

# Utah Health Status Update:

## Overweight/Obese

September 2007

Utah Department of Health

Obesity is a chronic disease that is caused by complex behavioral, environmental, and genetic factors. Obesity and overweight increase the risk for other diseases that are leading causes of preventable death in the U.S.<sup>1</sup> The percentage of persons who are overweight or obese has been increasing in Utah, as elsewhere. The issue is a difficult challenge for public health, medical practitioners, and individuals.

### Definition

The most common measurement method for obesity is the Body Mass Index (BMI). BMI is a comparison of weight to height (weight in kg divided by height in meters, squared). For adults, a BMI of 18.5 to 24.9 kg/m<sup>2</sup> is normal weight, a BMI of 25 to 29.9 kg/m<sup>2</sup> is overweight, a BMI greater than 30 kg/m<sup>2</sup> is obese, and a BMI greater than 40 kg/m<sup>2</sup> is extremely obese. For someone 5'8", a weight of 164 lbs. is considered overweight, and 197 is considered obese. BMI is the measurement used by public health agencies and others to track overweight and obesity trends in populations.

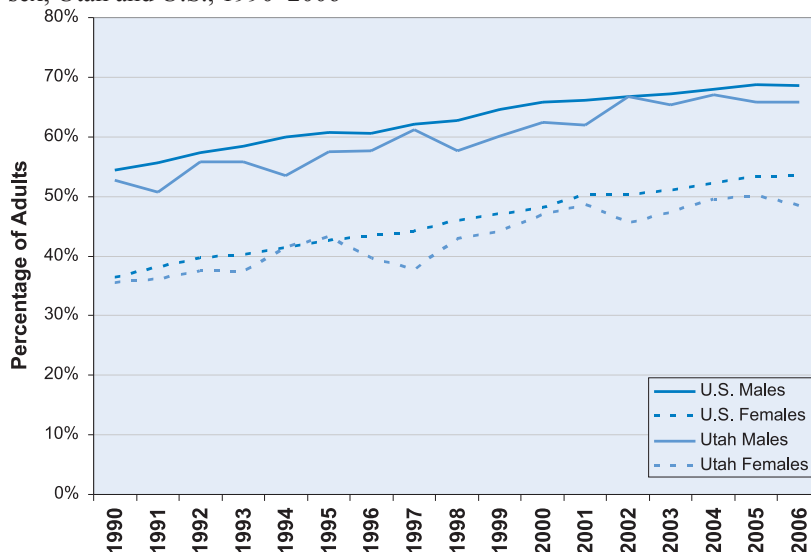
### Adult Prevalence

Since 1999 the percentage of overweight or obese males has been higher than the percentage of overweight adult females, and both sexes have continued to gain weight over time. In 1990, 54.5% of U.S. males and 52.8% of Utah males were overweight or obese. By 2006 the percentages had increased to 68.6% of U.S. males and 65.8% of Utah males, representing a 26% increase in a 16 year time period for U.S. males and a 25% increase for Utah males. A similar increase has been seen with females: U.S. 36.4% in 1990 and 53.5% in 2006; Utah 35.9% in 1990 and 48.4% in 2006, representing a 47% increase for U.S. females and a 37% increase for Utah females.

More Utah males are overweight or obese compared to Utah females across all age groups (Figure 2). Additionally, for both sexes, the percentage of overweight/obese adults increases as age increases until age 65.

### Overweight or Obese Adults Over Time

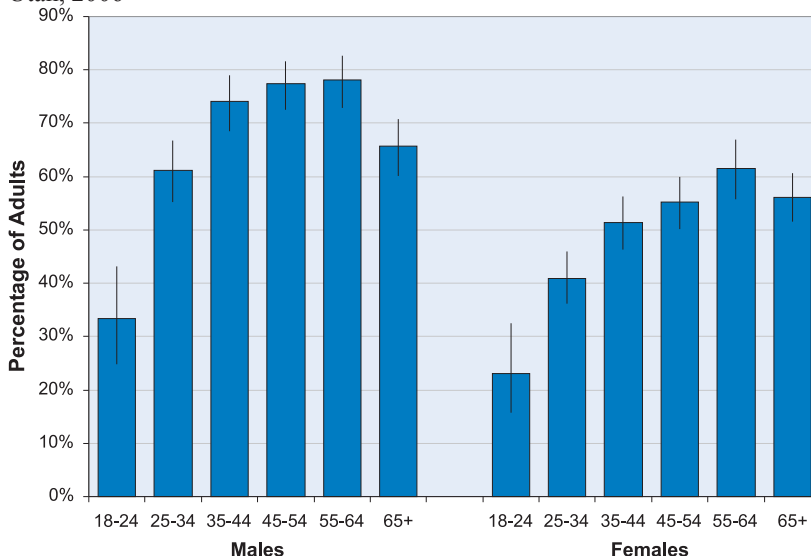
Figure 1. Percentage of adults who were overweight or obese by year and sex, Utah and U.S., 1990–2006



Source: Utah and U.S. BRFSS; age-adjusted to the 2000 standard population

### Overweight or Obese Adults by Age and Sex

Figure 2. Percentage of adults who were overweight or obese by age and sex, Utah, 2006



Source: Utah BRFSS

Figure 3 shows that over time, from 1999 to 2006, the percentage of obese Utah adults has increased while the percentage of overweight Utah adults remained about the same. In fact the percentage of obese males and females has tripled and almost doubled, respectively, during that time period. Within the same time period the percentage of

overweight males and females remained fairly stable.

### Child Prevalence

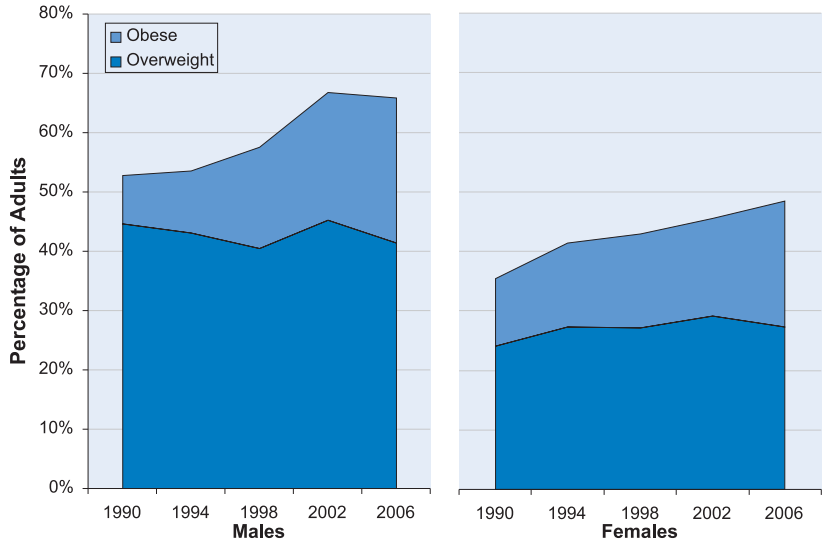
In 2006 the UDOH conducted a study of 1st, 3rd, and 5th graders in 69 randomly selected public schools. UDOH representatives and local partners physically weighed and measured 4,310 children at their schools. The results of that study are shown in Figure 4. The term “at risk for overweight” is used for children with a BMI between the 85th and 95th percentile (for their age and height) and the term “overweight” if their BMI exceeds the 95th percentile for their age and height. There were more overweight boys than girls across all grades, and the percentage of girls and boys that were at risk for overweight were comparable. The percentage of overweight and at risk for overweight was significantly higher for 5th grade boys compared to 1st grade.

### Summary

In summary, in both Utah and the U.S. the percentage of adults and children at an unhealthy weight has increased at an alarming rate, and the increase has been greatest in the obese adults and overweight children categories. This is important to note because higher levels of obesity have been associated with increased morbidity and mortality.<sup>2</sup> A 2005 national study showed that adult obesity was associated with 111,909 excess deaths.<sup>2</sup> The Utah Blueprint to Promote Healthy Weight for Children, Youth, and Adults outlines opportunities for state and local action.<sup>3</sup>

## Overweight and Obese Adults by Weight Category

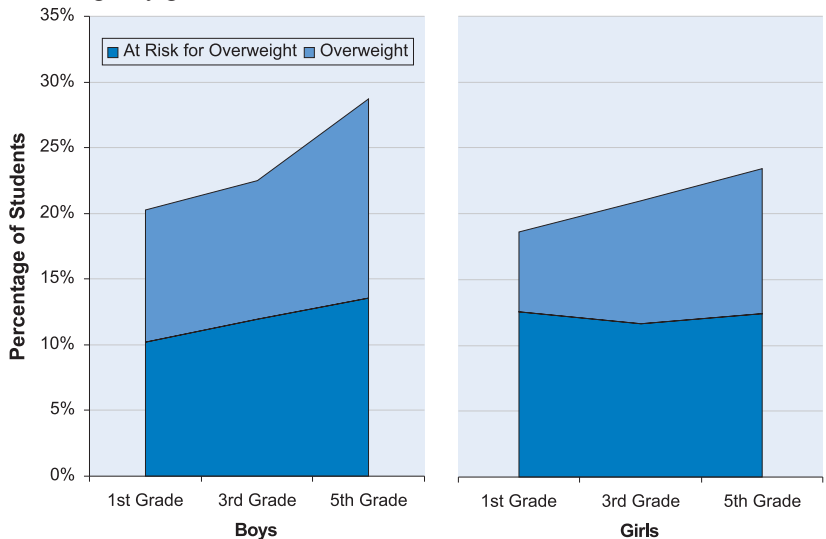
Figure 3. Percentage of adults who were overweight or obese by weight category and sex, Utah, 1990, 1994, 1998, 2002, and 2006



Source: Utah BRFSS; age-adjusted to the 2000 standard population

## At Risk and Overweight Children

Figure 4. Percentage of students who were overweight or at risk for overweight by grade and sex, Utah, 2006



Source: 2006 Height/Weight Study in Utah Elementary School Students

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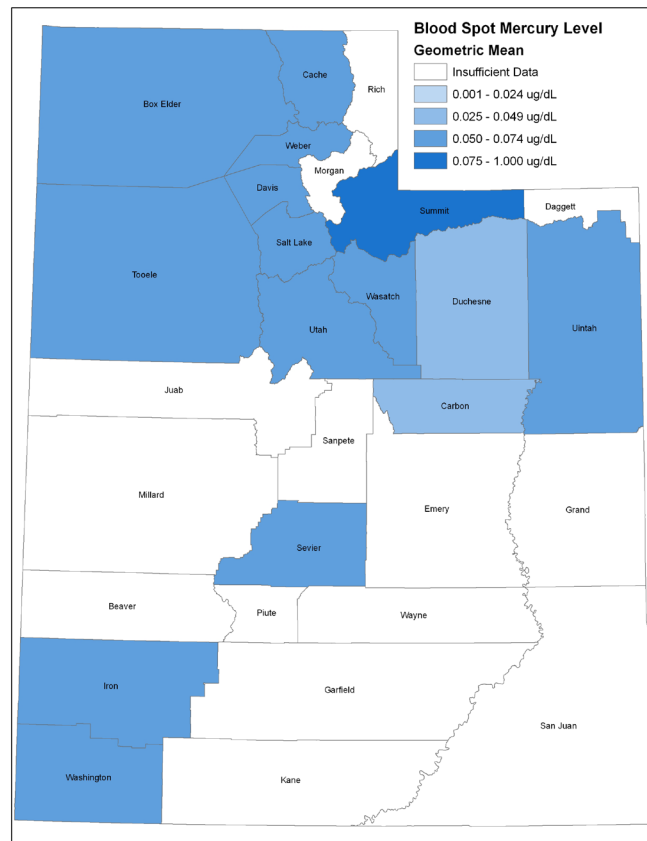
## Utah Health Status Update

For additional information about this topic, contact Richard Bullough, PhD, Program Manager, Utah Department of Health, Salt Lake City, UT, (801) 538-9291, [rbullough@utah.gov](mailto:rbullough@utah.gov), or visit <http://health.utah.gov/obesity>; or the Office of Public Health Assessment, Utah Department of Health, Box 142101, Salt Lake City, UT 84114-2101, (801) 538-6108, FAX (801) 538-9346, email: [phdata@utah.gov](mailto:phdata@utah.gov)

## Breaking News, August 2007

### Blood Lead and Mercury Surveillance Using Newborn Bloodspots

Blood spot samples for newborns are routinely submitted to the Utah Public Health Laboratory (UPHL) to be screened for health indicators. Recently the UPHL developed methodology to test blood spot samples for blood lead and blood mercury concentrations. In collaboration with the Environmental Epidemiology Program (EEP) the UPHL is developing child and maternal blood lead and blood mercury surveillance using this method. In a recent pilot of this method, the UPHL randomly selected 1,500 blood spot cards submitted to the lab during February 2007. The blood lead and mercury results for 816 of those samples were submitted to the EEP for analysis. After screening for problem samples, the EEP found the statewide geometric mean blood lead level for the sampled neonates was 0.4 ug/dL (range <0.1 to 76.1 ug/dL). Eleven samples had a level above 10 ug/dL (the public health action level). The statewide geometric mean blood mercury level for the sampled neonates was 0.06 ug/dL (range <0.01 to 1.52 ug/dL). The geometric mean blood mercury levels by county are provided in the accompanying map. Because neonatal blood lead and mercury levels correlate well with the mother's blood levels, this surveillance project has the potential of identifying locations of high risk female adults. The findings of this pilot demonstrate the utility of blood spot samples from newborn, along with other methods, to conduct lead and mercury surveillance among Utah residents.

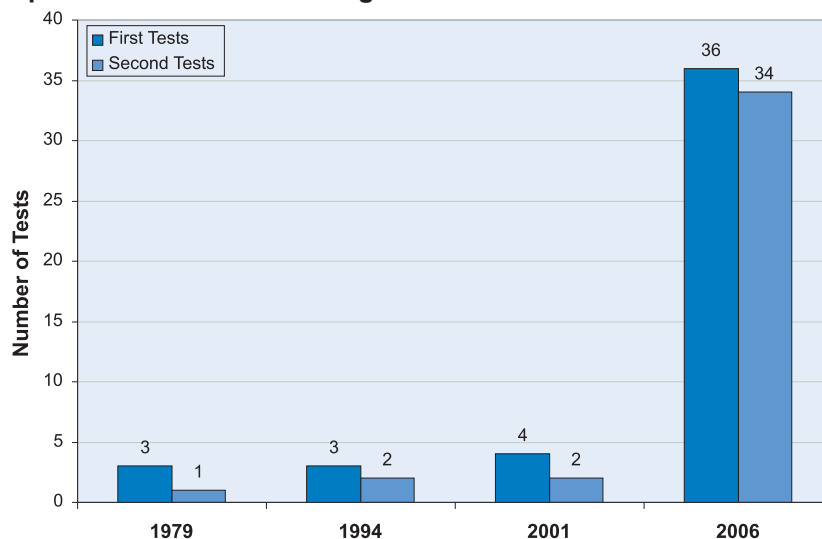


## Community Health Indicators Spotlight, August 2007

### Utah Newborn Screening Testing

The Utah Department of Health Newborn Screening Program (NSP) has expanded its screening requirements of all Utah newborns from 4 to 36 metabolic diseases beginning in 2006. The NSP has implemented significant system changes to ensure that all infants born in the state receive these expanded screening tests and appropriate follow-up care. The NSP began in 1979 with 3 first screening tests (Phenylketonuria, Galactosemia, Congenital Hypothyroidism) and 1 second confirmatory test (Phenylketonuria). In 1994, NSP added Congenital Hypothyroidism as a second confirmatory test. The NSP, in 2001, added Hemoglobinopathies in the screening requirements. The additional screening requirements in 2006 (Amino Acids—including Phenylketonuria, Organic Acids, Fatty Acids, Congenital Adrenal Hyperplasia, Biotinidase) gave the NSP the ability to now screen for a total of 36 first tests and 34 second tests. This screening will allow health care providers early diagnosis for treatment and prevention of severe consequences. The March of Dimes, with their 2007 Newborn Screening Report Card, recently gave Utah a near perfect score. Utah is now one of the thirty states that offer such elaborate extended screening. For more information on this topic, please contact NSP at 584-8255.

Expanded Newborn Screening Tests in Utah



# Monthly Health Indicators Report

(Data Through July 2007)

<b>Monthly Report of Notifiable Diseases, July 2007</b>	<b>Current Month # Cases</b>	<b>Current Month # Expected Cases (5-yr average)</b>	<b># Cases YTD</b>	<b># Expected YTD (5-yr average)</b>	<b>YTD Standard Morbidity Ratio (obs/exp)</b>
Campylobacteriosis (Campylobacter)	34	39	218	158	1.4
Enterotoxigenic Escherichia coli (E. coli)	20	16	57	41	1.4
Hepatitis A (infectious hepatitis)	1	2	3	19	0.2
Hepatitis B (serum hepatitis)	1	5	9	23	0.4
Measles (Rubeola, Hard Measles)	0	0	0	0	--
Meningococcal Diseases	1	1	8	4	1.9
Norovirus	1	4*	16	11*	1.4
Pertussis (Whooping Cough)	30	24	240	188	1.3
Salmonellosis (Salmonella)	41	28	173	150	1.2
Shigellosis (Shigella)	3	5	17	26	0.7
Varicella (Chickenpox)	9	7*	576	418*	1.4
Viral Meningitis	20	12	49	49	1.0
West Nile (Human cases/Equine cases)†	1 / 1	2 / 0	2 / 1	2 / 0	1.1 / 4.0

<b>Notifiable Diseases Reported Quarterly, 2nd Qtr 2007</b>	<b>Current Quarter # Cases</b>	<b>Current Quarter # Expected Cases (5-yr average)</b>	<b># Cases YTD</b>	<b># Expected YTD (5-yr average)</b>	<b>YTD Standard Morbidity Ratio (obs/exp)</b>
HIV	26	24	45	41	1.1
AIDS	8	11	20	22	0.9
Chlamydia	1,471	1,049	2,652	1,844	1.4
Gonorrhea	229	150	403	261	1.5
Tuberculosis	9	9	23	16	1.5

<b>Program Enrollment for the Month of June 2007**</b>	<b>Current Month</b>	<b>Previous Month</b>	<b>% Change<sup>s</sup> From Previous Month</b>	<b>1 Year Ago</b>	<b>% Change<sup>s</sup> From 1 Year Ago</b>
Medicaid	159,849	161,368	-0.9%	174,800	-8.6%
PCN (Primary Care Network)	17,795	18,066	-1.5%	16,043	+10.9%
CHIP (Children's Health Ins. Plan)	24,747	26,285	-5.9%	35,248	-29.8%

<b>Medicaid Expenditures (in Millions) for the Month of July 2007</b>	<b>Current Month</b>	<b>Expected/Budgeted for Month</b>	<b>Fiscal YTD</b>	<b>Budgeted Fiscal YTD</b>	<b>Variance - over (under) budget</b>
Capitated Mental Health	\$ 7.7	\$ 8.4	\$ 94.3	\$ 105.3	(\$ 10.9)
Inpatient Hospital	\$ 20.6	\$ 17.2	\$ 181.6	\$ 184.2	(\$ 2.6)
Outpatient Hospital	\$ 8.4	\$ 6.7	\$ 76.6	\$ 73.0	\$ 3.6
Long Term Care	\$ 14.5	\$ 14.5	\$ 182.4	\$ 180.1	\$ 2.3
Pharmacy	\$ 13.2	\$ 10.7	\$ 127.8	\$ 131.6	(\$ 3.7)
Physician/Osteo Services	\$ 5.2	\$ 5.9	\$ 60.0	\$ 163.9	(\$ 3.9)
<b>TOTAL HCF MEDICAID</b>	<b>\$ 122.0</b>	<b>\$ 123.3</b>	<b>\$ 1,406.7</b>	<b>\$ 1,441.2</b>	<b>(\$ 34.4)</b>

<b>Health Care System Measures</b>	<b>Number of Events</b>	<b>Rate per 100 Population</b>	<b>% Change<sup>s</sup> From Previous Year</b>	<b>Total Charges in Millions</b>	<b>% Change<sup>s</sup> From Previous Year</b>
Overall Hospitalizations (2006)	272,404	9.9%	-0.9%	\$ 3,874.8	+10.7%
Non-maternity Hospitalizations (2006)	161,398	5.7%	-2.5%	\$ 3,235.3	+11.0%
Emergency Department Encounters (2005)	664,523	25.0%	+3.5%	\$ 553.2	+21.2%
Outpatient Surgery (2005)	308,300	11.7%	-0.5%	\$ 947.7	+12.1%

<b>Annual Community Health Measures</b>	<b>Current Data Year</b>	<b>Population at Risk</b>	<b>Number Affected</b>	<b>Percent/Rate</b>	<b>% Change<sup>s</sup> From Previous Year</b>
Overweight and Obesity (Adults 18+)	2006	1,777,802	976,000	54.9%	+1.3%
Cigarette Smoking (Adults 18+)	2006	1,777,802	174,200	9.8%	-15.0%
Influenza Immunization (Adults 65+)	2006	217,313	156,700	72.1%	+3.4%
Health Insurance Coverage (Uninsured)	2006	2,582,371	306,500	11.9%	+2.5%
Motor Vehicle Crash Injury Deaths	2005	2,528,926	292	11.6 / 100,000	-4.5%
Suicide Deaths	2005	2,528,926	344	13.6 / 100,000	-11.1%
Diabetes Prevalence	2006	2,582,371	105,600	4.1%	-0.7%
Coronary Heart Disease Deaths	2005	2,528,926	1,567	62.0 / 100,000	-4.6%
All Cancer Deaths	2005	2,528,926	2,512	99.3 / 100,000	+0.4%
Births to Adolescents (Ages 15-17)	2005	58,374	917	15.7 / 1,000	+5.8%
Early Prenatal Care	2005	51,517	40,587	78.8%	+1.0%
Infant Mortality	2005	51,517	231	4.5 / 1,000	-13.3%
Childhood Immunization (4:3:1:3:3)	2005	50,043	37,100	74.1%	+3.9%

\* Due to limited historical data, the average is based upon 3 years of data for norovirus, varicella, and 4 years of data for West Nile virus infections.

† West Nile virus surveillance has begun for the 2007 season.

\*\* July data were not yet available at the production time of this report.

§ % Change could be due to random variation.

Note: Active surveillance has ended for influenza until the 2007 season.