Please answer the following questions to the best of your ability. Your responses will help us to understand how you evaluate online articles that provide scientific evidence after working with slnvestigator this semester.

Will my responses be graded?

No. Your responses will be used by our research team to understand how you think critically about online evidence.

Will my results be confidential?

The professors and researchers on our team will compile your responses for our project; no one outside of our team will have access to your responses.

If you encounter problems or have questions while you are completing this posttest, please raise your hand and a member of the research team will assist you.

Key Terms

Author competence refers to the extent to which we can believe that the author of an article is an expert in the subject matter of that article.

Author objectivity refers to the extent to which we can believe that the author's claims have a scientific basis and are not influenced by non-scientific factors.

Article credibility refers to the extent to which we can believe what an article is telling us.

1. Please enter your first name and last name. We will use this information for matching with previous surveys; your name will be removed prior to the analysis of the responses.

You may answer the questions about the following three articles in any order, and you may change your responses at any time.

Article #1	Article #2	Article #3
Title	Title	Title
Energy Drinks' Effects on Student-Athletes and Implications for Athletic Departments	Improved time to exhaustion following ingestion of the energy drink Amino Impact™	Do Energy Drinks Improve Sports Performance?
Publisher	Publisher	Publisher
The Sports Journal	Journal of International Society of Sports Nutrition	TeamSnap

2. You need to write a paper about the effect of energy drinks on sports performance. A Google search leads you to the three articles listed in the table above. Which article are you *most likely* to use as a reference?

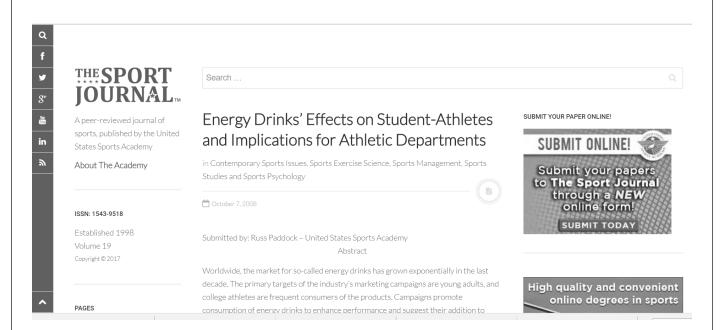
Energy Drinks' Effects on Student-Athletes and Implications for Athletic Departments

) Improved Time to Exhaustion Following Ingestion of the Energy Drink Amino Impact™

Do Energy Drinks Improve Sports Performance?

Evaluate Article #1

Here is more detailed information about the first article.



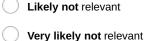
The following text is an excerpt from the article.

Does ingestion of an energy drink really boost athletic performance? Caffeine is the only ingredient in energy drinks that has been studied in depth and that shows proven effects; short- and long-term effects of high doses of taurine and glucuronolactone require additional study. Athletes have long used caffeine prior to training sessions and competitions, but most nevertheless do not well understand how the drug works, for example that, as a diuretic, caffeine is capable of aggravating the dehydration athletes may experience during competition. The scientific literature itself provides mixed messages about caffeine's performance-enhancing capability and its value prior to exercise. Fornicola (2007) stated that no real need exists to use energy drinks for performance advantage and that that quick caffeine fix is not a very intelligent strategy. In contrast, the website of the Sports Medicine Council of Manitoba reports that endurance athletes might gain some advantage by exploiting caffeine to derive energy from fat early in a competition, thereby leaving more muscle glycogen available to provide energy later on (Caffeine—Performance, n.d., p. 1). However, the website also advises athletes that "4% dehydration equals 20% of performance lost" (p. 1).

3. Assuming that the above text is true, is it relevant to your question about the effects of energy drinks?
--

Very likely relevant	
Likely relevant	

Containly relevant



Certainly not relevant

Diagon overning the coroons	hat of the above website hefe	raraananding	
to Questions 4-8.	shot of the above website befo	re responding	
to Questions 4-0.			
If you would like more infor	mation, you may visit the webs	site by clicking on the	
following link:			
	ticle/energy-drinks-effects-on-	<u>-student-athletes-and-</u>	
<u>implications-for-athletic-departments/</u> You are also welcome to visit other websites to support your evidence evaluation.			
	at other websites to support y		
4. What is the reputation of the p	publisher of this article?		
Certainly reputable	Likely not reputable	I have no basis by which to evaluate	
Very likely reputable	Very likely not reputable	the publisher's reputation.	
Likely reputable	Certainly not reputable		
5. What is the competence of the	e author of this article?		
Certainly competent	Likely not competent	I have no basis by which to evaluate	
Very likely competent	Very likely not competent	the author's competence.	
Likely competent	Certainly not competent		
6. What is the objectivity of the a	author of this article?		
Certainly objective	Likely not objective	I have no basis by which to evaluate	
Very likely objective	Very likely not objective	the author's objectivity.	
Likely objective	Certainly not objective		
7. What is the credibility of this a	urticle?		
Certainly credible	Likely not credible	I have no basis by which to evaluate	
Very likely credible	Very likely not credible	the credibility of the article.	
Likely credible	Certainly not credible		
8. Would you use the article as	s a reference for your paper?		
Justify your response in 2 or 3	3 sentences.		

Evaluate Article #2

Here is more detailed information about the second article.

6		
S NCBI Resources 🕑 How To 🕑		Sign in to NCBI
US National Library of Medicine National Institutes of Health	Advanced Journal list	Search
Journal List > J Int Soc Sports Nutr > v.7; 2010 > PMC28	tral jissn	Formats: Article <u>PubReader</u> <u>ePub (beta)</u> <u>PDF (513K)</u> <u>Citation</u> Share I Facebook I Twitter I Google+
<u>J Int Soc Sports Nutr</u> . 2010; 7: 14. Published online 2010 Apr 15. doi: <u>10.1186/15</u>	50-2783-7-14 50-2783-7-14	Save items
Improved time to exhau Amino Impact™	stion following ingestion of the energy drink	Add to Favorites
Allyson L Walsh, ¹ Adam M Gonzalez, ¹	<u>Nicholas A Ratamess,¹ Jie Kang</u> , ¹ and <u>Jay R Hoffman^{⊠1}</u>	Similar articles in PubMed
Author information Article notes Copyright	It and License information >	Examination of a pre-exercise, high energy supplement on exercise performance. [J Int Soc Sports Nutr. 2009]
Chis article has been <u>cited by</u> other articles in	1 PMC.	Thermogenic effect of meltdown RTD energy drink in young healthy women: a double blind, cross-ove [Lipids Health Dis. 2009]

The following text is an excerpt from the article.

Background

The purpose of this study was to examine the effect of a commercially available energy drink on time to exhaustion during treadmill exercise. In addition, subjective measures of energy, focus, and fatigue were examined

Methods

Fifteen subjects (9 men and 6 women; 20.9 ± 1.0 y; 172.1 ± 9.1 cm; 71.0 ± 9.4 kg; 16.9 ± 9.7% body fat) underwent two testing sessions administered in a randomized, double-blind fashion. Subjects reported to the laboratory in a 3-hr post-absorptive state and were provided either the supplement (SUP; commercially marketed as Amino Impact[™]) or placebo (P). During each laboratory visit subjects performed a treadmill run (70% VO2 max) to exhaustion. Mean VO2 was measured during each endurance exercise protocol. Subjects were required to complete visual analog scales for subjective measures of energy, focus and fatigue at the onset of exercise (PRE), 10-mins into their run (EX10) and immediately post-exercise (IP).

Results

Time to exhaustion was significantly greater (p = 0.012) during SUP than P. Subjects consuming the supplement were able to run 12.5% longer than during the placebo treatment. Subjects consuming SUP reported significantly greater focus (p = 0.031), energy (p = 0.016), and less fatigue (p = 0.005) at PRE. Significant differences between groups were seen at EX10 for focus (p = 0.026) and energy (p = 0.004), but not fatigue (p = 0.123). No differences were seen at IP for either focus (p = 0.215), energy (p = 0.717) or fatigue (p = 0.430). **Conclusions**

Results of this study indicate that the supplement Amino Impact[™] can significantly increase time to exhaustion during a moderate intensity endurance run and improve subjective feelings of focus, energy and fatigue

9 Assuming that the above tex	t is true, is it relevant to your question a	hout the effects of energy drinks?	
Certainly relevant			
Very likely relevant	Very likely r		
Likely relevant	Certainly no	ot relevant	
Please examine the screen Questions 10 - 14.	shot of the above website befo	re responding to	
If you would like more information, you may visit the website by clicking on the following link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2861014/			
You are also welcome to vi	sit other websites to support ye	our evaluation.	
10. What is the reputation of the	e publisher of this article?		
Certainly reputable	Likely not reputable	I have no basis by which to evaluate	
Very likely reputable	Very likely not reputable	the publisher's reputation.	
Likely reputable	Certainly not reputable		
11. What is the competence of	the author of this article?		
Certainly competent	Likely not competent	I have no basis by which to evaluate	
Very likely competent	Very likely not competent	the author's competence.	
Likely competent	Certainly not competent		
12. What is the objectivity of the	e author of this article?		
Certainly objective	Likely not objective	I have no basis by which to evaluate	
Very likely objective	Very likely not objective	the author's objectivity.	
Likely objective	Certainly not objective		
13. What is the credibility of this	s article?		
Certainly credible	Likely not credible	I have no basis by which to evaluate	
Very likely credible	Very likely not credible	the credibility of the article.	
Likely credible	Certainly not credible		

14. Would you use the article as a reference for your paper? Justify your response in 2 or 3 sentences.

DSLQ Post-assessment - Fall 2017	
Evaluate Article #3	
Here is more detailed information about the third article	
TLC Sports Summit 2017, December 11: Don't miss out on this master clinic featu management. <u>Register today!</u>	ing some of the biggest names in tournament, league and club 🗶
	IMUNITY ABOUT CONTACT HELP LOG IN SIGN UP
Community Time Management Sports Science Sports Photograp	hy Skills & Drills Podcasts Help & Support Concussions Blog
Sports Science Sports Nutrition	
Do Energy Drinks Boost Sports Performance f 217 y G· in z + 2	e? 15 Million Customers 1 Million Teams 196 Countries World ? Help

The following text is an excerpt from the article.

So, what are the actual pros and cons of energy drinks for athletes? While there is no actual "energy" in the ingredients (~40 kcal/100 ml of product) compared to regular soda, does the effect of additional caffeine and carbs boost performance? Researchers at Madrid's Camilo José Cela University (UCJC) tested 90 experienced athletes over four years who were not already consuming a large amount of caffeine.

Just before a sports competition, some of the athletes, including soccer, basketball, rugby, tennis and hockey players drank the equivalent of three cans of energy drink. The rest consumed the same amount of a placebo drink that they were told was an energy drink.

Using GPS, dynamometers, and potentiometers to measure distance and speed travelled along with muscle performance, the researchers found that athletes amped up on energy drinks did perform 3-7% better than the placebo group.

15. Assuming that the above text is true, is it relevant to your question about the effects of energy drinks?

Certainly relevant	Likely not relevant
Very likely relevant	Very likely not relevant
Likely relevant	Certainly not relevant

Please examine the screenshot of the above website before responding to Questions 16-20.			
If you would like more information, you may visit the website by clicking on the following link: https://www.teamsnap.com/community/sports-science/sports-nutrition/do-energy- drinks-boost-sports-performanceYou are also welcome to visit other websites to support your evaluation.			
 16. What is the reputation of the Certainly reputable Very likely reputable Likely reputable 	e publisher of this article? Likely not reputable Very likely not reputable Certainly not reputable	I have no basis by which to evaluate the publisher's reputation.	
17. What is the competence of t Certainly competent Very likely competent Likely competent		I have no basis by which to evaluate the author's competence.	
 18. What is the objectivity of the Certainly objective Very likely objective Likely objective 	e author of this article? Likely not objective Very likely not objective Certainly not objective	I have no basis by which to evaluate the author's objectivity.	
19. What is the credibility of this Certainly credible Very likely credible Likely credible	Exact credible Control of the control of the credible	I have no basis by which to evaluate the credibility of the article.	
	Certainly not credible as a reference for your paper? 3 sentences.		
L			

Think about your three experiences with slnvestigator this semester as you respond to the Questions 21-23.

1) Wind Power Generation

Building an Argument and Evaluating Evidence

2) Geocentric and Heliocentric Models of the Universe

Finding and Evaluating Evidence

3) Evolution

Finding and Evaluating Evidence

21. How have the ways in which you talk about science changed?

22. How have the ways in which you evaluate the credibility of evidence changed?

23. How did sInvestigator help you to learn about the course topics?

Thank you for completing this post-assessment.

If you have further questions about the study, please email Dr. Nancy Holincheck in the Graduate School of Education at GMU, <u>nholinch@gmu.edu</u>