

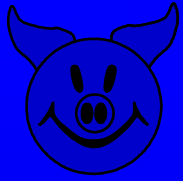


ESPEN Congress Glasgow 2002

Cardio-Respiratory Failure

Is there a Role for Specific Nutrients

Peggy Borum

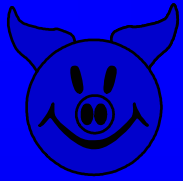


Cardio-Respiratory Failure – Is There A Role For Specific Nutrients?

Peggy R. Borum, Ph.D.

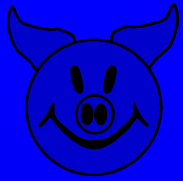
University of Florida

Carnitine - dietary supplements



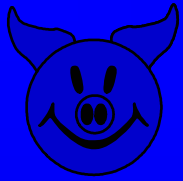
Questions Concerning A Role For A Specific Nutrient in Organ Dysfunction

- What is the function of the nutrient in healthy individuals?
- Has the organ dysfunction altered the supply and or the function of the nutrient? If so, how?



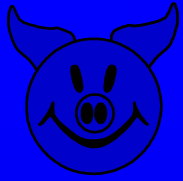
Questions Concerning A Role For A Specific Nutrient in Organ Dysfunction

- Is the compound being used as a pharmacological agent rather than a nutrient? If so, what is the mechanism of action?
- How is the optimal dose and route of administration determined for the individual?



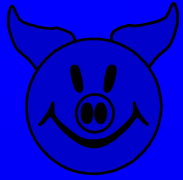
Questions Concerning A Role For A Specific Nutrient in Organ Dysfunction

- **How is the efficacy of treatment in the individual assessed?**
- **Are side effects or adverse events known?
If so, how are they monitored?**



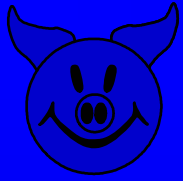
Carnitine As An Example

- Carnitine is a nutrient in many animal products
- Carnitine supplementation has been suggested by several investigators to be beneficial to patients with cardiac dysfunction, and/or skeletal muscle dysfunction, and/or pulmonary dysfunction



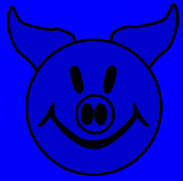
Cardio-Respiratory Failure – Is There A Role For Carnitine?

- **A literature search for carnitine and heart identifies more than 1000 papers**
- **A literature search for carnitine and muscle identifies more than 1300 papers**
- **A literature search for carnitine and lung identifies more than 30 papers**
- **I have studied carnitine for more than 30 years**
- **Why can I not answer the question?**



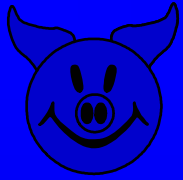
What Is Carnitine

- **Free carnitine**
- **Acylcarnitine**
- **Total carnitine**
- **Ratio of acylcarnitine / free carnitine**
- **Acylcarnitine profile**



Cardio-Respiratory Failure – Is There A Role For Carnitine?

- **Not enough data to answer the question**
- **Best guess – probably. But critical questions concerning function, assessment of patient, form of carnitine to use, dose, and route of administration remain.**



Cardio-Respiratory Failure – Is There A Role For Carnitine?

- **Could carnitine administered incorrectly cause harm – probably.**
- **Suggestion for treatment today: With the exception of inborn errors of metabolism, use dietary doses of supplementation.**

No references provided by the author(s)