

# Paramedic CAT (Critically Appraised Topic)

**Title:** Nutrition education for Paramedics

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**Clinical Scenario:** A 40-year-old male paramedic who is approximately 18 kg overweight picks up a coffee and bagel w/cream cheese on the way to his twelve-hour shift. Throughout the day, he quickly eats a Big Mac Meal and two chocolate bars between calls. He finds that by mid-afternoon his energy level is low and he has trouble focusing. His 40-year-old partner starts his day with a fruit smoothie and brings several small healthy snacks to eat throughout his twelve-hour shift. He feels energetic all day long. Could a nutrition education program help the first paramedic to understand his daily nutritional requirements, and help him plan and consume meals that would provide an adequate amount of energy throughout his shift?

**PICO (Population – Intervention – Comparison – Outcome) Question:** In paramedics working rotating twelve-hour shifts, does a lack of nutrition education compared to an in-depth knowledge of nutrition lead to differences in their food choices and their ability to maintain energy levels and focus throughout their shift?

**Search Strategy for CINAHL Plus with Full Text database:** ((paramedics OR paramedic OR emergency medical service OR emt OR ambulance) AND (nutrition OR diet OR food OR nourishment OR food intake OR eating)) Limiter: published 2014-2019

**Search Outcome:** In CINAHL Plus with Full Text – 1516 results

**Search Strategy for PubMed database:** ((paramedics) AND (nutrition)) Limiter: 10 years

**Search Outcome:** In PubMed – 296 results

**Relevant Papers:** 3 were chosen as relevant for this CAT

Title	Design	Population	Outcomes Measured	Results	Strengths/ Weaknesses
Anstey 2016	Qualitative study using telephone interviews and	Sample of 15 paramedic shift workers from	Perceived influences on food and meal choices	The lack of regularly-scheduled and guaranteed	<b>Strengths:</b> Because the interviews were done by telephone, the

	<p>manual thematic analysis LOE: 3</p>	<p>Queensland, Australia</p>		<p>mealtimes was a significant factor in food choices</p> <p>Respondents reported that while they understood the need to follow proper nutrition practices, they often made poor food choices in order to take advantage of the opportunity to eat</p> <p>Respondents expressed concern that there would be long periods of time with no opportunity to eat</p>	<p>interviewer was able to explore answers in depth to gather additional information beyond the basic question; this provided significant and useful anecdotal data</p> <p>The sample size is small however the researchers felt that it was representative of the attitudes and knowledge of paramedic shift workers in general; similar results were found in a Canadian study</p> <p><b>Weaknesses:</b> The interviewer was a dietetic student and this might have had a negative impact on answers provided</p>
<p>Kris-Etherton 2014</p>	<p>Systematic review LOE: 1</p>	<p>Wide variety of U.S. health care professionals</p>	<p>The present status of nutrition education was established through the review of many studies on this topic</p>	<p>The authors called for a significant increase to nutrition education among U.S. health care professionals so that they are more prepared to deliver nutrition care to their patients</p>	<p><b>Strengths:</b> Data from just over 100 studies was reviewed; a history of nutrition education for the past fifty years is included; global efforts to improve nutrition education are provided</p>

					<b>Weaknesses:</b> A few of these studies date back to the 1980's so relevance may be questionable
Macdonald 2013	Matched cohort study LOE: 2	30 new Canadian primary care paramedic shift workers – 59% were male	A 15-minute education session was provided to study participants.  Nutrition knowledge and attitudes toward nutrition were measured using three self-administered surveys – one before the education session; one immediately after the education session; and one three months later	Nutrition knowledge increased significantly following the education session  Retention of nutrition knowledge was evident one month later  Attitudes towards nutrition were positive at all three stages of the survey	<b>Strengths:</b> Good balance between male and female participants  <b>Weaknesses:</b> A 15-minute education session seems quite short; a longer, more detailed education session might have yielded different results

**Comments:** I was unable to access the full text of the article by Macdonald so the above analysis of that article is based solely on the abstract.

**Clinical Bottom Line:** It is clear from these articles that nutrition education is needed for all shift workers but especially for paramedics who do not have guaranteed meal breaks. The lack of time and opportunity to eat balanced meals makes it even more important for paramedics to understand their food choice options and the impact these choices have on their ability to stay energized and focused throughout their shift.

**References:**

- Anstey, Stephanie, et al. "Qualitative Study of Queensland Paramedics' Perceived Influences on Their Food and Meal Choices during Shift Work." *Nutrition & Dietetics*, vol. 73, no. 1, Feb. 2016, pp. 43-49. *EBSCOhost*, doi:10.1111/1747-0080.12237.
- Kris-Etherton, Penny M et al. "The need to advance nutrition education in the training of health care professionals and recommended research to evaluate implementation and effectiveness" *American journal of clinical nutrition* vol. 99,5 Suppl (2014): 1153S-66S.
- Macdonald, Amanda B., et al. "Nutrition and Shiftwork: Evaluation of New Paramedics' Knowledge and Attitudes." *Canadian Journal of Dietetic Practice & Research*, vol. 74, no. 4, Winter 2013, pp. 198-201. *EBSCOhost*, doi:10.3148/74.4.2013.198.