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Health Maintenance Regarding Carbohydrate Counting and Calorie Restricted Diets in Diabetes Mellitus Type 2 Patients

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Health Maintenance Regarding Carbohydrate Counting and **Calorie Restricted Diets in Diabetes Mellitus Type 2 Patients** Chelsea Stoltzfus, Katie Siegle, Lauren Trainer

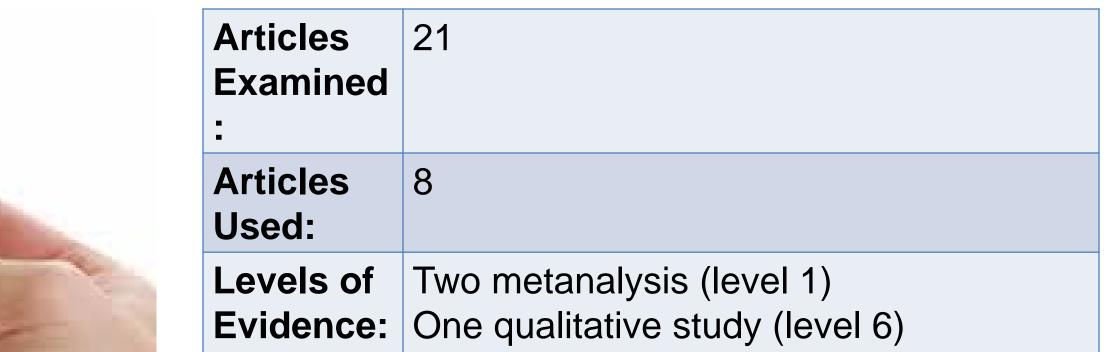
Cedarville University School of Nursing

PATIENT CARE ISSUE

Background & Significance of Diabetes Mellitus:

- Rapidly growing epidemic in today's society
- In 2000, 2.8% (171 million) of the world had this diagnosis⁸
- In 2030, it is expected to increase to 4.4% (366 million)⁸
- There is an increased need for research and implementation in the nursing field to manage diabetic symptoms.
- Diabetes mellitus type 2 is a cellular change causing insulin to be resistant to the cells which leads to a build up of glucose.

RESULTS



• Multiple medical complications can result from the diagnosis of diabetes mellitus type 2.



One well designed RCT (level 2) Three systematic reviews (level 5) One report from experts (level 7)

EVIDENCE-BASED PRACTICE QUESTION

Question: Which diabetic diet is	P- Population is adults with the diagnosis of diabetes mellitus type 2
more effective in reducing the symptoms of diabetes	Intervention to educate and implement the most effective of the two diets
mellitus type 2 patients: carbohydrate counting or calorie restricted?	C- Comparison of interventions reveals: an inconclusive standard unless
	O- Outcome desired is to take into consideration multiple variables and implement the most relevant diet to manage diabetic symptoms

REGISTERED NURSE INTERVIEW

Miami Valley Hospital nutritionist and registered nurse:

- Outpatient teaching- the same as inpatient protocol.
- Inpatient protocol- a combination of both diets by the nurse depending on the patients personal health criteria



SYNTHESIS OF EVIDENCE

- There are advantages to both diets. - Carbohydrate counting was proven to be more effective in: • Decreasing symptoms of metabolic syndrome¹ Medication reduction/elimination⁶ Improving glycemic control¹ • Weight reduction⁶ - Calorie restriction was proven to be more effective in: • Patients with sedentary lifestyles • Improving glycemic control⁶ • Weight reduction⁶ • Diet recommendations should be specific to each individual patient. - Multiple factors need to be accounted for: • Other dietary intake • Patient preference
 - Activity level • Lifestyle
 - BMI

EVIDENCE-BASED PRACTICE RECOMMENDATIONS

• Carbohydrate counting is more effective in patients who are physically active and maintain a healthy dietary intake.



METHODS

	Google Scholar, National Guideline Clearinghouse, Cochrane Library, PubMed, Medline
Keywords:	Type 2 diabetes, diabetic diets, low carbohydrate type 2 diabetic diet, calorie restriction in diabetes evidence based articles, and carbohydrate counting in diabetes evidence based articles
Inclusion Criteria:	Adult patients with diabetes type 2 diagnosis, current evidence, written in English
Exclusion Criteria:	Studies conducted on diabetes type 1 patients, subjects of 18 years or younger

- Protocol should not be amended based on resulting evidence
- Multiple variables need to be taken into consideration 2.
- More research needs to be conducted 3

LIMITATIONS

- Few studies investigated long term effects of the diets
- Insufficient data on baseline glucose and lipid levels
- Lack of focus on African American or Asian patients
- Participants were predominately women volunteers⁶
- Most studies didn't take multiple variables into consideration

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