

# Supplement Banning



This specific project will require you to research information on several aspects of the very popular supplement known as creatine; a naturally occurring substance in the body that is used by people hoping to improve their athletic performance. Lastly, students will work in groups of three to create a PowerPoint, Keynote, and or Prezi presentation in which they share their conclusion as to whether or not these supplements should be banned.

# Introduction:



By now you have heard all the news about athletes using performance-enhancing substances. These athletes are hoping to get an edge on their competition. Major league baseball, pro football, international track and field, swimming, and bicycle racing are all sports currently dealing with the problem of illegal substances. Sadly, this issue also involves not so well-known athletes such as student-athletes in both high school and college.

Many amateur as well as professional athletes are using not an illegal drug, but a dietary supplement called creatine to enhance their performance. Creatine, a natural substance found in our cells and in foods like meat and fish, can improve athletic performance. However, creatine use may result in potentially serious side effects. Critics argue that these side effects are a reason to control its use.

Should athletes be allowed to use creatine supplements?

## Task:



A federal agency has approached and hired you and two other researchers to investigate creatine. You will take on the role of either a biochemist, a physiologist, or a health scientist and examine the issue from that perspective. Working within this team, you will create a PowerPoint, Keynote, and or Prezi presentation detailing the structure and function of creatine and the effects and side effects of creatine supplements. In the presentation you must recommend whether or not creatine supplements should be banned as performance enhancing substances.

# Process:



Once in your group of three decide who will assume the roles listed below. The questions under each role will assist you in your research at hand. While you are responsible for completing your section of the report, you will also be responsible for making the recommendation, as a *team*, on the issue of creatine.

## Biochemist

- What is the chemical formula of creatine?
- What is the structural formula of creatine?
- In what type of cells is most of the creatine in our bodies found?
- What is the function of creatine in these cells?
- What is the ratio of ATP to creatine in these cells?

## Physiologist

- How do creatine supplements affect the body?
- What is the recommended dose athletes take?
- To what degree do the supplements enhance athletic performance?
- Have any professional sports banned the use of creatine supplements by athletes?

## Health Scientist

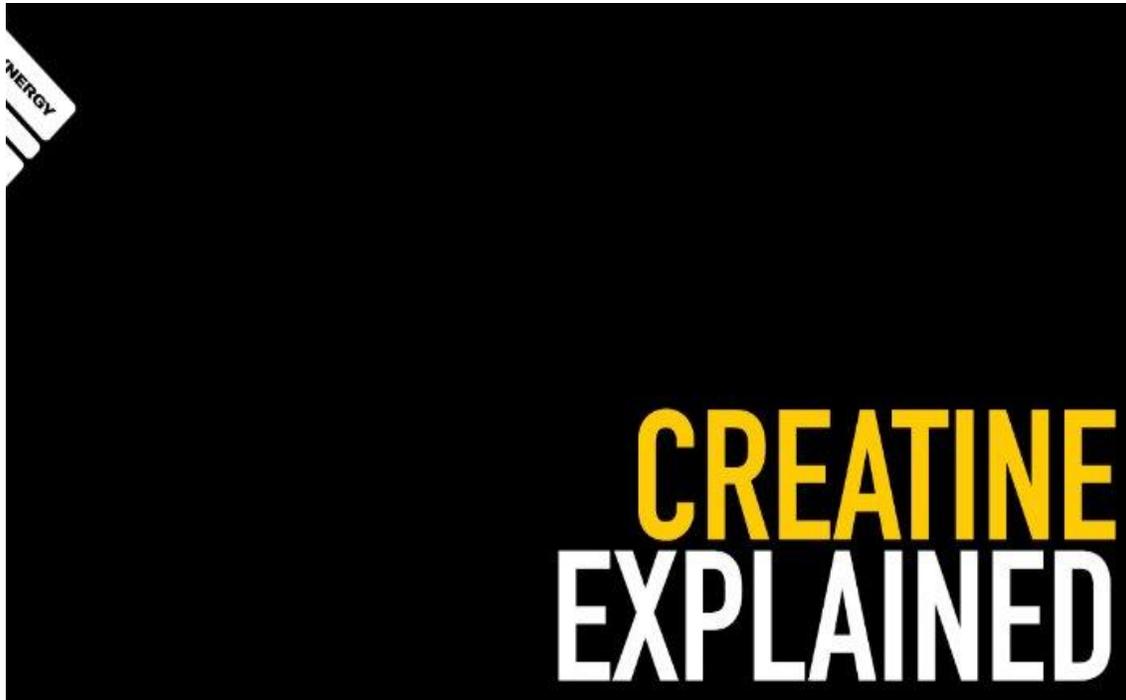
- What are the side effects of using creatine supplements?
- What happens if one takes more than the recommended dose?
- Has the Food and Drug Administration determined its safety?
- Has a truly safe dose been determined by scientific studies?

The end product of this project will be a comprehensive PowerPoint, Keynote, and or Prezi presentation describing the structure and function of creatine, and the effects and side effects of creatine supplements. Each scientist will be responsible for his/her section of the presentation while the cooperative efforts of the entire group will be utilized to make the final recommendation.

- Meet with the other members of your group and decide who will take on each of the three roles. Determine the organization, contents, and “look” of your PowerPoint, Keynote, and or Prezi presentation. Produce an outline of all the information contained in your presentation.
- Start researching your project using different websites, book, and or academic research journals in order to find the information needed to answer the questions listed under your role in the Task section. In addition, to enhance your PowerPoint, Keynote, and or Prezi find some pictures that you can use to help illustrate the pros and cons of the use of creatine supplements. Be wary of copyright violations.
- Take notes as you research. Bookmark useful sites for quick reference. Do not plagiarize. Plagiarism occurs when you use the ideas or writings of another and present these writings or ideas as your own. Be sure to identify any borrowed passages from books, articles, or the Internet by including a bibliography.
- When your research is completed, start the first draft of your presentation. Be sure to introduce your role at the beginning of your section so that the reader knows what point of view you are coming from. Remember that you are presenting a report about the issue of creatine as a performance enhancer and not just a set of answers to the questions posed under your role. Put yourself in your audience’s shoes as you work on your presentation to ensure that they understand what you are presenting.
- After each scientist has completed his/her section of the presentation, meet with your group and share your reports. Get feedback from the other members of your group about your section. Ask them if your section is clear to them. If it is not, seek advice on improving your section. Then put together the final draft of your section of the presentation.

As a group, decide where you stand on the issue of creatine supplements. Should they be banned or not? Determine the recommendation and the justifications/conclusions that you will present in your PowerPoint, Keynote, and or Prezi. Determine who will write this important section, and who will combine the pieces of the report. Each person is required to present his/her findings.

## Conclusion:



After having researched and completed your presentation on creatine supplements, you should have a firmer grasp of both the benefits of creatine supplements for athletes and the arguments against their use. You should now possess the knowledge that will allow you to make an informed decision for yourself if you are an athlete considering using creatine or to offer advice to an athlete you care about.