Obesity Epidemic

In the United States, as of the year 2005, the Center of Disease & Control (CDC) and the National Heart, Lung & Blood Institute (NHLBI) report that 65% of adults are overweight, 23% being obese. They also report that there are over 9 million children considered overweight and 16% obese. Obesity is defined by a person’s body mass index (BMI), calculated by the following formula, (weight in kg divided by height in meters squared) this determines a range of amount of body fat. For example, an adult whose BMI is <18.5 is underweight, 18.5-24.9 is considered a healthy weight range, 25-29.9 is overweight and >30 is obese. BMI alone is not an indicator for intervention. It is advised to look at a person’s overall health and underlying factors in order to assess their health status.

If a person is obese and has at least two underlying medical factors then intervention is warranted. Some underlying medical factors that are associated with overweight and obesity are, but not limited to, hypertension, diabetes, high cholesterol, coronary heart disease, stroke, gall bladder disease, infertility, osteoarthritis, psychological disorders (depression, self esteem), stress, some cancers (breast cancer, colon, and endometrial), sleep apnea and respiratory problems.

Co-morbidities increase as BMI increases, creating a linear relationship. Obesity is a risk factor for the previously mentioned medical conditions but not all individuals with such diseases (i.e. hypertension) are obese.

There are numerous factors that contribute to being obese. Factors that add to the epidemic of obesity are lack of physical activity, behaviors/attitudes/perceptions towards nutritional intake (excess caloric intake), body

Congenital Cardiovascular Malformations

Congenital Cardiovascular malformations (CCVMs) are the most common forms of congenital defects contributing to morbidity and mortality in neonates. The prevalence of infants diagnosed with CCVM ranges from 5-8 per 1,000 live-born infants a year. The severity of cases varies from causing little functional consequences at birth (e.g. bicuspid aortic valve) to severe cyanosis (e.g. transposition of the great arteries). There have been extensive studies into many aspects of the etiology and epidemiology of CCVMs. The purpose of such investigations has been to determine how to prevent and treat these conditions that highly utilize forms of acute and chronic care in the health care system. However, the topic of racial and geographic distribution of CCVMs has not been thoroughly examined by studies in the past. It is important to understand racial and geographic differences in CCVM prevalence in order to specifically target groups at higher risk. Detecting trends in populations with higher prevalence may provide information regarding associations with CCVM, as well as introduce the kinds of interventions possible to reduce the adverse effects of these conditions.

This study was to determine the prevalence of Congenital Cardiovascular Malformations by race and ethnicity in the NY Hudson Valley Region from 1992-2001. There were 3,075 CCVMs in 2,303 children from a birth population of 297,606. For all CCVMs, 14.4 malformations/1000 live births in Non-Hispanic Whites (NHW)12.8/1000 in Non-Hispanic Blacks (NHB), 8.8/1000 in Hispanics and 8.4/1000 in Others. The risk of all CCVMs was lower in NHB [RR=0.89, 95%CI 0.80-0.99], Hispanics [RR=0.61, 95%CI 0.54-0.68], and Others [RR=0.58, 95%CI 0.50-0.69] compared to NHW. The risk of tetralogy of fallot (TOF) in Hispanics [RR=0.31, 95%CI 0.14-0.67] was significantly lower than NHW, but not in NHB and Others. The risk of great vessel anomalies relative to NHW was lower in NHB [RR=0.48, 95%CI 0.24-0.95] and Hispanics [RR=0.33, 95%CI 0.16-0.67] but not in Others. The risk of VSD compared to NHW was lower in NHB [RR=0.60, 95%CI 0.48-0.75], Hispanics [RR=0.63, 95%CI 0.52-0.77], and Others [RR=0.65, 95%CI 0.49-0.86]. In conclusion, in the Hudson Valley Region all CCVMs and specific anomalies such as TOF have the highest prevalence in Whites with Hispanics consistently maintaining a lower risk.
image, adverse health risks, as well as a person’s genetics and metabolism. Cultural influences on nutritional/caloric intake may exceed the standards of the Institute of Medicine (IOM) recommendations therefore creating overweight or obesity in communities which may not view or understand the relationship between cultural foods and obesity.

Socioeconomic status (SES) is another factor which may affect a person’s weight. In a low SES a person may only have enough monies for cheap, highly processed, fast foods or is only able purchase cheaper non-healthy food at local stores. In higher SES levels, individuals may overindulge in caloric intake. A person’s behavior or cultural perceptions (of self-image) may equate affluence with abundantly eating (food intake may be healthy or not). Parenting styles may affect childhood obesity. For example, all previously mentioned factors can be associated with childhood obesity including parent use of foods in excess or non-healthy foods as a reward for a good act, comforting tool or as snacks. The rapid increase of obesity in the United States over the past twenty years has increased the economic and medical-insurance costs associated with weight (obese and overweight) related conditions. This makes it extremely difficult for people to make healthy life choices.

Dramatic trends may be due to an increase in economic strengths correlated with long term trends of larger body sizes in affluent and well nourished communities in the United States (Flegal, et al., 2002). This is compared to other countries that also have increasing rates of obesity parallel to increasing affluent communities. Flegal et al. also suggest there is missing data about factors associated with obesity which include but are not limited to fear of crime in communities leading to decrease in physical activity outside of home, decrease of tobacco use, increase use of computers at work and increases in technology resulting in a sedentary lifestyle.

Increasing BMI trends have been documented in children and adolescents without co-medical factors mostly in Hispanic and Non-Hispanic Blacks. The NHANES 1999-2002 concluded that Non-Hispanic Black (21%) and Mexican-American adolescents (23%) ages 12-19 were more likely to be overweight than Non-Hispanic white adolescents (14%). Mexican-American children ages 6-11 were more likely to be overweight (22%) than Non-Hispanic black children (20%) and non-Hispanic white children (14%). In addition to the 16 percent of children and teens ages 6 to 19 who were overweight in 1999-2002, another 15 percent were identified at risk of becoming overweight by a criterion of a BMI-for-age between the 85th and 95th percentiles.

In examining such alarming statistics on obesity, disparities among gender and race/ethnicity have been shown to be associated with this epidemic. Women, especially women of color, have higher rates of being overweight and/or obesity. According to the National Health and Nutrition Examination Survey, this epidemic is common among Hispanic and African American women as compared to White women. Among African American women, 78.0% are overweight and 50.8% are obese, Mexican American women are 71.8% overweight and 40.1% obese and White Non Hispanic women are 57.5% overweight and 30.6% obese. This demonstrates disproportional rates of obesity among women of color as compared to their white counterparts.

One study (Winkleby, et al. 1996) examined the influences of gender and SES factors on Hispanic and White Non-Hispanic differences in BMI using population based surveys. This study determined the contribution of education, income and language spoken (used as a measure of acculturation) to ethnic differences in obesity. The results were that Hispanic men and women had a higher BMI than White Non Hispanics, even within each education level. The least educated Hispanics were associated with higher BMI’s. Hispanic men and women desired higher BMI levels than White Non Hispanic men and women. Hispanic women with less than 12 years of education were more likely to remain in a higher BMI rank if they would have reached their desired weight. Differences in gender indicated that more women would remain in a higher BMI rank if reached desired weight. Primary language spoken at home was found to not have a significant relationship to obesity in Hispanics. This may be due to a less sensitive acculturation measure used, such as, the primary language spoken in the home. A possible explanation is that both education and language spoken at home may have a stronger relationship between education and obesity. Although this study found that language did not have a significant relationship to obesity other studies with stronger acculturation analysis (set of 31 questions) have found that acculturation has a strong relationship with obesity trends in Mexican Americans.

A life course perspective was used in a prospective study (James, et al. 2006) examining the SES position and obesity in African American women in Pitt County, North Carolina. Intergenerational social mobility dynamics are shown to have an impact on obesity. Through follow-up interviews of 1112 women of 25 to 50 years of age, the results showed that women who were disadvantaged in childhood and adulthood had twice the odds of being obese. This study defined disadvantaged by a score from an index of childhood and adulthood SES position based on four variables: education, occupation, employment status, and homeownership. Women who were disadvantaged in childhood but not in adulthood were 55% as likely to become obese than women who were not disadvantaged in childhood and adulthood. Women who were advantaged in childhood but disadvantaged in adulthood were less likely to be obese (odds of obesity at 14%). Several reasons for greater odds of childhood obesity through lower SES could be a strong relationship with parental education and adult obesity, adverse intrauterine conditions or adverse postnatal physiological disturbances both possibly affected by maternal SES can predispose fetus/child to an array of health difficulties later in life, i.e. obesity. In addition, individuals with lower SES in childhood were more likely to engage in detrimental health related behaviors, i.e. poor nutrition and low levels of physical activity in childhood and adulthood.

In the next edition of the Perinatal Gazette we will continue our discussion on the obesity epidemic with a discussion of maternal weight influence on pregnancy, delivery, and post pregnancy outcomes.

Bonnie Reyna  reynab@wcme.com
New York Medical College School of Public Health
**NEW YORK STATEWIDE BREASTFEEDING COALITION**

**Kick Off Meeting - Sharing the Vision**
Featuring Dr. Ruth Lawrence
“Our Past, Our Future, Our Vision”

Introducing NY State’s first breastfeeding legislation in 12 years – The Breastfeeding Bill of Rights – S 8511
Meet with your Legislators

January 30, 2007, Tuesday - 9:00 am – 12:30 pm
Hearing Room A, Legislative Office Bldg., Albany, NY

You are invited to participate in the development of a New York Statewide Breastfeeding Coalition. The purpose of the coalition is to bring local representatives together to carry out the following mission:

- Be an articulate voice for families, mothers and babies
- Serve as a clearing house for the exchange of information and ideas
- Advocate for public policy to make the breastfeeding experience a positive one

Our vision is to eliminate all barriers to successful breastfeeding, and NYS will be the best place in the nation for breastfeeding mothers and babies.

A steering committee was formed and has been meeting since March 2005. We participated in the United States Breastfeeding Committee National conference of State Breastfeeding Coalitions in January 2006 in Washington DC. And we came back from this event more committed than ever to get the NYS Breastfeeding Coalition up and running.

We are asking you to participate in this coalition because of your involvement and interest in the health of mothers and their children in your community. We believe your participation and leadership will be critical to the success of this Coalition.

If interested please contact the NY Statewide Breastfeeding Coalition Steering Committee by January 14, 2007 at 518-453-0227 or nysbc@nycap.rr.com

---

**SAVE THE DATES**

April 17 & 18, 2007

“The Impact of Birth Practices on Breastfeeding”

Speakers: Michel Odent, MD
Linda Smith, BSE, FACCE, IBCLC

Holiday Inn - Fishkill, New York
Sponsored by the Mid-Hudson Lactation Consortium and the Westchester/Putnam/Rockland Lactation Consortium

For more information and to request a brochure: Stephanie@misn.us

---

**JANUARY 2007 - NATIONAL BIRTH DEFECT PREVENTION MONTH**

January 8-14: National Folic Acid Awareness Week

If women of child-bearing age took adequate amounts of folic acid before conception and during pregnancy, up to 70 percent of neural tube defects could be prevented. Folic acid has been proven to help a baby’s brain and spinal cord development, but only if taken before and during the first few weeks of pregnancy. This is why it is strongly recommended that women of childbearing age consume foods rich in folic acid every day, including leafy greens, lentils, fortified cereals and enriched white bread.

Consuming adequate amounts of folic acid is critical for an infant’s development. Since 1998 when the US mandated folic acid fortification of enriched grains, neural tube defects have declined by 34 percent.

The March of Dimes, with support from the Grain Foods Foundation, is committed to raising awareness for the important role that B vitamins and folic acid, in particular, play in preventing birth defects, premature birth, and infant mortality. We carry out this mission through research, community services, education and advocacy to save babies’ lives.

For more information, please visit www.marchofdimes.com.

---

**JOB OPPORTUNITY**

**Regional Perinatal Center (RPC)**

- **Maternal Fetal Medicine (MFM) Outreach Coordinator:** (20 hrs./week)
  - A Registered Nurse or similarly skilled individual who is responsible to help improve communication between Regional Perinatal Center (RPC) and affiliate obstetrical services through on-site visits, phone & e-mail communications.
  - Will act as an educational resource person assessing affiliate educational needs and assisting affiliates with developing and implementing a plan to meet these needs. (e.g. providing & coordinating educational in-services)
  - Works collaboratively with the RPC Neonatal Intensive Care (NICU) personnel in reviewing quality issues related to neonatal transports; maternal mortality and assessing affiliate and RPC quality improvement activities related to issues of high risk pregnancies/maternal transports.
  - Collection/analysis of regional maternal statistical data.
  - Participation in RPC quarterly Quality Assurance (QA) quadrant meetings and the Regional Perinatal Forum. (RPF)

To Apply: Please E-mail resume/cover letter to heather_brumberg@nymc.edu, or marchwinskisa@wcmc.com

---

**Perinatal Gazette** 3
State Perinatal Database Team & Perinatal Gazette Editorial Board

Susan Marchwinski, R.N., C., M.S., SPDS Coordinator
(914) 493-8590 (marchwinskisa@wcmc.com)

Donna Dozor, R.N., M.S. Neonatal Data Collection
(914) 493-8309 (dozord@wcmc.com)

Clare Nugent, RN Neonatal Data Collection
(914) 493-8346 (nugentc@wcmc.com)

Edmund LaGamma, M.D., Director Newborn Medicine
(914) 493-8558 (edmund_lagamma@nymc.edu)

Chaur-Dong (C.D.) Hsu, M.D., M.P.H. Director OB/GYN
(914) 593-8987 (chaur-dong_hsu@nymc.edu)

Heather Brumberg, M.D. M.P.H., Director Neonatal Public Health Programs
(914) 493-8491 (heather_brumberg@nymc.edu)

We are interested in providing you with a newsletter that is relevant and of interest to you. Please contact us with perinatal topics you would like to see addressed.

For a copy of our newsletter or to be placed on our mailing list contact us by phone or e-mail.

Please see below the NYMC neonatal web site address to locate other issues of The Perinatal Gazette:

http://www.nymc.edu/neonatology

Maria Fareri Children’s Hospital
At Westchester Medical Center
1 Woods Road
Valhalla, New York 10595