



# Diabetes Coverage in Mass-Circulating Women's Magazines, 1995–2001

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## ABSTRACT

*This review evaluates the accuracy of diabetes mellitus coverage in selected mass-circulating women's magazines from 1995 through 2001. The ProQuest database was searched to obtain all citations from five women's magazines (Better Homes and Gardens, Good Housekeeping, Ladies' Home Journal, Family Circle, and Woman's Day) and three magazines with a large African-American audience (Ebony, Essence, and Jet). A content analysis abstraction form was developed to collect information from the articles in the following areas: sources of information used, description of insulin/diabetes, incidence/prevalence statistics, risk factors, symptoms, prevention measures, and long-term complications. Forty-nine articles were identified in all magazines combined over the 7-year time period. Overall, current diabetes prevalence rates, risk factors, symptoms, preventive measures, and long-term complications were not discussed in great detail. The findings suggest that coverage of diabetes in women's magazine articles does not reflect the true public health significance of this disease.*

Diabetes mellitus constitutes an epidemic among adults in the United States and is becoming more problematic as a result of an aging population and increases in the proportion of individuals who are obese and sedentary (Resnick & Howard, 2002). In 1996 the total cost for treatment of diabetes was \$10.1 billion, whereas the estimated work-loss costs for persons with diabetes was \$3.5 billion (Druss, Marcus, Olfson, Tanielian, Elinson, & Pincus, 2001). Further, diabetes is an independent risk factor for cardiovascular disease (Resnick & Howard, 2002), the leading cause of mortality in the United States (Minino & Smith, 2001).

Women's magazines regularly feature health columns that provide medical information on emerging issues. To date, the only research regarding health issues in women's magazines has focused on cancer (Marino & Gerlach, 1999; Gerlach, Marino, &

Hoffman-Goetz, 1997) and osteoporosis (Wallace & Ballard, 2003). The purpose of this study was to evaluate the accuracy of diabetes mellitus coverage in selected mass-circulating women's magazines from 1995 through 2001.

## METHODS

### Design

The 2001 *American Journalism Review* (2002) list of leading magazines (by subscription/circulation rate) was used to select magazines in this review. The researcher was interested in general women's magazines with regularly featured health columns. Women's magazines listed in the top 10 based on circulation rate were considered for review in this study, with the following 5 magazines selected: *Better Homes and Gardens* (number 6 circulation rate), *Good Housekeeping* (number 7 circulation rate), *Ladies' Home Journal* (number 8 cir-

ulation rate), *Family Circle* (number 9 circulation rate), *Woman's Day* (number 10 circulation rate).

Because diabetes strikes African-American women at a higher rate than any other group (Black, 2002), magazines with a wide African-American audience were also included. The following three magazines were selected: *Ebony* (number 36 circulation rate), *Essence* (number 85 circulation rate), and *Jet* (number 87 circulation rate).

### Data Extraction

The ProQuest database was searched to obtain all citations from these magazines

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(n=8), published between 1995 and 2001. First, an "advanced" search from the menu was selected. Next, Boolean searches were performed with the field names: title, subject (sub), and source. Two specific search strategies were used for each magazine: title(diabetes) AND source(magazine title) and sub(diabetes) AND source(magazine title). The majority of articles were available in full-text; however, only abstracts were available for citations found for articles published in *Woman's Day* and *Family Circle*. When just abstracts were available, the researcher obtained the full article from a public library.

**Data Analysis**

A content analysis abstraction form was developed to collect information from the articles in the following areas: sources of information used; description of insulin/diabetes; incidence/prevalence statistics; risk factors; symptoms; prevention measures; and long-term complications (American Diabetes Association, 2002).

*Sources of information.* Sources were reviewed to evaluate credibility of information presented in each article. Specifically, this included research institutions (e.g., universities, medical centers) where studies were conducted, government sources (e.g., Centers for Disease Control and Prevention, National Institutes of Health), professional associations (e.g., American Diabetes Association), or reference to referred journals (e.g., *Journal of the American Medical Association*).

*Incidence/prevalence statistics.* Articles were reviewed for coverage of current epidemiological diabetes statistics, including total number of individuals affected by diabetes; incidence rates by gender, age, and race/ethnicity; increasing prevalence of diabetes; percentage of individuals who are unaware of having diabetes; and morbidity rates attributable to diabetes.

*Description of insulin/diabetes.* Sources were reviewed to evaluate definitions of insulin and diabetes (i.e., type I and type II) provided.

*Risk factors.* Evaluation of nonmodifiable and modifiable risk factors for diabetes was

examined. Nonmodifiable risk factors included genetic predisposition; minority race/ethnicity (e.g., African-American, Latino); android fat distribution pattern ("apple-shape" figure); prior gestational diabetes; given birth to a ≥9 lb. baby; elevated lipids (e.g., serum cholesterol, triglycerides); elevated blood pressure; advanced age; polycystic ovarian disease; and low socioeconomic status. Modifiable risk factors included sedentary lifestyle, overweight and/or obesity, emotional stress, poor diet (e.g., excess food, high-fat/low-carbohydrate), and cigarette smoking.

*Symptoms.* Evaluation of symptoms for diabetes included extreme thirst and hunger; frequent urination; fatigue; unintentional weight-loss; blurred vision; numbness/tingling in extremities; slow healing cuts; itchy skin; frequent infections; nausea; vomiting; and irritability.

*Prevention measures.* Primary prevention measures (type II) included adoption and/or maintenance of a physically active lifestyle and low-fat diet. Screening recommendations (e.g., every 3 years beginning at age 45), smoking cessation, and weight loss were examples of secondary measures. Medications to control blood glucose were considered tertiary prevention measures.

*Long-term complications.* Articles were reviewed for coverage of long-term consequences of diabetes including blindness; kidney damage; heart disease; stroke; nerve damage (amputations); elevated blood pressure; poor pregnancy outcomes; impotence; and financial burden.

Data were entered into a spreadsheet using the Statistical Program for the Social Sciences (SPSS+) for Windows™ Version 10.0. Cross-tabulations, frequencies, and percentages were computed for each category.

**RESULTS**

Fifty-three (n=53) articles related to diabetes mellitus were obtained from the eight magazines reviewed with publication dates between 1995 and 2001. Articles were excluded if they emphasized another topic with only a brief mention of diabetes (n=2), listed a specific drug for recall (n=1), or

were a recruitment advertisement for a research study (n=1). Forty-nine articles were used in this review and the publication distribution by year was as follows: 3 articles in 1995; 5 articles in 1996; 8 articles in 1997; 7 articles in 1998; 10 articles in 1999; 4 in 2000; and 12 in 2001. Fifteen (30.6%) of the articles were published in *Jet*, and the other 34 were published in the other seven magazines (*Ebony*, n=9; *Essence*, n=9; *Better Homes & Gardens*, n=5; *Good Housekeeping*, n=5; *Woman's Day*, n=5; *Family Circle*, n=1; *Ladies' Home Journal*, n=0). Twenty-one (42.8%) provided factual information, 13 were anecdotal, and the remaining 15 were a combination of factual and anecdotal. Examples of article titles are presented in Table 1.

The majority of articles (n=34, 69.4%) listed expert sources. Total prevalence rates were presented in 13 (24.5%) articles, whereas the percentage of Americans affected by diabetes was highlighted in 4 (7.5%) articles. Prevalence rates by race/ethnicity and age were discussed in 12 (22.6%) and 4 (7.5%) articles, respectively. Discussion of how incidence rates have drastically increased over the past decades was highlighted in 14 (26.4%) articles. Sixteen articles discussed the proportion (≈1/3) of individuals who are unaware that they have diabetes. The overall mortality rate attributable to diabetes was discussed in 12 (22.6%) articles.

The role of insulin and its relationship to diabetes was mentioned in 19 (38.8%) articles. Fifteen (30.6%) articles provided a definition of type I diabetes, and 18 (36.7%) articles described the characteristics of type II diabetes. Risk factors were presented

Table 1. Examples of Select Article Titles
"Diabetes: Are You Its Type?"
"The Real Face of Diabetes"
"The Silent Epidemic"
"Beating Diabetes"
"Taming Diabetes: The Silent Killer That Prefers Blacks"
"Diabetes: Making Progress"



**Table 2. Risk Factors Associated with the Development of Diabetes Mellitus Presented in Magazine Articles**

Risk Factor	Number of Articles	Percentage
<b>Nonmodifiable</b>		
Genetic predisposition	20	76.9
Minority race/ethnicity	19	73.1
Advanced age	7	26.9
Android fat distribution pattern	4	15.4
Prior gestational diabetes	3	11.5
Elevated serum cholesterol	4	15.4
Elevated triglycerides	3	11.5
Elevated blood pressure	3	11.5
Polycystic ovarian disease	3	11.5
Low socioeconomic status	3	11.5
<b>Modifiable</b>		
Overweight and/or obesity	25	96.2
Sedentary lifestyle	17	65.4
Poor diet	5	19.2
Emotional stress	1	3.8
Cigarette smoking	1	3.8

Note: N=26

diabetes statistics and symptoms for diabetes were discussed in  $\approx$  one-third of articles. Because symptoms were not discussed in detail, this may contribute to some confusion and underestimation of the prevalence and long-term impact of diabetes. Risk factors for diabetes were discussed in  $\approx$ 50% of articles. This finding is alarming given the likelihood of developing diabetes is highly related to personal behaviors, such as diet and physical inactivity. Less than half of the articles discussed long-term consequences associated with diabetes. Both short- and long-term complications related to uncontrolled or poorly managed diabetes need to be discussed to increase awareness of the severity of this debilitating disease.

Although this study provided an analysis of diabetes in eight mass-circulating women's magazines, it has potential limitations. First, only women's magazines were surveyed for diabetes coverage. Women's magazines provide only one channel for dissemination of diabetes information to women. Second, women were exposed to other magazines, newspapers, broadcast media, the Internet, and health professionals during this time frame (1995–2001) and may have obtained diabetes information from these sources. Nonetheless, it was the focus of this study to analyze how specifically diabetes information was presented in mass-circulating women's magazines.

The findings suggest that coverage of diabetes in women's magazine articles does not reflect the true public health significance of this disease. It is important that future coverage be more balanced and provide greater detail when reporting prevalence statistics, symptoms, risks and preventive measures. Recognizing that diabetes mellitus was the sixth leading cause of death in 2000 overall in the United States (Minino & Smith, 2000), more coverage in women's magazines should be encouraged to increase perceived susceptibility and severity of diabetes among adult women. If women are provided with pertinent diabetes educational information across the lifespan, they may be more likely to partake in regular diabetes screening throughout

in 26 (53.1%) articles (Table 2). Genetic predisposition, minority race/ethnicity, and advanced age were the most commonly cited nonmodifiable risk factors. The most frequently mentioned modifiable risk factors were overweight and/or obesity, and sedentary lifestyle.

Symptoms were presented in 15 (30.6%) articles. The following symptoms were highlighted: extreme thirst ( $n=14$ ) and hunger ( $n=11$ ), frequent urination ( $n=12$ ), fatigue ( $n=10$ ), unintentional weight-loss ( $n=11$ ), blurred vision ( $n=10$ ), numbness/tingling in extremities ( $n=11$ ), slow healing cuts ( $n=8$ ), itchy skin ( $n=3$ ), frequent infections ( $n=7$ ), nausea ( $n=5$ ), vomiting ( $n=6$ ), and irritability ( $n=6$ ).

Prevention measures were discussed in 25 (51.0%) articles. Both low-fat diet and regular physical activity were highlighted in 22 articles. Of the secondary prevention measures presented, weight loss and regular blood glucose screening were mentioned in 15 articles. Medications (i.e., tertiary measures) were discussed in 15 articles. Long-term complications were mentioned

in 21 (42.9%) with blindness ( $n=20$ ), kidney failure ( $n=19$ ), amputations ( $n=15$ ), heart disease ( $n=14$ ), and stroke ( $n=12$ ) discussed the most frequently (Table 3).

## DISCUSSION

This study analyzed the volume of diabetes mellitus coverage in eight mass-circulating magazines from January 1, 1995, to December 31, 2001. More than one-third ( $n=33$ , 67.3%) of the 49 articles were published in the three magazines targeting African-American readers (*Jet*, *Ebony*, and *Essence*). A combined 10 articles were published in the two most popular women's magazines (*Better Homes & Gardens* and *Good Housekeeping*) over the 7-year time period. Overall, a very small amount of diabetes information was available relative to the number of studies published in the scientific literature during 1995–2001. For instance, a search of the MEDLINE (National Library of Medicine, 2002) database using the descriptors "diabetes mellitus," and "human" identified 42,345 articles.

Coverage of current epidemiological



**Table 3. Long-Term Complications Associated Diabetes Mellitus Presented in Magazine Articles**

Long-term Complication	Number of Articles	Percentage
Blindness	20	95.2
Kidney failure	19	90.5
Amputations	15	71.4
Heart disease	14	66.7
Stroke	12	57.1
Nervous system damage	4	19.0
Elevated blood pressure	2	9.5
Pregnancy complications	1	4.8
Impotence	1	4.8
Financial burden	1	4.8

Note: N=21

adulthood, recognize the warning signs (i.e., symptoms) earlier, and adopt and/or maintain a healthy lifestyle (e.g., sound dietary practices, regular physical activity, weight management).

Health educators should be aware that access to diabetes information is available via various outlets; however, the quality of-ten is not entirely balanced or representative. Health educators should consider

working with the popular press (media) to provide accurate and well-rounded diabetes information to the public.

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The image shows a document titled "HEALTH STUDIES POSITION STATEMENT" from the "UNIVERSITY OF DELAWARE". The text is heavily blurred, but the title and university name are clearly visible. The document appears to be a formal statement or report related to health studies.