



## **OBESITY, DISABILITY, AND MOVEMENT ONTO THE DISABILITY INSURANCE ROLLS**

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**THE FINDING THAT OBESITY CAUSES DISABILITY WILL PERMIT MORE ACCURATE PROJECTIONS OF FUTURE DISABILITY INSURANCE APPLICATIONS AND CASELOADS. THE PREVALENCE OF OBESITY IS EXPECTED TO CONTINUE TO RISE, SUGGESTING THAT, ALL ELSE EQUAL, DISABILITY INSURANCE APPLICATIONS AND CASELOADS WILL LIKELY CONTINUE TO RISE.**

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### **Overview**

The age-adjusted prevalence of obesity -- which is defined as a body mass index (BMI) greater than or equal to thirty -- more than doubled from 15 percent during 1976-1980 to 30.4 percent during 1999-2002. Over roughly the same period, the number of beneficiaries receiving income from the Social Security Disability Insurance program (DI) doubled from 3.8 million in 1983 to 7.6 million in 2002. This study tests whether these trends are related; specifically, we test whether obesity raises the probabilities of employment disability and of movement onto the rolls of Social Security Disability Insurance (SSDI). The results are mixed but we find evidence that weight increases the probability of health-related work limitations and the probability of receiving disability-related income.

### **A Causal Connection?**

There exists suggestive, but not definitive, evidence on the relationship between obesity and disability. In several instances recently, the Social Security Administration (SSA) has revised its medical listing of obesity. In 1999, obesity was deleted from the medical listings. In 2000, a Social Security Ruling ensured that obesity would once again be included in the medical listings. In 2002, SSA policy was revised yet again with obesity considered a severe impairment that merits its own medical listing. The changing policies of the SSA reflect uncertainty within government about the effect of obesity on disability; this study documents and quantifies this effect. There are three possible explanations for the correlation between obesity and disability. First, obesity may in fact cause disability. This is plausible given the evidence

that obesity is a risk factor for many chronic diseases. Second, the reverse may be true -- disability may cause obesity. Disability is likely to result in a decline in physical activity, which, if not matched with a decline in calorie intake, will result in weight gain. Third, unobserved factors may cause both obesity and disability. One possible such unobserved factor is rate of time discount. People who do not value future outcomes are likely to invest less in their health, which may lead to both obesity and employment disability.

Cawley (2000) tested the first hypothesis, that obesity causes employment disability. Using the method of instrumental variables to exploit the genetic (i.e. exogenous) variation in weight between mothers and children, it found little evidence that obesity causes employment

disability among young women (aged 16-41) in the National Longitudinal Survey of Youth, 1979 Cohort (NLSY). This study builds on the previous analysis by expanding the scope of inquiry beyond young mothers to working-age adults of both genders and examines data from both the NLSY and the Panel Survey of Income Dynamics (PSID).

## Findings

- The results are mixed but there is some evidence that body weight in general, and obesity in particular, raises the probability of work limitations among men.
- For women in both samples there is a positive and significant correlation between weight and work limitations
- In the NLSY, the probability of receiving disability income is raised by 0.7 percentage points for a ten-pound gain in weight, and is raised by 6.92 percentage points by obesity for men.
- Among NLSY females, the magnitude of the impact of obesity on the probability of receiving disability income is equivalent to the effect of aging 31.5 years or losing 16.7 years of education.

## Conclusion

The finding that obesity causes disability will permit more accurate projections of future DI applications and caseloads. The prevalence of obesity is expected to continue to rise, suggesting that, all else equal, DI applications and caseloads will likely continue to rise.

An important implication of our results is that the causal impact of obesity on disability income receipt

is considerably stronger than one would conclude from the overall correlation between the two.

This analysis underscores the importance of conducting parallel analyses in complementary data sets. Even though the NLSY and PSID are both nationally representative and were both collected during the 1980s and 1990s, even though we estimated models with identical sets of regressors for the same age ranges, we occasionally find different results for the two samples. The fact that even nationally representative datasets collected over similar time periods can generate results that differ in important ways underscores the need to test hypotheses using multiple datasets in order to determine which results are truly robust.

Understanding the contribution of obesity to disability will also permit more accurate estimates of the total costs of obesity. Recent calculations of the cost of obesity do not correct for the endogeneity of weight, and as a result, underestimate the impact of obesity on disability and underestimate the total costs of obesity.

## About the Researchers

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## About the MRRC

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