## Geography linked to obesity

Univeristy of Alberta researchers find that the ratio of fast food restaurants in certain cities is linked to local obesity rates

TOM WAGNER News Staff

A recent study by University of Alberta economics professor Sean Cash shows a strong connection between the number of fast food restaurants in Canadian cities and the incidence of obesity in each.

The study looked at data from Statistics Canada, as well as the density per 10 000 people of the top ten fast food chains, including McDonalds, Burger King, and Tim Hortons, and attempted to determine whether the availability of fast food affected the average weight of Canadians.

The answer, as it turns out, was hardly a surprise.

"On average, even after controlling for differences [between cities], one more fast food restaurant per 10 000 people was associated with 3.3 per cent more obesity in a city," Cash explained. "For the most part, the cities with more of these fast food restaurants had higher obesity; the cities with fewer had less."

However, Cash was quick to point out that the data should be interpreted as simply one indicator of factors relating to obesity, for instance lifestyle, and not as a direct cause. He stressed that a city's average obesity is also linked to things such as commute time, climate, and average income, which the study also took into consideration.

As one example, the study looked at the availability of coffee shops in different cities as an indicator of the lifestyle and activities of the population.

"We actually found that coffee shops had a significant negative relationship with the incidence of obesity," he explained.

Moreover, there were some cities that did not fit in with the trend of more fast food restaurants equalling bigger waistlines. Halifax, for example, had a relatively high number of fast food restaurants and one of the lowest instances of obesity in the country.

Still, Cash still feels that the study's findings are relevant and important.

"I do think [the study] indicates that the types of things, the types of businesses and amenities we have in our cities, may influence some of the health outcomes we care about," he said.

## Researchers find link between low birth weights and adult depression

RACHEL HENDRICKS

News Writer

The odds of developing depression or anxiety as an adult may be significantly increased even prior to birth, according to a study led by Ian Colman, assistant professor in the University of Alberta's School of Public Health.

The study, published in the December 2007 issue of *Biological Psychiatry*, found that individuals with low birth weights were more likely to become depressed or anxious as adults.

"This [study] shows that prenatal conditions have long-term effects on the developing fetus," Colman said.

Colman worked with researchers at the University of Cambridge and University College London to discover the correlation between birth weight and mental disorders. The research subjects were all members of the Medical Research Council National Survey of Health and Development, a survey that has monitored symptoms of mental disorder in over 5000 Britons born in 1946.

"We [...] found that babies who were smaller were more likely to be depressed or anxious

later on," Colman said.

Colman further explained why low birth weight may be significant.

"There is biological theory that suggests that when pregnant mothers become stressed [...] there's less blood flow to the uterus, so the babies aren't getting nutrients, and they end up smaller.

"[Also,] stress hormones like cortisol are passing through the placenta, and they could influence the developing baby's brain and permanently alter the stress response in that baby for the rest of its life. So when that baby grows up and is faced with stressful life events, they're more likely to become depressed or anxious."

Research that investigates prenatal conditions leads back to that long-standing debate of nature versus nurture.

"I think that what this points to is that nature is an important part of our mental health, and [for] people who suffer from depression and anxiety, this is further evidence that they might be biologically different," Colman said. "But that doesn't suggest that the environment isn't an important factor."

"This research supports the theory where there's an interaction between nature and nurture."



