



Centre for Diet and Activity Research
A UKCRC Public Health Research Centre of Excellence

Is the proliferation of takeaway food outlets contributing to unhealthy diet and obesity?

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Career Development Fellow, CEDAR

7th October 2015



About CEDAR



- The *Centre for Diet and Activity Research (CEDAR)* is focussed on studying the determinants of dietary and PA behaviours; developing and evaluating public health interventions; and helping shape public health practice and policy. We are driven by the overall goal of supporting effective interventions to change diet and physical activity behaviours at the population level.
- The Centre is a partnership of several institutions, and is one of five Centres of Excellence in Public health Research funded through the UK Clinical Research Collaboration.
- How to find out more: <http://www.cedar.iph.cam.ac.uk/>

Of every 100 adults in England...

2 are underweight



36 are a healthy weight



62 are overweight or obese



KEY



Underweight



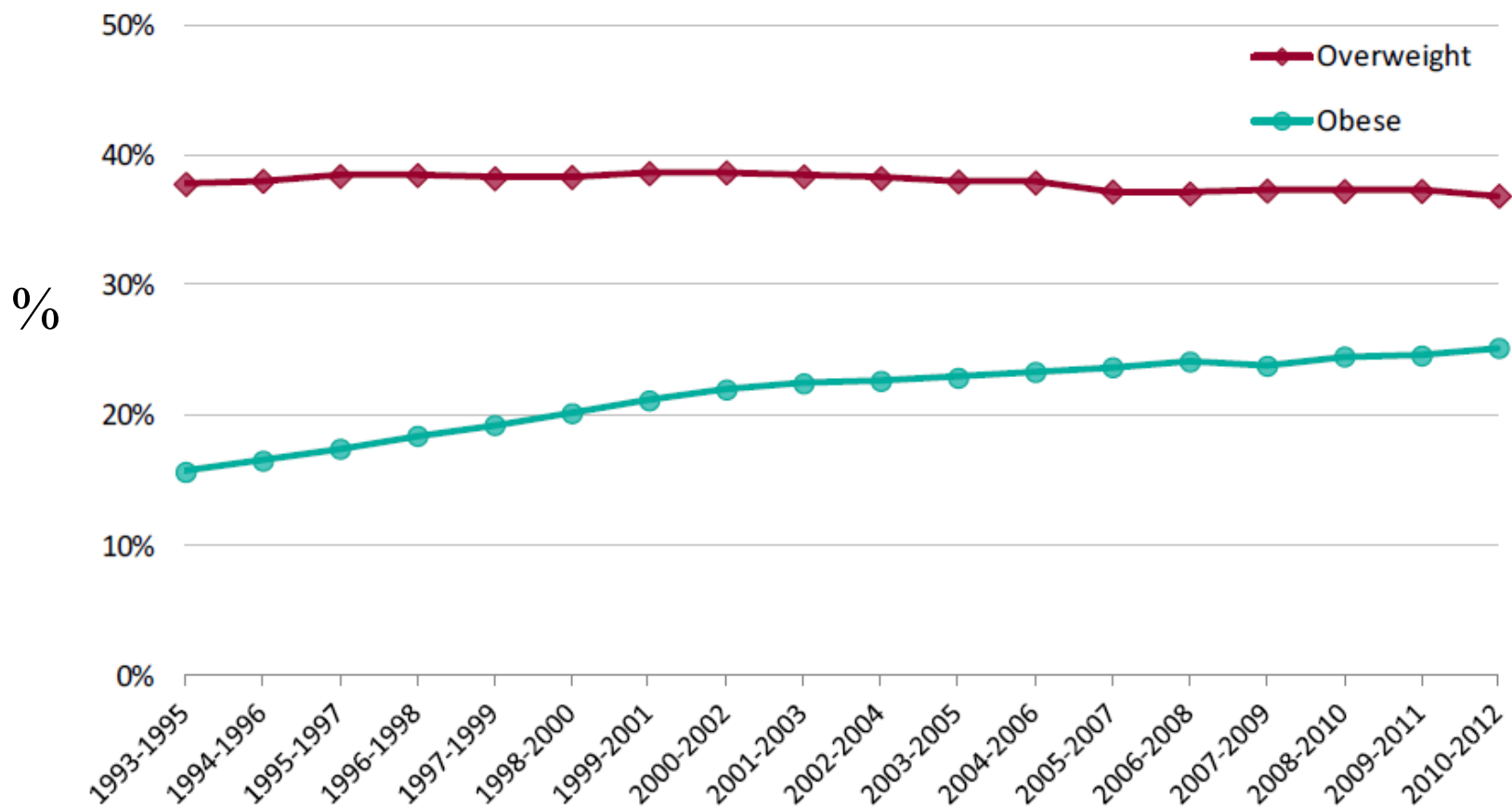
Healthy weight



Overweight



Obese



Adult overweight and obesity trends in England

29%

Increased expenditure on food outside
the home in the last decade

£28bn

Amount spent on takeaway food
annually in Great Britain

£9

Average spending per person per week on
food away from home in 2012

1 in 6

Average number of meals now
consumed outside the home

Takeaway food and weight



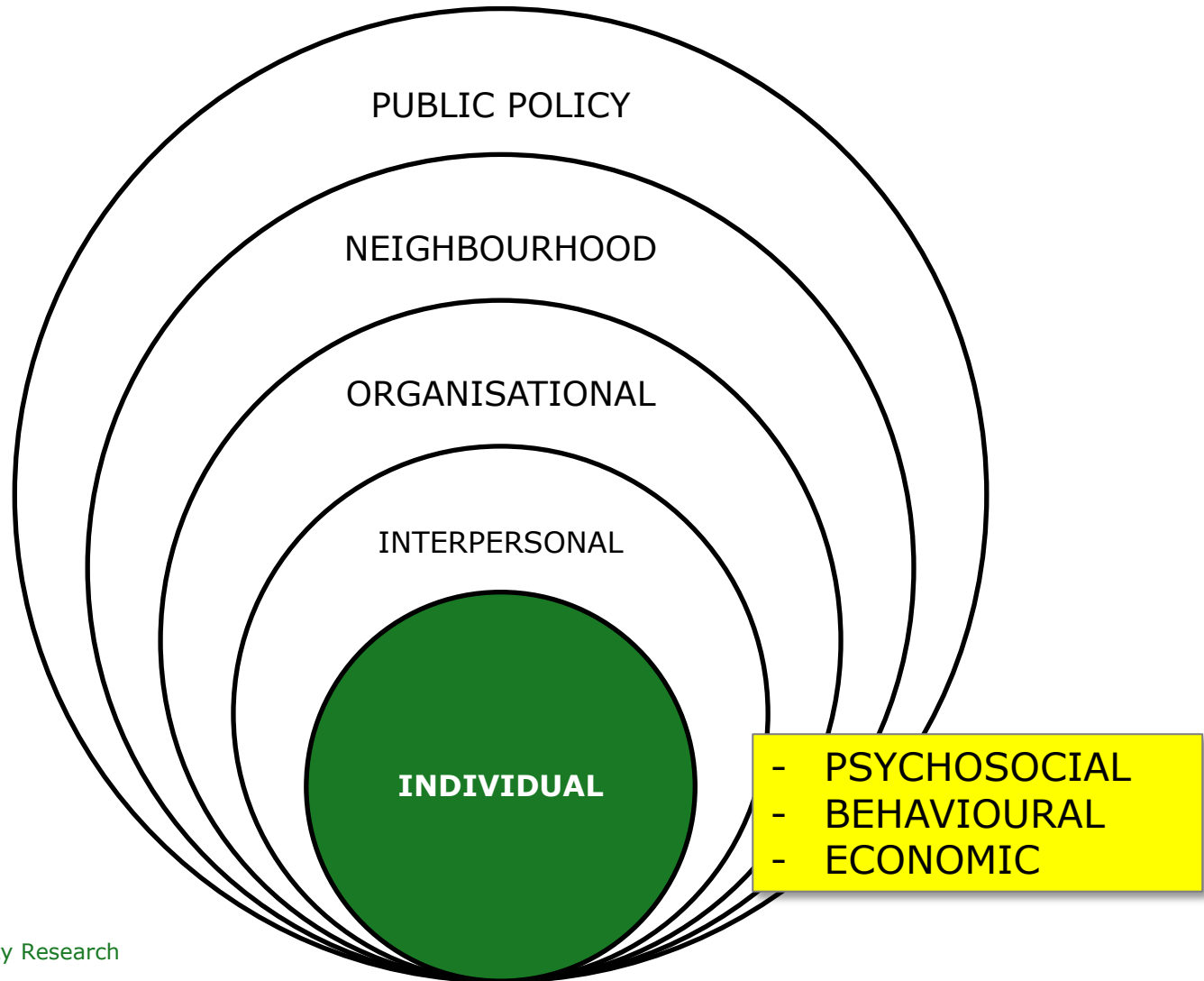
Excess weight gain associated with frequent
takeaway food outlet visits over 15 years

Defining 'takeaway food'

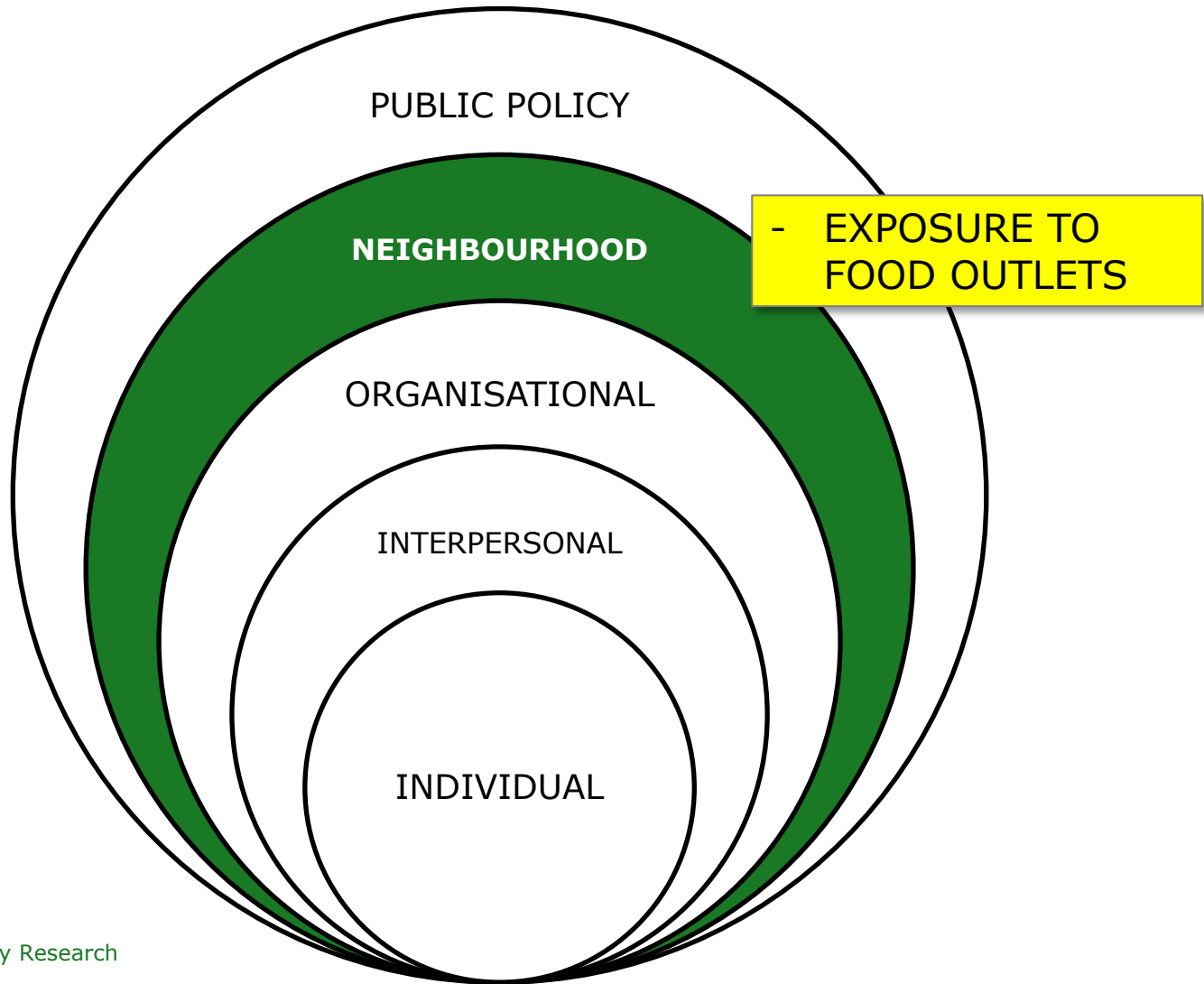


Foods prepared commercially, which are designed to be consumed outside of the home

The role of individual choice



Food choices are made in context

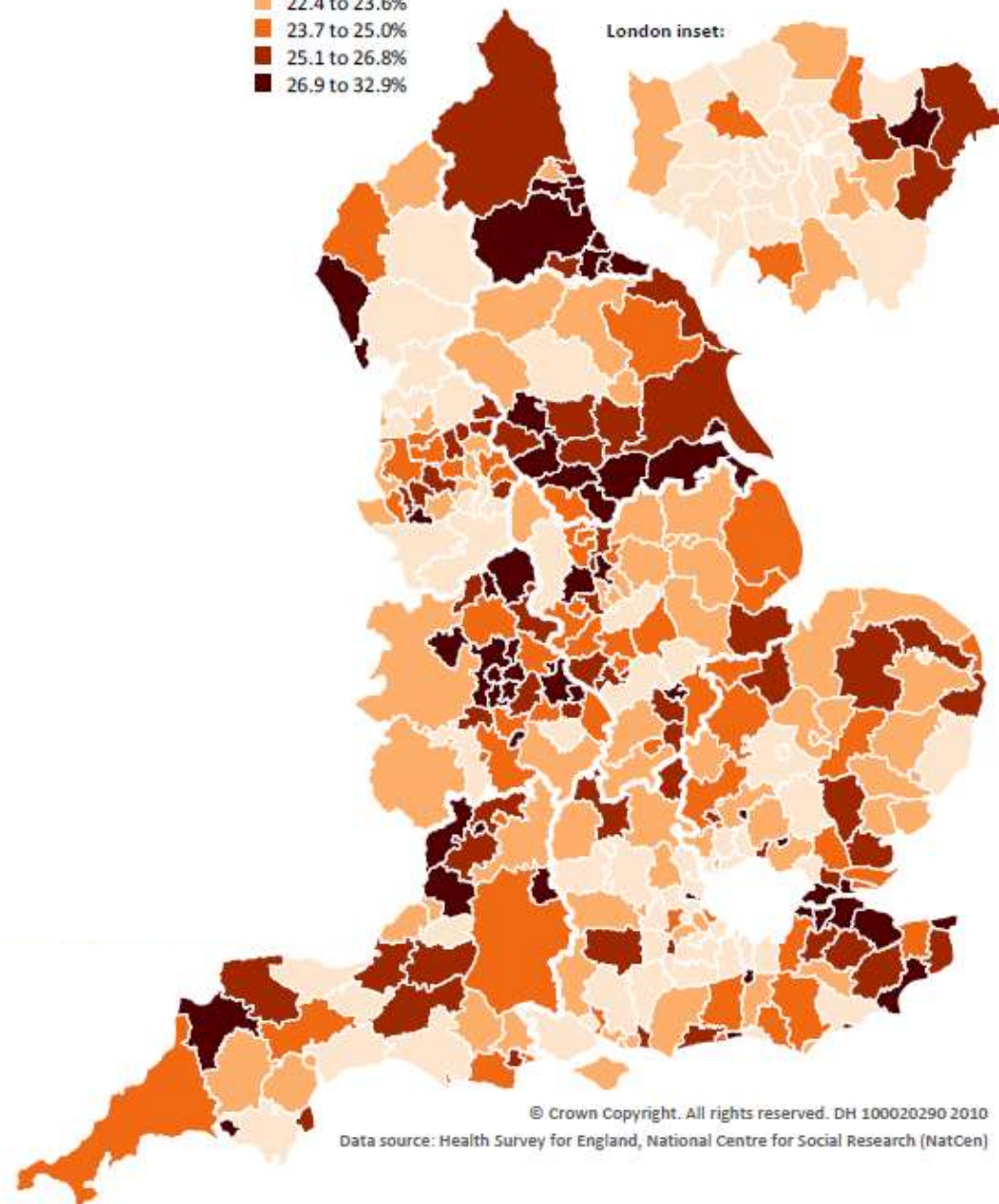


Adult obesity prevalence, modelled estimates for local authorities

National Centre for Social Research, 2006-2008

- 13.1 to 22.3%
- 22.4 to 23.6%
- 23.7 to 25.0%
- 25.1 to 26.8%
- 26.9 to 32.9%

London inset:



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Data source: Health Survey for England, National Centre for Social Research (NatCen)

The 'obesogenic environment'

“the sum of the influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individual’s or populations”



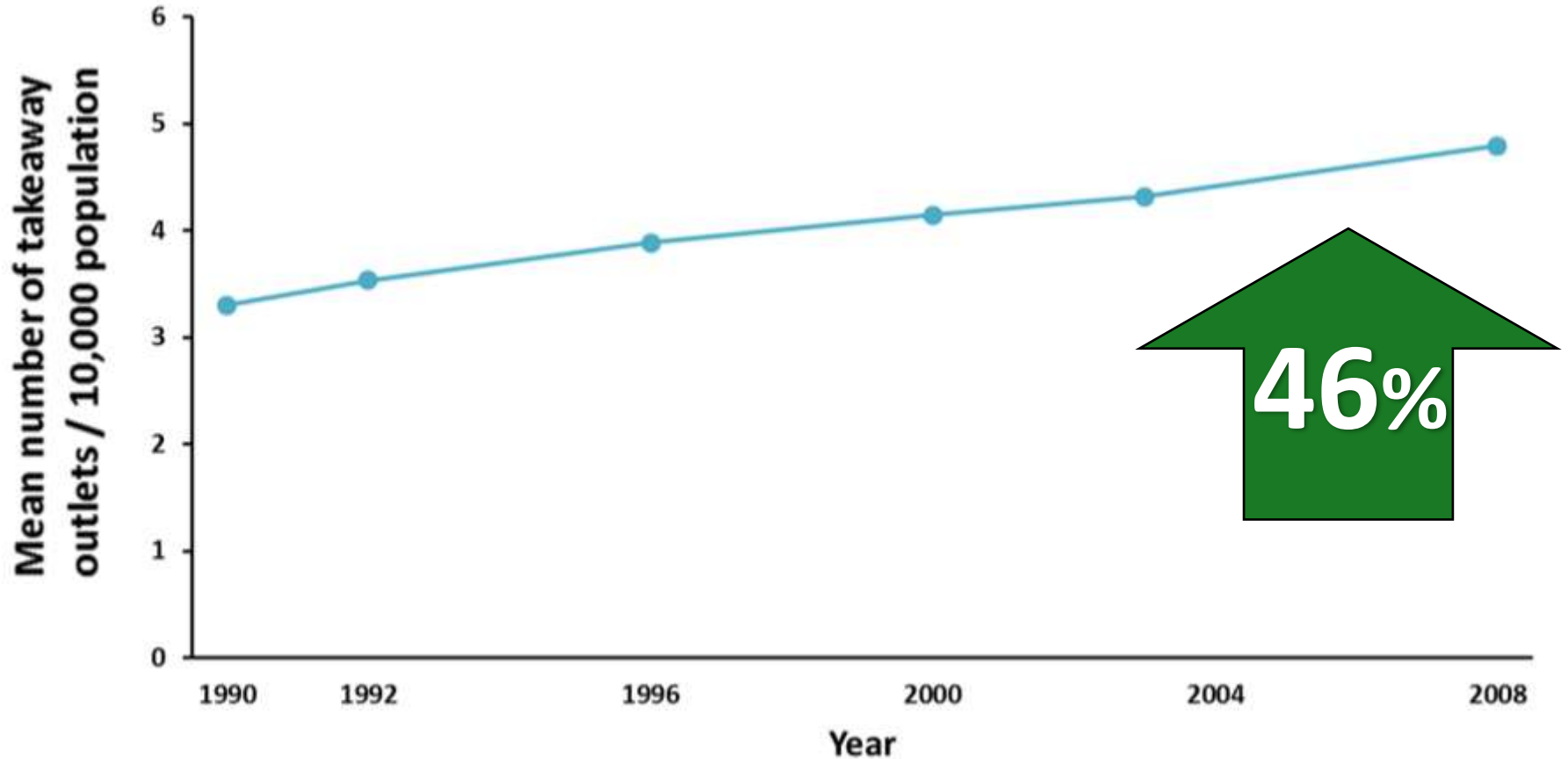
Food deserts

Populated urban areas where residents do not have access to an affordable and healthy diet

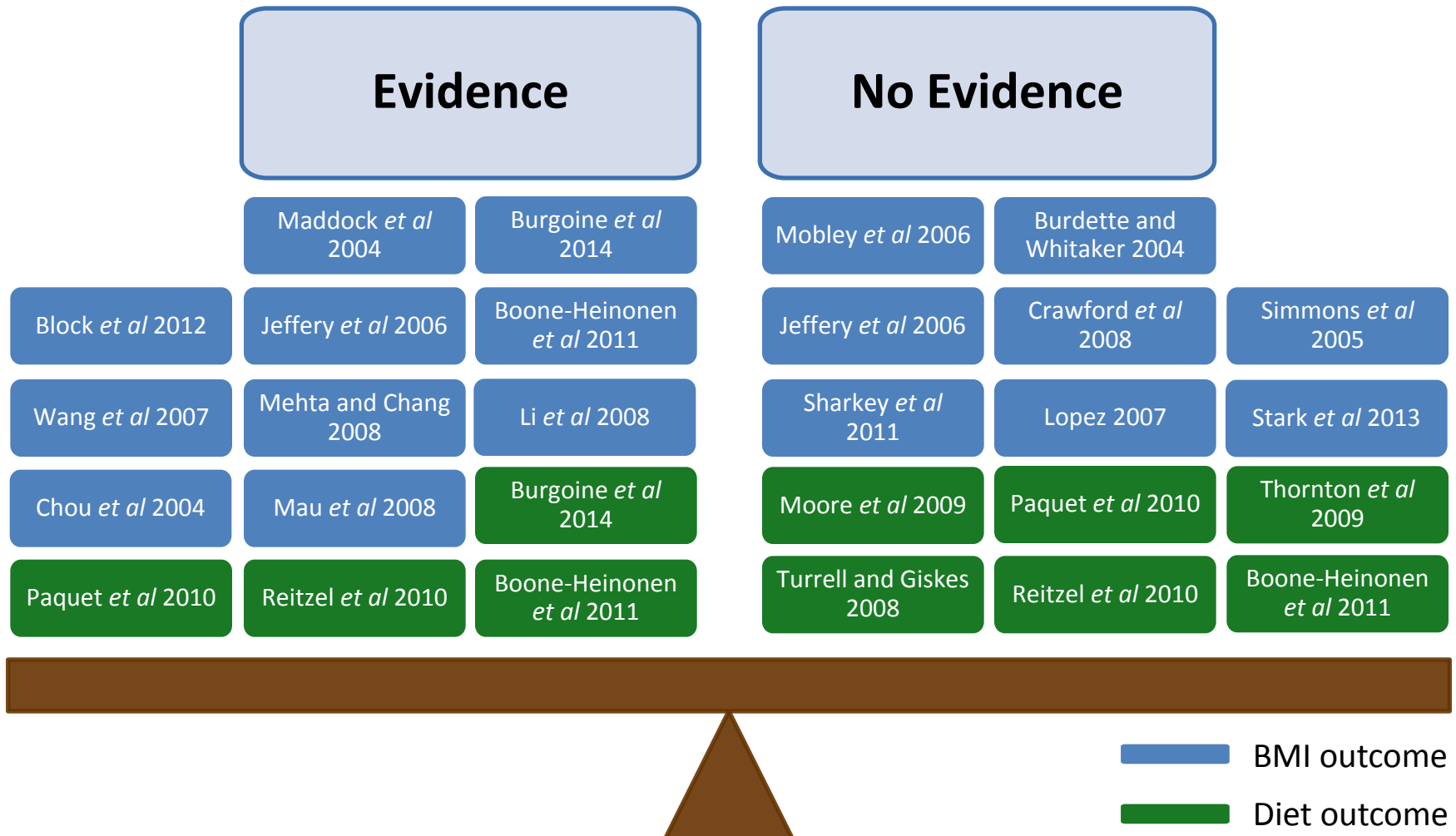


Google Earth 2012

Takeaway food outlet proliferation



Evidence for neighbourhood effects



Evidence for neighbourhood effects

Health & Place 18 (2012) 1172–1187

Contents lists available at SciVerse ScienceDirect



Health & Place

journal homepage: www.elsevier.com/locate/healthplace

Review Essay

The local food environment and diet: A systematic review

Caitlin E. Caspi^{a,b,*}, Glorian Sorensen^{a,b}, S.V. Subramanian^a, Ichiro Kondo^a

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ABSTRACT

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obesity reviews

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Other Reviews

A systematic review of fast food access studies

S. E. Fleischhacker¹, K. R. Evenson¹, D. A. Rodriguez² and A. S. Ammerman¹

Background: High consumption of energy-dense fast food is associated with increased obesity prevalence. This systematic review aims to examine the methodology and evidence on fast food access and its associations with outcomes. Sixteen studies published in English during a 10-year period, with data collection and reporting on fast food access were included. Forty articles met the aforementioned criteria. Nearly half of the studies ($n = 16$) used their own set of criteria to define fast food. Studies predominantly examined the relationship between fast food access and socioeconomic factors ($n = 21$) and 76% indicated that fast food access was more prevalent in low-income areas compared with higher-income areas. Ten of 12 studies found fast food restaurants were more prevalent in areas with higher concentrations of ethnic minority groups in contrast to Caucasians. Six adult studies found higher body mass index was associated with living in areas with increased exposure to fast food; four studies found no association. Further work is needed to understand if and how fast food access impacts dietary intake and health outcomes, and if fast food access is associated with socioeconomic, race/ethnicity and age associations.

Conclusion: Built environment, fast food, local food access, obesity.

Obesity

Reviews (2011) 12, e400–e471

The Relationship of the Local Food Environment with Obesity: A Systematic Review of Methods, Study Quality, and Results

Laura K. Cobb^{1,2}, Lawrence J. Appel^{1,2,3}, Manuel Franco^{1,4}, Jessica C. Jones-Smith⁵, Alana Nur¹, and Cheryl A.M. Anderson^{1,8}

Objective: To examine the relationship between local food environments and obesity and assess the quality of studies reviewed.

Methods: Systematic keyword searches identified studies from US and Canada that assessed the relationship of obesity to local food environments. We applied a quality metric based on design, exposure and outcome measurement, and analysis.

Results: We identified 71 studies representing 65 cohorts. Overall, study quality was low; 60 studies were cross-sectional. Associations between food outlet availability and obesity were predominantly null. Among non-null associations, we saw a trend toward inverse associations between supermarket availability and obesity (22 negative, 4 positive, 67 null) and direct associations between fast food and obesity (29 positive, 6 negative, 71 null) in adults. We saw direct associations between fast food availability and obesity in lower income children (12 positive, 7 null). Indices including multiple food outlets were most consistently associated with obesity in adults (18 expected, 1 not expected, 17 null). Limiting to higher

Annual Report of the
Chief Medical Officer

Surveillance Volume, 2012
On the State of the Public's Health

“The association between [fast] food availability
and obesity is not yet fully understood”



BMJ

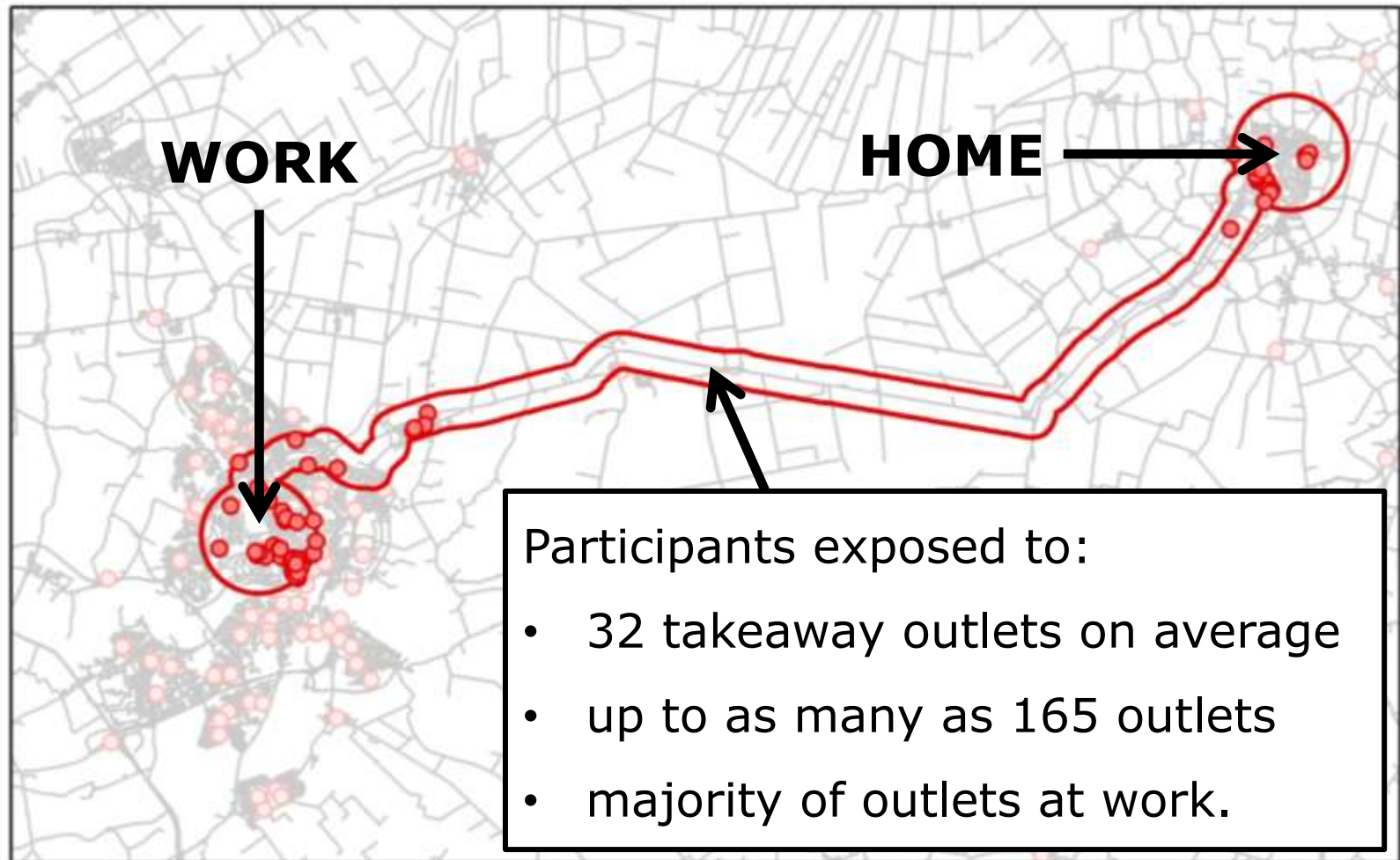
22 March 2014 | bmj.com

Internet delivered CBT
Macrolide use and pyloric stenosis
Managing endometriosis
The joy of cochlear implants



Life in the fast food lane

Non-home takeaway food exposure



What might a Journey look like?

Takeaway food outlets only

CJ Brown
Greggs
The Cornish Pasty Co.
Millie's Cookies
McDonalds
Chill Grill

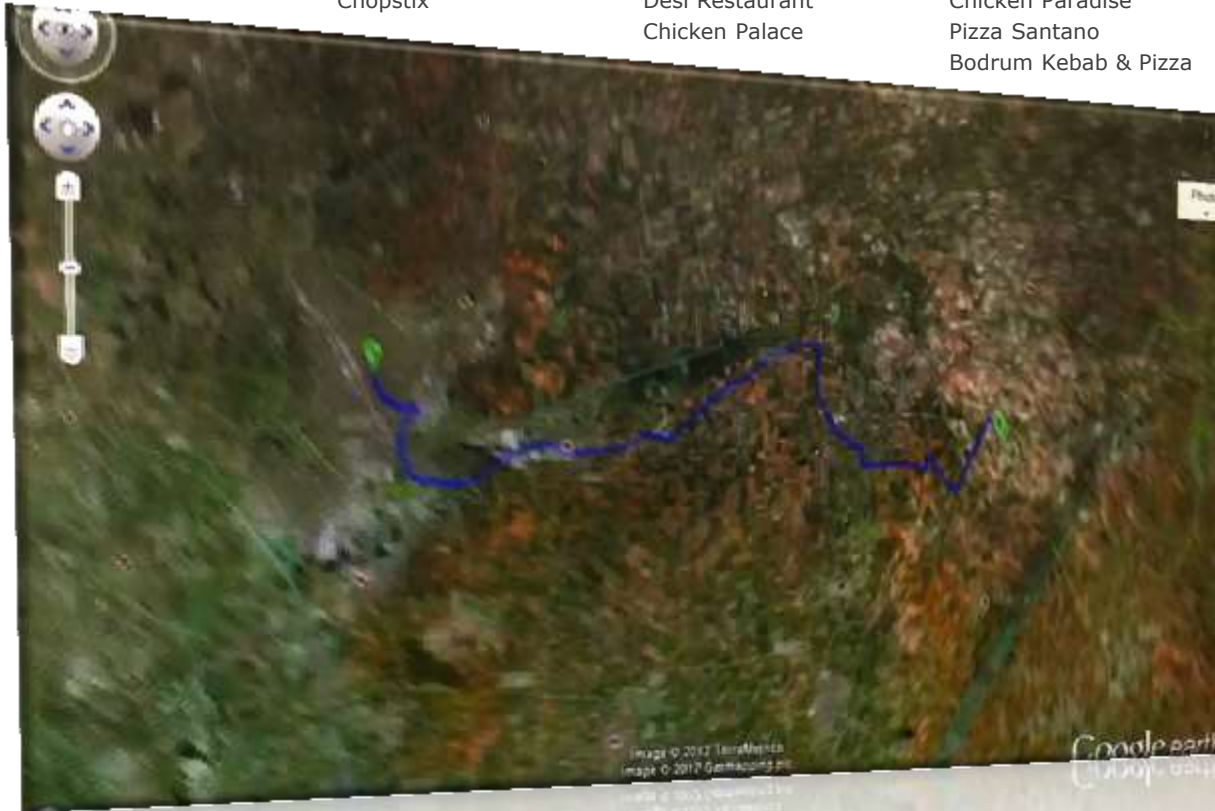
Pizza Hut
Hot & Spice
Parrots Fish Parlour
Perfect Chicken and Ribs
City Kebab
Greggs
Chopstix

The Lido
Roshni Takeaway
Madina Kebab House
Hot Pot Takeaway
Express Burger
Chilli Hut
Desi Restaurant
Chicken Palace

Express Grill
Papa John's
Zorba
Sunrise
Espirito Da Coisa
Curry & Pizza Hut
Chicken Paradise
Pizza Santano
Bodrum Kebab & Pizza

Eastern Delight
Curry Masters
2 Tasty
UK Fried Chicken & Pizza
Ali's Kebab House
Asia Restaurant
Balti Hut
Abdullah's
Chicken Palace
Yummy Fish & Chips
Golden Cod
Alivels
Wongs City
Snappy Pizza
Wei Fung
Wongs Crispy Duck
J & B Fish Bar
Taste of Oriental
Chef Peking
Snappers Family Fish Bar
March Fish and Chips
USA Chicken
Bakers Oven
Royal China
Chilli Hut
Eastern Promise
Leonardo's Pizzas
Golden Land Fish Bar
March Tandoori
Carlos Pizza
Popeye's Pizza
Sats Fish Bar
Papa Luigi Dial-a-pizza
Curryland

Kentucky Fried Chicken
China Fountain
Fletton Fish N Chips
Bombay Delight
Top Chef
Jinja Express
Stanground Fish Bar
Star Tandoori
Linford's Fish & Chips
UK Kebab and Pizza
Beijing House
Friar Tucks
Rainbow City
Happy Valley
Ming Garden
Harbour City
Hassan's Grill
Moonlight Takeaway
Friar Tucks
Premier Pizza
China Chef
The Fresh Pizza Company
Jade Cottage
Curry Cottage
The Maltings Chinese
Takeaway
Feng Wah
Kebabland
Chippy Sues
Silver River
Best Kebab House
Choys Chinese Takeaway



PE12 to PE14, 28.1 miles, 95 takeaways

Google Earth

Evidence for environmental effects

Environmental exposure

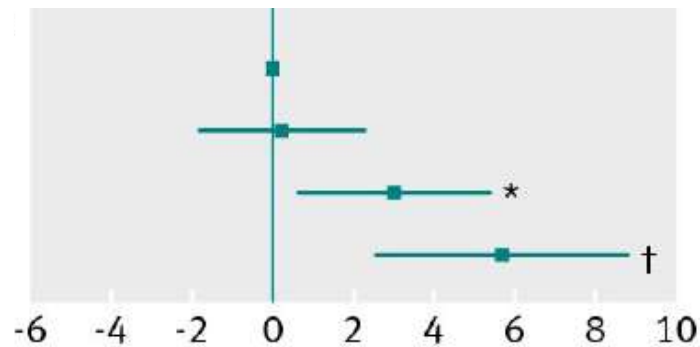
Difference in takeaway food consumption (g/day) relative to Q1

Q1

Q2

Q3

Q4



+5.7 grams

Environmental exposure

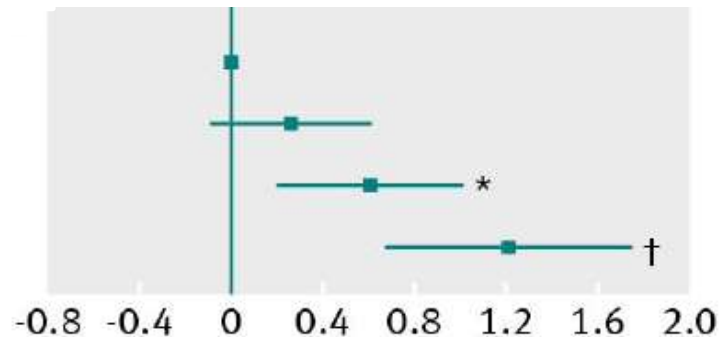
Difference in body mass index relative to Q1

Q1

Q2

Q3

Q4



+1.2 units



40g/week



Bobmonk, Harlow, United Kingdom, 1 year ago

Wow, I would never have figured. So you're telling me, people who live closer to takeaways and fast food joints are more likely to eat from there than people who live further away? I don't know how I can cope with this. Get the prime minister to delay all meetings... he needs to hear this... it could have massive repercussions on our society.

Click to rate



4



0

It probably won't come as a surprise to many, but Cambridge scientists have found that people surrounded by takeaways eat more junk food and are more likely to be obese than those who are not.

The eating habits of 5,442 adults from Cambridgeshire were studied for a Medical Research Council paper published in the *British Medical Journal* – and the results may encourage politicians to try and restrict the number

GARETH MCPHERSON

much takeaway food people ate using questionnaires for foods such as pizza, burgers,

“The foods we home tend to than the meal ourselves, so to consider to food outlets high calorie food to-day environment be influencing “Our study evidence that kind of relation the number of



Turnpike

570 days ago

Funny how many highly-paid "experts" seem to be idiots. I don't get fat because I drive past a fast food joint. I get fat because I choose to go in and eat.

Reply · Share

-1 likes



banksstuart2, Bristol, United Kingdom, 1 year ago

There are plenty of fast food, takeaway and eat-in restaurants within easy walking distance to where I live, but it would be foolish and idiotic for me to choose to use them because: 1. I can make a hot meal in my own kitchen for £1.50 that includes a hot drink, a healthy hot meal and a dessert, where an equivalent sized meal would cost at least £4 and probably over £5. 2. Eating a cooked meal at home is quicker to make and more convenient to consume.

Click to rate



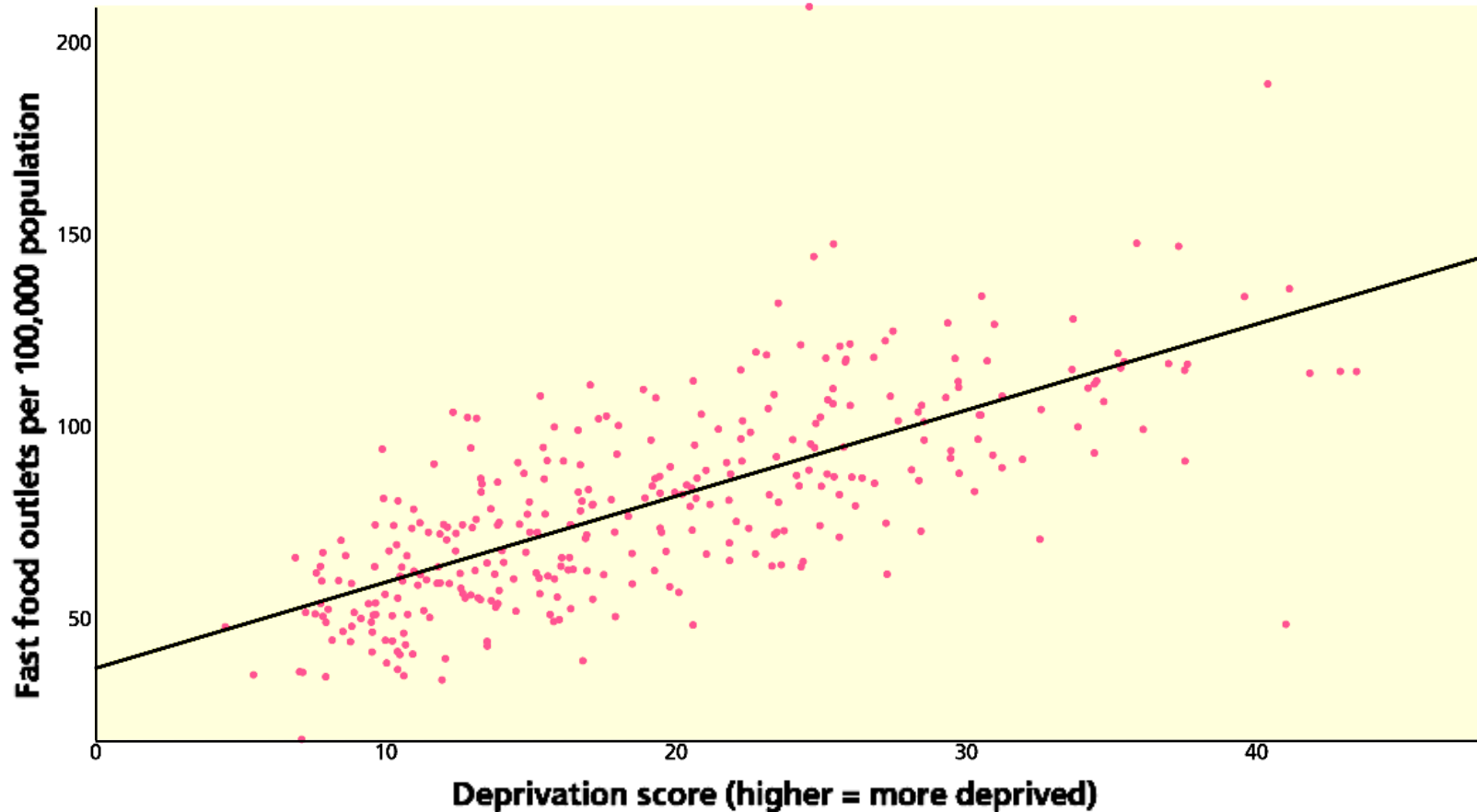
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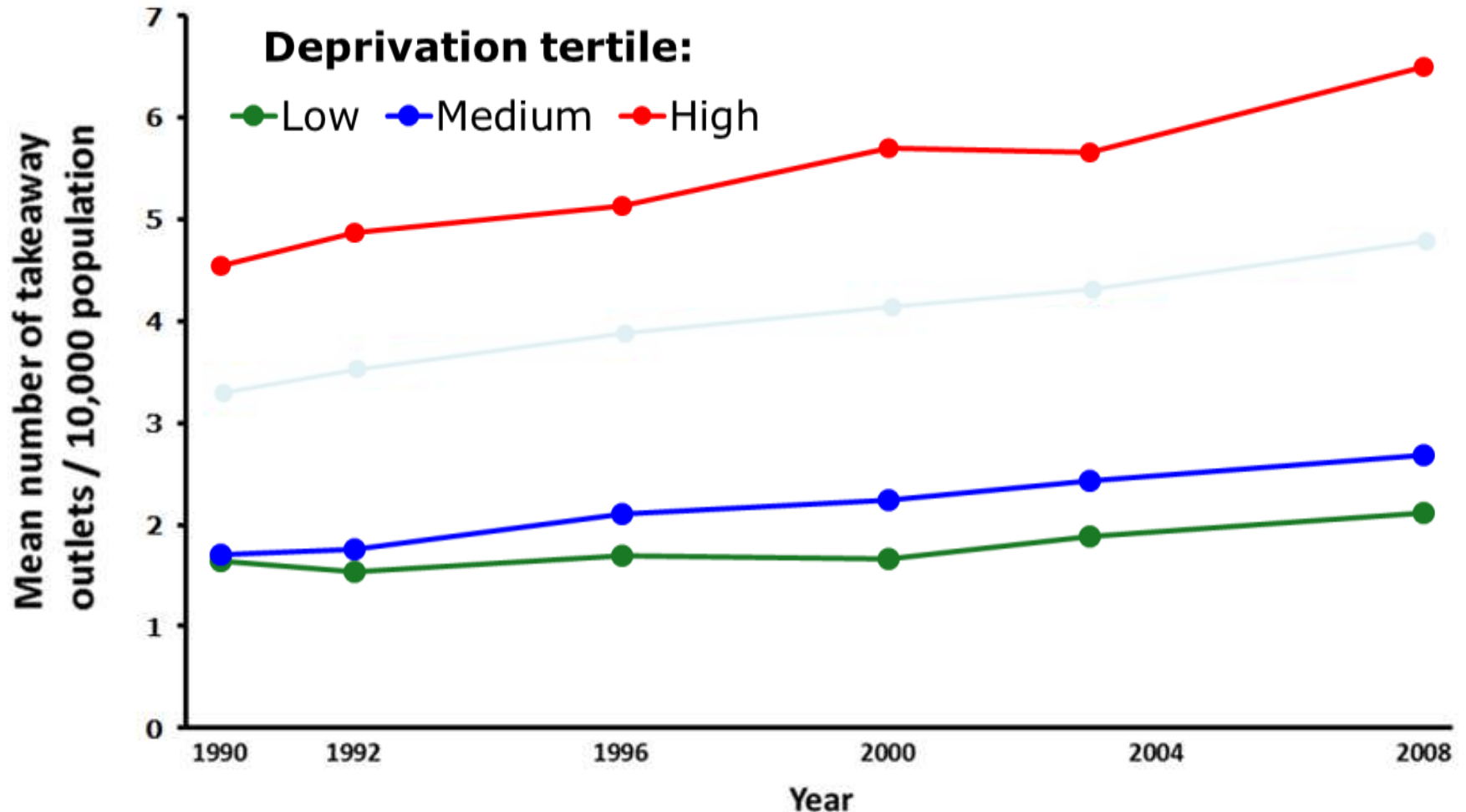
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Could n'hoods generate inequalities?

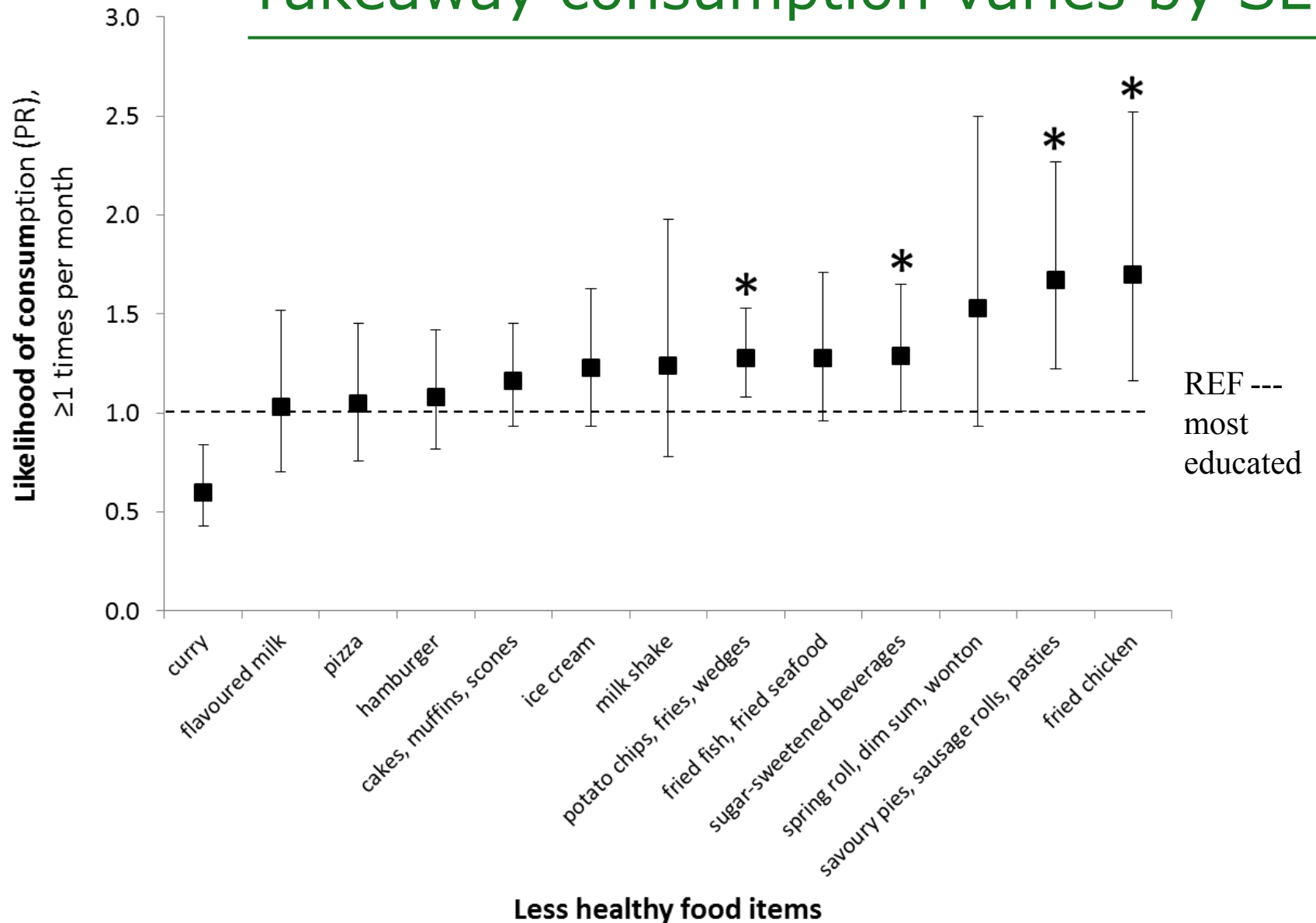


More takeaway outlets in deprived areas

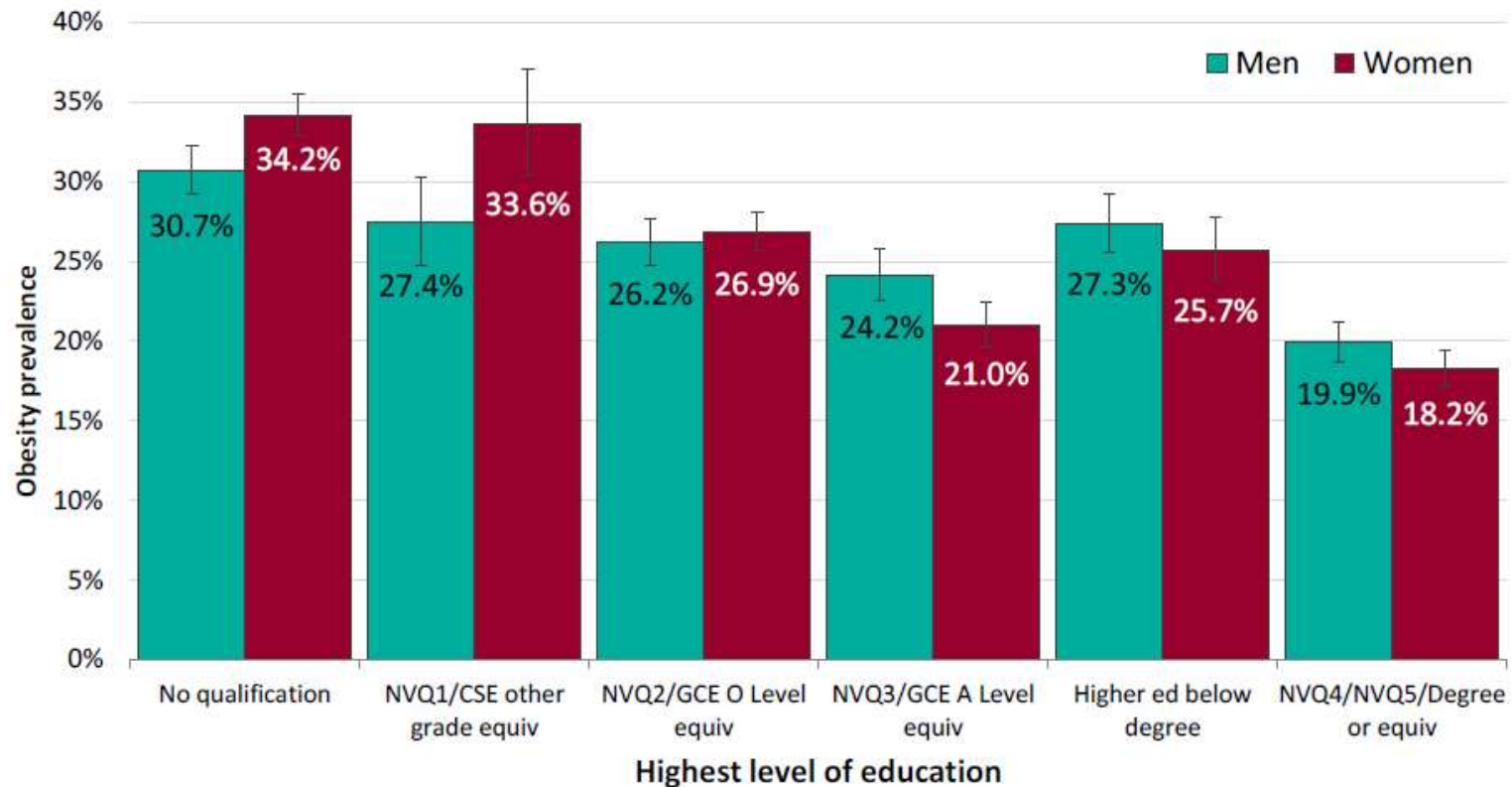
Takeaway access over time by n'hood SES



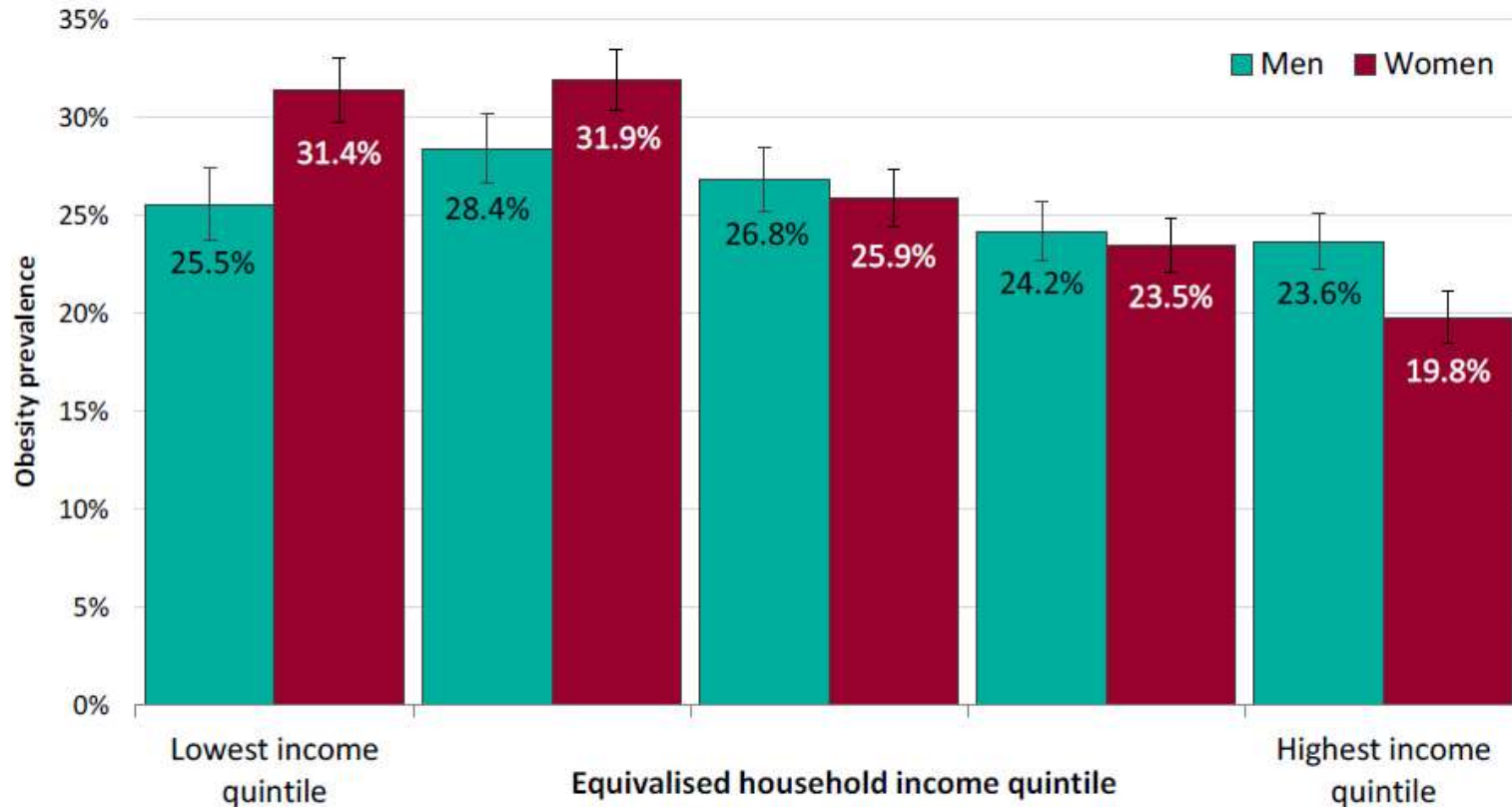
Takeaway consumption varies by SES



Obesity varies by educational attainment



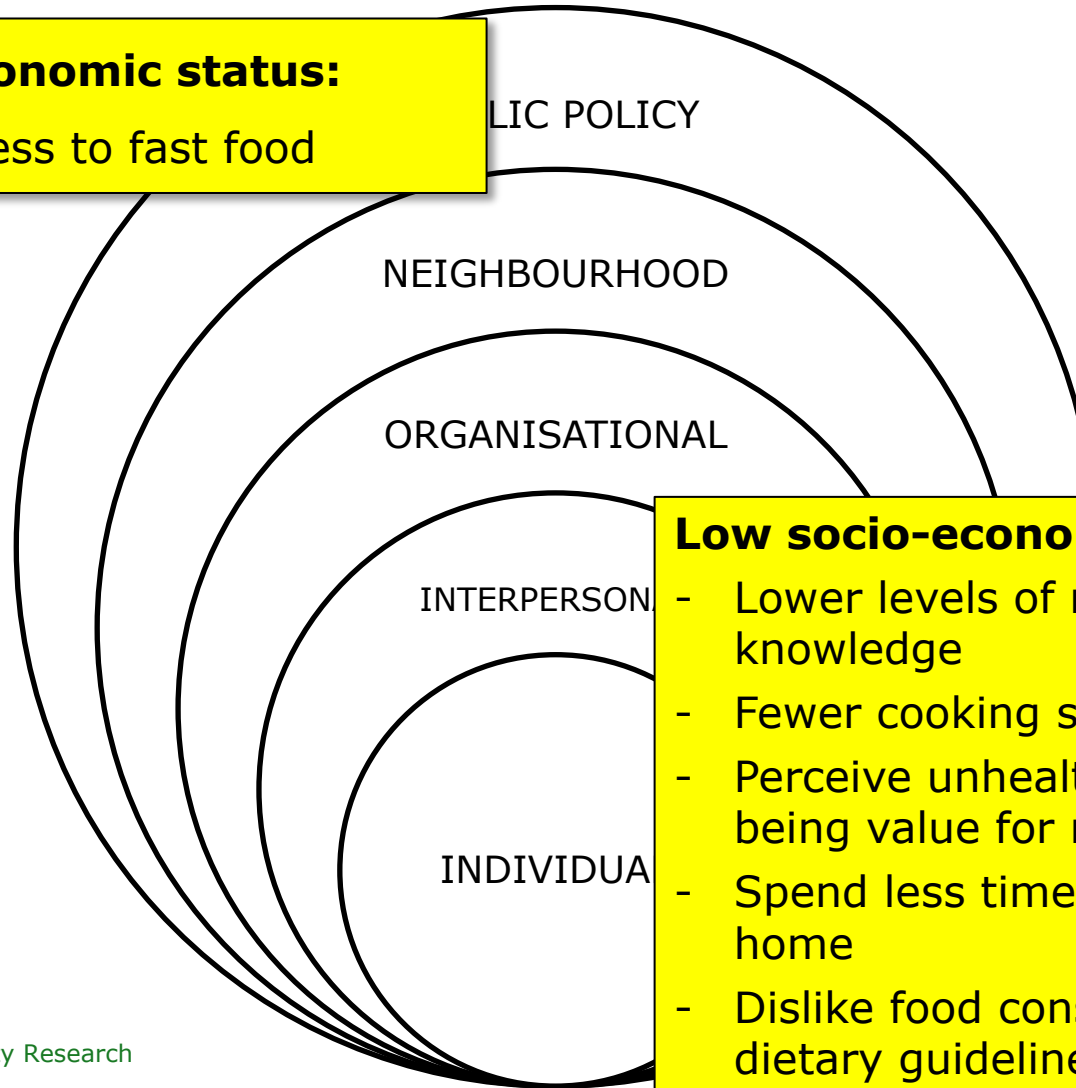
Obesity varies by household income



The role of individual choice

Low socio-economic status:

- Greater access to fast food



Low socio-economic status:

- Lower levels of nutrition knowledge
- Fewer cooking skills
- Perceive unhealthy foods as being value for money
- Spend less time preparing food at home
- Dislike food consistent with dietary guidelines

Informing evidence-based policy



23

UNITED KINGDOM



Informing evidence-based policy

Gateshead Council
Supplementary Planning Document 2015

Restrict the opening of new A5 Hot Food outlets where:

1. Young people congregate
2. Levels of obesity are high
3. Threshold per capita would be exceeded
4. Opening would result in clustering

Others...

JOB'S MOTORS PROPERTY DIRECTORY BUYSELL FAMILY NOTICES DATING CHRONICLE CASHBACK BOOK AN AD COOKIE POLICY

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TRENDING RUGBY WORLD CUP DICK ADVOCAT NORTHERN POWERHOUSE TYNE AND WEAR METRO Sport Traffic & Travel Celebs Food & Drink

News » North East News » Kenton

Kenton McDonald's: 100 angry residents packed out a protest meeting in Newcastle

21:37, 12 MAR 2015 | UPDATED 21:50, 12 MAR 2015 | BY KEIRAN SOUTHERN

The fast food giant had seen their original Newcastle bid rejected, but signalled their intention to appeal last week

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“...the planning system is ultimately not a means for the nanny state to regulate the type of food that people eat, nor is it there to pursue some form of inverted snobbery against Big Macs”

- **Brandon Lewis MP, Minister of State (Communities and Local Government)**



Why the Fast-Food Ban Failed in South L.A.

Obesity rates for residents of South Los Angeles only increased after the city imposed a moratorium on the construction of new fast-food restaurants.



(Lucy Nicholson/Reuters/The Atlantic)



ADAM CHANDLER | MAR 24, 2015

The [national discourse](#) about health and obesity has never been a particularly cordial conversation.

Conclusions

- Obesity is a major public health challenge
- Regular takeaway consumption associated with poor diet and weight gain over time
- Neighbourhood exposure to takeaway food outlets associated with greater consumption and body weight
- Takeaways have proliferated (inequitably)
- Inequitable takeaway food outlet exposure may aid understanding of socioeconomic gradient in diet and health
- Could changing neighbourhoods be part of the solution?

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