German vegans and vegetarians

Markus Keller, PhD
Institute of Alternative and Sustainable Nutrition,
Giessen, Germany

6th International Congress on Vegetarian Nutrition
February 25th 2013, Loma Linda, USA
Veggie lifestyle today

Restaurants
about 130 vegetarian restaurants in Germany, 40 vegan

Supermarkets
in 2011 launch of first full assortment vegan supermarket
Veggie lifestyle today

Consumer fairs present huge variety of vegetarian/vegan products

Festivals numerous vegetarian/vegan street festivals all over Germany
Veggie lifestyle today

Consumer fairs present huge variety of vegetarian/vegan products

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Patrik Baboumian – psychologist, strength trainer and since 2012 officially strongest man in Europe (Powerlifting Championship Finland)

"The strongest animals are herbivores: gorillas, buffalos, elephants and me."
Increasing number of vegetarians in Germany over the last 30 years

(VEBU 2012)
Studies with vegetarians and vegans in Germany

• Heidelberg Vegetarian Study
• Berlin Vegetarian Study
• Giessen Vegetarian Study
• Giessen Wholesome Nutrition Studies I/II
• German Vegan Study
• Giessen Raw Food Study
• University of Saarbrücken I/II
• Jena Vegetarian Study
• Vit. $B_{12}$ Toothpaste Study
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6800 subjects
Studies with vegetarians and vegans in Germany

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Heidelberg Vegetarian Study

- Only prospective cohort study (1978-1999)
- 1165 lacto-ovo-vegetarians
  60 vegans
  679 health-conscious non-vegetarians
- Objectives: association between health conscious lifestyle, vegetarian diet and mortality
Heidelberg Vegetarian Study

Main results

No difference in mortality between VEG and health conscious non-VEG

1 SMR: VEG = 62, Non-VEG = 52

(Chang-Claude et al. 2005)
Heidelberg Vegetarian Study

Main results

- No difference in mortality between VEG and health conscious non-VEG
- Significantly lower mortality\(^1\) in both groups compared with the general population

\(^1\) SMR: VEG = 62, Non-VEG = 52

(Chang-Claude et al. 2005)
Heidelberg Vegetarian Study

Main results

- No difference in mortality between VEG and health conscious non-VEG
- Significantly lower mortality\(^1\) in both groups compared with the general population
- VEG had a 30% lower risk of dying from IHD

\(^1\) SMR: VEG = 62, Non-VEG = 52

(Chang-Claude et al. 2005)
German Vegan Study

• Cross-sectional study (1994/1995)
• 98 "strict" vegans, 56 "moderate" vegans
• Objectives: Health behavior, nutrient supply, nutrient status, health status
German Vegan Study

Main results

Favorable blood lipid levels

80% showed low serum vitamin B\textsubscript{12} levels

The longer the duration of the vegan diet, the lower the vitamin B\textsubscript{12} concentrations

Source: Waldmann, A.
German Vegan Study

Subjects with favorable serum lipid levels

- Cholesterol < 200mg/dl
- HDL > 45 (♀) or > 35mg/dl (♂)
- LDL < 160mg/dl
- Triglycerides < 200mg/dl

Moderate Vegans
Strict Vegans

(Waldmann 2003)
German Vegan Study

Main results

80% showed low serum vitamin B_{12} levels

The longer the duration of the vegan diet, the lower the vitamin B_{12} concentrations
German Vegan Study

Subjects with serum vitamin B_{12} levels below the normal range

<table>
<thead>
<tr>
<th>Cut-off point</th>
<th>Moderate Vegans</th>
<th>Strict vegans</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 150 pmol/L</td>
<td>35</td>
<td>58</td>
</tr>
<tr>
<td>&lt; 250 pmol/L</td>
<td>69</td>
<td>87</td>
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(Waldmann 2003)
German Vegan Study

Main results

80% showed low serum vitamin $B_{12}$ levels

The longer the duration of the vegan diet, the lower the vitamin $B_{12}$ concentrations
German Vegan Study

Association between the duration of a vegan diet and serum vitamin $B_{12}$ levels

<table>
<thead>
<tr>
<th>Median serum vitamin $B_{12}$ [pmol/L]</th>
<th>&lt; 5 y</th>
<th>5-9 y</th>
<th>10-14 y</th>
<th>≥ 15 y</th>
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<tbody>
<tr>
<td></td>
<td>166</td>
<td>157</td>
<td>108</td>
<td>95</td>
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(Waldmann 2003)
Jena Vegetarian Study

- Cross-sectional study (2007)
- 2517 lacto-ovo-vegetarians
- Objectives: motives of vegetarians
Jena Vegetarian Study

• The average vegetarian...
  ... is female, young, highly educated, lives in major cities
Jena Vegetarian Study

- The average vegetarian...
  ... is female, young, highly educated, lives in major cities
- Main Motivation for choosing vegetarianism:
  ➔ ethical reasons
The average vegan is female, young, above average education, lives urban.

Motivation for choosing vegetarianism:
- Ethical reasons (63%)
- Health reasons (20%)
- Aversion of meat (= emotional reasons, 11%)
- Not classified (6%)

(Friedrich Schiller Universität Jena 2007)
Summary results: German vegetarians

+ 

- health conscious lifestyle
- high intake of preventive nutrients
- preventive antioxidant and blood lipid levels
Summary results: German vegetarians

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- low risk for chronic diseases
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German vegetarians

- preventive nutrients
- preventive antioxidant and blood lipid levels
- low risk for chronic diseases
- lower mortality

- low iron stores (women)
- low vitamin B₁₂ status (vegans)
- elevated homocysteine levels (vegans)
Outlook

• Most of the data is rather old
• New testing methods and biomarkers → more accurate results
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• Questions unanswered
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• Urgent need for new studies with German vegans and vegetarians
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• Questions unanswered

• Urgent need for new studies with German vegans and vegetarians
Thank you!

Markus Keller, PhD
markus.keller@ifane.org
www.ifane.org