
405	<b>Warfarin</b>	In the row for TOXICITY, second column, replace "Proteins C and S... clotting factors II, VI, IX, and X" with "Proteins C and S... clotting factors II, VII, IX, and X" to maintain consistency with the list vitamin-K dependent clotting factors described previously. Specifically, note that it should be Factor VII, not Factor VI, in this list.
412	<b>Rituximab</b>	In the row for CLINICAL USE, replace "IBD" with "ITP" to more appropriately reflect the use of this drug.
438	<b>Pigmented skin disorders</b>	In the row for Albinism, delete the sentence, "Can also be caused by failure of neural crest cell migration during development."
489	<b>Seizures</b>	In the righthand column, regarding Status epilepticus, replace "variably defined as >10-30 min" with "defined as >5 min." Although a consensus definition based on time is lacking, most clinical guidelines agree that seizures lasting greater than 5 minutes should be treated as status epilepticus.

521	<b>Antipsychotics (neuroleptics)</b>	<p>(1) In the third column, in the row for MECHANISM and CLINICAL USE, replace "(e.g., Huntington disease, delirium, EPS symptoms)." with "(e.g., extrapyramidal symptoms [EPS])."</p> <p>(2) In the second column, in the row for CLINICAL USE, replace "...acute mania, Tourette syndrome." with "bipolar disorder, delirium, Tourette syndrome, Huntington disease, OCD."</p>
559	<b>Embryologic derivatives</b>	<p>In the entry for Mesoderm, replace "... vagina, kidneys, adrenal cortex..." with "... upper vagina, kidneys, adrenal cortex..."</p> <p>In the entry for Endoderm, replace "...most of urethra (derived from urogenital sinus)..." with "... most of urethra and lower vagina (derived from urogenital sinus)..."</p> <p>This highlights the importance that the vagina and other urogenital structures have a mixed embryological origin between mesoderm and endoderm.</p>
563	<b>Vitelline duct</b>	<p>In the image, the part labelled "Vitelline fistula" would be more appropriately classified as a "Vitelline cyst," given that its cavity is in discontinuity with both the lumen of adjacent bowel and the surface of the umbilicus.</p> <p>A vitelline fistula would be more appropriately shown as follows:</p>  <p>The diagrams show three anatomical scenarios from left to right: 1. Normal: A straight line representing the vitelline duct connects the developing gut to the umbilicus. 2. Vitelline fistula: A tube connects the gut to the umbilicus, but there is a small opening (fistula) between them. 3. Meckel diverticulum: A pouch (diverticulum) is formed from the gut, and the vitelline duct has completely closed off, leaving a remnant (Meckel's diverticulum) on the gut's surface.</p> <p>Normal                      Vitelline fistula                      Meckel diverticulum </p>
568	<b>Uterine (Müllerian duct) anomalies</b>	<p>In the set of figures for this fact, please note that the figure for Didelphys should depict a double vagina in addition to a double uterus and double cervix, as described in the text. Please see this image for an example of such a diagram.</p>  <p>The diagram shows two separate uteri, each with its own cervix and vagina, originating from a common base. This is characteristic of didelphys.</p> <p><b>Didelphys</b></p>

571	<b>Urethral injury</b>	<p>The bulbar urethra is more appropriately considered as part of the anterior urethra and is commonly injured in perineal saddle injuries. Please change the text as follows:</p> <p>Posterior urethra—membranous urethra prone to injury from pelvic fracture. Injury can cause urine to leak into retropubic space.</p> <p>Anterior urethra—bulbar and penile urethra at risk of damage due to perineal straddle injury. Can cause urine to leak beneath deep fascia of Buck. If fascia is torn, urine escapes into superficial perineal space.</p>
583	<b>Gynecological tumor epidemiology</b>	Replace "Worst prognosis—ovarian > cervical > endometrial." with "Worst prognosis—ovarian > endometrial > cervical."
587	<b>Ovarian neoplasms</b>	In the entry for Choriocarcinoma, remove "Very responsive to chemotherapy."

#### CLARIFICATIONS

Page	Fact Name	Revision
291	<b>Arteriosclerosis</b>	In the entry for Mönckeberg (medial calcific sclerosis), replace "Calcification of elastic lamina of arteries ..." with "Calcification of internal elastic lamina and media of arteries ..."
322	<b>Thyroid hormones (T<sub>3</sub>/T<sub>4</sub>)</b>	In the row for REGULATION, second column, replace "Thyroid-stimulating immunoglobulins (e.g., TSH) stimulate follicular cells (e.g., Graves disease)." with "May also be stimulated by thyroid-stimulating immunoglobulin (TSI) in Graves disease."
369	<b>Alcoholic liver disease</b>	In the entry for Alcoholic hepatitis, in the righthand column, replace "(ratio usually >1:5)" with "(ratio usually >2:1)" to remain consistent with criteria used elsewhere in the book.
423	<b>Muscle conduction to contraction</b>	In the righthand column, note that terminal cisternae are part of the sarcoplasmic reticulum. For clarity, replace the first sentence in the third column with the following: "T-tubules are extensions of plasma membrane juxtaposed with terminal cisterna of the sarcoplasmic reticulum."
494	<b>Glaucoma drugs</b>	In the entry for Cholinomimetics, Direct (pilocarpine, carbachol), under SIDE EFFECTS, replace "Miosis and cyclospasm (contraction of the ciliary muscle)" with "Miosis (contraction of pupillary sphincter muscles) and cyclospasm (contraction of ciliary muscle)"
524	<b>Atypical antidepressants</b>	In the entry for Trazodone, the first sentence should read: "Primarily blocks 5-HT <sub>2</sub> , α <sub>1</sub> -adrenergic, and H <sub>1</sub> receptors; also weakly inhibits 5-HT reuptake."