



A Woman's HEART

Heart disease is the
NO. 1 KILLER
of women

Education, research, and marketing are needed to help women understand and treat cardiovascular disease.

W

omen are six times more likely to die from heart attacks than breast cancer. Cardiovascular diseases (CVD), particularly coronary heart disease (CHD) and stroke, remain the leading causes of death of women in America and most developed countries, with almost 39% of all female deaths in the United States occurring from CVD.

Yet fewer than one in 10 women today thinks that heart disease is her biggest health threat. Bridging this educational gap is paramount to extending the lives of American women.

"Using global advertising and PR strategies with clear messaging and consistent statistics, much as we've seen in the successful breast cancer model, are fundamental to strengthening awareness of this issue," says Bob Preston, publisher of *Great Health* magazine. "Such initiatives must make women understand that the risk of heart attack among men and women at age 70 is equivalent. They also need to clarify for women that this risk is not entirely modifiable through lifestyle; that is, while eating right and exercising regularly are important for overall health, they don't necessarily protect women against heart disease. Educational efforts should also focus on how other conditions, such as blood pressure, cholesterol, diabetes, etc., affect the heart. And since genetics play a leading role in this condition, women need to understand that, regardless of lifestyle, other treatments, including medication, may be required."

According to Kalia Doner, editor-in-chief of *Remedy* and *Diabetes Focus* magazines at MediZine, women need all of the healthcare information they can get to make wise decisions.

"At the same time, the informational content should be of the highest standard for all patients, not just women, as well as the doctors and pharmacists with whom they will be consulting," Ms. Doner says. "Our goal is to engage, educate, and influence patients so they will see themselves at the center of a health management team."

Pharmaceutical companies can play a role in helping women know their risks. For example, last year, Sanofi-Aventis supported the American Heart Association's Go Red campaign, whose goal is to reduce coronary heart disease and stroke in women by 25% by 2010. In February 2007,



Focusing on educating women who are heads of households hits the family's health manager, influencing 80% of the household decision. Women of middle age have tremendous influence on their aging mothers, especially with compliance of medications.

BOB PRESTON *Great Health*

as well as in previous years, the company supported the Spirit of Women Coalition for its annual special event called "Day of Dance for Cardiovascular Health" where 50 hospitals across the United States raised awareness among women about heart disease and stroke.

The Go Red campaign includes National Wear Red Day — Feb. 1 — when Americans wear red to show their support for women's heart disease awareness. The Heart Truth — a national awareness campaign for women about heart disease developed by the National Institutes of Health — uses the Red Dress as the national symbol for women and heart disease awareness.

"Pharmaceutical companies can play a significant role in improving the understanding for women and their risk of cardiovascular mortality," says Larry Dillaha, M.D., executive VP and chief medical officer of Sciele Pharma.

Cardiovascular disease is an all-encompassing term for several facets that increase morbidity and eventually mortality if left untreated. It includes both disorders of the heart and blood vessels, such as coronary heart disease, cerebrovascular disease, peripheral arterial disease, rheumatic heart disease, congenital heart disease, and deep vein thrombosis and pulmonary embolism. An unhealthy diet and

physical inactivity result in several intermediate risk factors for cardiovascular disease, including hypertension, dyslipidemia, hyperglycemia, and obesity.

Unfortunately for women, cardiovascular disease has long been considered predominately a male disease. So, historically, less attention has been focused on women and symptoms of the disease specific to them.

"One of the most important challenges pharma companies have in planning their campaigns is breaking through the perception that cardiovascular disease is primarily a male issue," Mr. Preston says. "Because they are protected early in their lives, women continue to have a sense of their own invulnerability to heart disease even after menopause. Surveys indicate that heart disease education among women is their most critical need. While many companies have women's health divisions recognizing the need for education, those with vast resources should be funding new branded and unbranded educational DTC/DTP initiatives."

"The perception is that males are still at higher risk than women for cardiovascular events, in part, because women have hormonal protection," Dr. Dillaha agrees.

Rather than the more commonly recognized symptoms that men incur, such as the sudden chest pain or uncomfortable pressure, women may experience shortness of breath, dizziness, nausea, indigestion, vomiting, unexplained fatigue, and back, shoulder blade, or jaw pain.

Additionally, study results are beginning to emerge that show that there are gender differences in the cause and progression of cardiovascular disease.

A study by the Cedars-Sinai Medical Center in Los Angeles and sponsored by the National Heart, Lung and Blood Institute indicated that as many as 3 million women previously diagnosed with healthy arteries could actually have an increased risk of heart attack after all. This study, called the Women's Ischemia Syndrome Evaluation (WISE), found, among other things, that the standard test for assessing coro-

Women do not always present with the classic symptoms of a heart attack, for example, substernal chest pain radiating into the jaw and down the left arm. Women often have nonclassical symptoms, such as nausea/vomiting, back pain, and a generalized sense of just not feeling well.

DR. RANDALL MOREADITH *Cardium Therapeutics*

nary artery disease — the coronary angiogram — may not spot the more diffuse buildup of plaque that often forms in the smaller coronary arteries of women's hearts.

The WISE researchers found that women have "a global pattern of dysfunction in the macro- and microcirculation." Although the "diffuse atherosclerosis" that many women experience is not seen on a coronary angiography, it results in abnormal resistance that limits blood flow to the heart tissue. But without angiographic evidence of a blocked artery, a woman's symptoms are likely to be discounted.

Cardiovascular Disease Stats

- ♥ **One in three** female adults has some form of cardiovascular disease (CVD).
- ♥ **Since 1984**, the number of CVD deaths for females has exceeded those for males.
- ♥ **In the United States in 2004**, all cardiovascular diseases combined **claimed the lives of 459,096 females** while all forms of cancer combined killed **267,058 females**. Breast cancer claimed the lives of **40,954 females**; lung cancer claimed **68,461**.
- ♥ **Almost 39% of all female deaths in America occur** from CVD, which includes coronary heart disease, stroke, and other cardiovascular diseases.
- ♥ **The death rate** due to CVD is substantially higher in black women than in white women.
- ♥ **38% of women compared with 25% of men** will die within one year after a heart attack.

Source: American Heart Association, Dallas.
For more information, visit americanheart.org.

Women need health education information on heart disease that offers them hope and solutions and that gives them the opportunity to engage in productive conversations with their physicians and pharmacists.

KALIA DONER
Remedy and Diabetes Focus



Response Differences

Cardiovascular drugs are approved for treating men and women, yet few have been studied to determine whether men and women respond differently. Researchers are beginning to find that there are gender differences between how women and men respond to cardiovascular drugs based on lower body

weight, smaller organ sizes, and a higher proportion of fat in women when compared with men. In addition, hormone levels and differences in metabolism may affect absorption and elimination of drugs in women.

One company that is studying how gender plays a role is Cardium Therapeutics. Upon analyzing data from its trial using angiogenic gene therapy Generx (alferminogene tadenovec) in

patients with chronic stable angina, the medical technology company found that women responded differently than men. Generx promotes the growth of new blood vessels in the heart, thereby providing alternate routes of blood flow and oxygen delivery that the blocked vessels cannot provide.

Generx is in a Phase III clinical trial entitled AWARE (Angiogenesis in Women with Angina pectoris who are not candidates for Revascularization) clinical study. The randomized, placebo-controlled, double-blind AWARE study is expected to enroll about 300 women with recurrent stable angina pectoris who are not candidates for revascularization and who are receiving optimal drug therapy.

“The AWARE trial was initiated specifically for women who have coronary artery disease that cannot be corrected using bypass surgery or angioplasty with a stent,” says Randall Moreadith, M.D., Ph.D., executive VP and chief medical officer at Cardium Therapeutics. “This gene therapy is unique in that after a one-time infusion during a routine catheterization procedure, we begin to see growth of new blood vessels in the heart within four to eight weeks following infusion. We named the trial AWARE specifically for purposes of raising awareness in women about their cardiovascular risk. One of the things we learned from the WISE trial was that women do not have the normal symptoms of a heart attack, which are pain down the left arm or a substernal chest pain. Instead, women reported nonclassic symptoms of nausea and vomiting, shortness of breath, back pain, or just an ill feeling. In addition, data from the WISE study found that many women with positive tests for angina — such as an exercise treadmill test — did not show lesions in the coronary arteries that limit blood flow to the heart. This has led to the hypothesis that some women with angina may have coronary microvascular syndrome. The development of Generx is aimed precisely at the growth of these small vessels, and thus women may respond to this approach uniquely.”

On the device side, Abbott Vascular in July 2007 began enrollment for the first clinical trial designed to study a drug-eluting stent in women. The goal of the XIENCE V Spirit Women trial is to increase the understanding of

A Pipeline Check

AMERICA’S PHARMACEUTICAL RESEARCH COMPANIES ARE DEVELOPING 771 MEDICINES FOR DISEASES THAT DISPROPORTIONATELY AFFECT AMERICAN WOMEN. THE MEDICINES IN THE PIPELINE FOR WOMEN (EITHER IN CLINICAL TRIALS OR AWAITING APPROVAL AT THE FOOD AND DRUG ADMINISTRATION) INCLUDE:

- ♥ **277** medicines for heart disease and stroke, which kill half a million women each year.
- ♥ **135** for female specific cancers, including **95** for breast cancer, **47** for ovarian cancer, and **17** for cervical cancer; there are an additional **96** medicines for lung cancer, the leading cancer killer of women.
- ♥ **125** for arthritis/musculoskeletal disorders. Arthritis affects **41 million** women, accounting for **70%** of all rheumatoid arthritis sufferers and almost **64%** of Americans with osteoarthritis.
- ♥ **106** for autoimmune diseases, which collectively afflict **23.5 million** Americans, most of them women.
- ♥ **95** for diabetes, which is reaching epidemic proportions, particularly among women and minorities. More than **9 million** women older than the age of **20** have diabetes, including one-third who do not know it.
- ♥ **90** for obstetric/gynecologic conditions.

- ♥ **65** for depression and anxiety. Almost twice as many women as men suffer from these disorders.
- ♥ **56** for Alzheimer’s disease, which affects more women than men because women tend to live longer.
- ♥ **59** for asthma, which affected more than **20 million** Americans in 2004, with the prevalence rate for women being **24%** higher than for men.

Medicines in Development for Heart Disease and Stroke

Thrombosis	40
Atherosclerosis	37
Peripheral Vascular Disease	32
Hypertension	31
Heart Failure	30
Lipid Disorders	24
Heart Attack	19
Stroke	19
Acute Coronary Syndrome	16
Pulmonary Vascular Disease	15
Arrhythmia/Atrial Fibrillation	13
Coronary Artery Disease	11
Adjunctive Therapies	6
Imaging Agents	6
Angina	4
Other	26

Note: Some medicines are listed in more than one category.

Source: PhRMA, Washington, D.C. For more information, visit phrma.org.

A photograph of a woman and a young girl sitting together against a green, textured wall. The woman, with dark hair pulled back, is wearing a blue sleeveless top and has her arms around the girl. The girl, wearing a pink and white striped shirt and a pink headband, is looking directly at the camera with a serious expression. The woman is also looking at the camera.

“It’s my diagnosis, but
it’s not just me
living with HIV.”

Pharmaceutical companies deliver so much more than medicine. That’s why they partner with HealthEd. Our strategies support the individual needs of patients, their families, and the treatment teams who care for them.

Our passion is the *whole* patient.



EDUCATING PATIENTS :: BUILDING BRANDS

how heart disease affects women and to assess the performance of the XIENCE V Everolimus Eluting Coronary Stent System in women with previously untreated coronary artery lesions. The trial is being conducted in Europe, Asia-Pacific, Canada, and Latin America and will enroll about 2,000 women.

"The biggest challenge is to find study sites that are appreciative of the cardiovascular issues between the two genders," says Jules Mitchel, Ph.D., president of Target Health. "Recruiting women for the studies is also a challenge. Women

still do not consider cardiovascular disease as a major health issue."

Although the National Institutes of Health has established requirements for equal inclusion of women in clinical studies, the underrepresentation of women in cardiovascular clinical trials continues to be an issue.

Women are less willing to participate in cardiovascular prevention trials, as well as other clinical studies, than men, because they perceive a greater risk of harm, new research suggests. The authors say this perception must be overcome so that men and women can be

included equally in clinical studies. The report, published in the May 14, 2007, issue of the *Archives of Internal Medicine*, was conducted by Harvard School of Public Health.

"For a long time, the issue of under-enrollment of women in clinical trials has been thorny for the medical establishment," Mr. Preston says. "But as more women are enrolled in CVD clinical trials as study subjects, more data are available that document women's risks and assess the role of various interventions. Companies can initiate educational and PR initiatives that increase awareness, compli-



By changing the way marketers gather customer insights, they can gain new perspectives on women that will enable them to create deeper brand connections.

Gretchen Goffe, Senior VP,
Consulting Practice for
Pink Tank, a division of
GSW Worldwide

Marketing to Women: Science Plus Art

Women influence up to 80% of healthcare decisions for their households, and have more than \$1.2 trillion in buying power, yet many marketers default to generalizations and stereotypes when developing brand campaigns aimed at women.

The most successful campaigns are the ones that connect the most strongly with their target customer. But to do that, marketers need to know

the woman they are speaking to, not just how she thinks, but what she feels and what matters to her. They need to know what will shift her mindset from "why?" to "why not?" when considering the brand.

Most existing market research methods don't go deep enough to reveal the key beliefs that drive women's behavior. By changing the way marketers gather customer insights, they can gain new perspectives on women that will enable them to create deeper brand connections. Below are a few recommended approaches.

♥ OFFER HIGHLY PERSONALIZED FORMATS

If focus group participants are in-person,

then why not the observers? The one-way mirror creates tremendous anxiety for participants who may assume they are being judged or criticized. By bringing the observers into the room, participants can see that they are respectful and interested in the valuable information women have to share.

Better yet, make the focus group location a place where women naturally gather and share advice and opinions with friends, like a living room.

♥ PROVIDE COMPLETE ANONYMITY

Moderated proprietary chat rooms let participants say what they really think while being anonymous. This creates an environment where they can confess behaviors that don't follow social expectations or decisions that are highly personal. Women are more likely to say, "Okay, here's the real deal" when they are completely comfortable.

♥ ELIMINATE THE MIDDLE MAN

Allow women to reflect in private and record first-hand video journal entries without speaking to a moderator. This approach, used frequently by reality TV shows, enables women to provide honest feedback in a highly personalized setting, where they don't feel judged. Their body language often tells as much as their words.

In addition to the above methods suggested for structuring market research, the following are thoughts to keep in mind when uncov-

ering insight about women's beliefs and behaviors.

♥ UNDERSTAND SELF-PERCEPTIONS

Behaviors link into self-perceptions, which are difficult to learn from direct inquiry. Apply the principles of psychology along with "walking in her shoes" to uncover hardwiring and subconscious attitudes women themselves might not be aware of. Empathology is not just about understanding her, but understanding how she sees herself.

♥ CONSIDER THE UNIQUE POINT OF SALE

For prescription products, treatment decisions are reliant on a connected dialogue between patient and physician that is ultimately played out in the doctor's office. Attitudes, emotions, unsaid objections, and assumptions can prevent ideal dialogues that influence your brand in many ways. It will be critical to ensure a connected dialogue between patients and their healthcare providers.

The insightful research that follows as a result of these tactics will paint a portrait of the target audience's mindset. Marketers will understand who she is, who she aspires to be, how she thinks, what she feels, and what matters to her. And in the process it will expose the current beliefs driving behaviors.

Source: Pink Tank, a division of GSW Worldwide, Westerville, Ohio. For more information, visit gsw-w.com.



Functional perfection isn't always alluring to women.

A great brand can only feel like a perfect fit if it feels right emotionally as well as functionally. Is your brand resonating as well as it could with female influencers? Compromises, assumptions, and generalizations often get in the way of making deeper connections. And brand potential goes unrealized.



Pink Tank is a diverse group of brand counselors with expertise in creating a brand voice to which women respond. In fact, we'd be happy to share our 5½ keys to finding the female voice with you at your request.

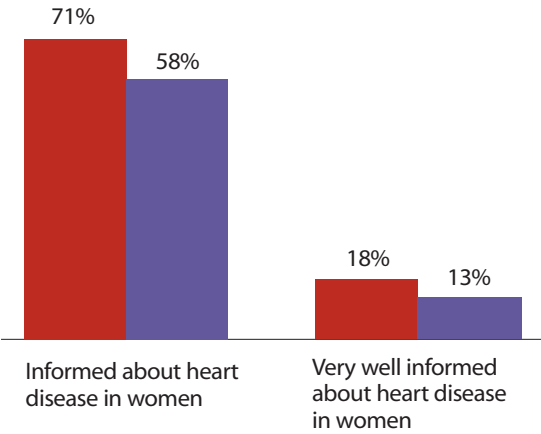
Does your brand feel like the perfect fit? Contact us at pinktank@gsw-w.com.



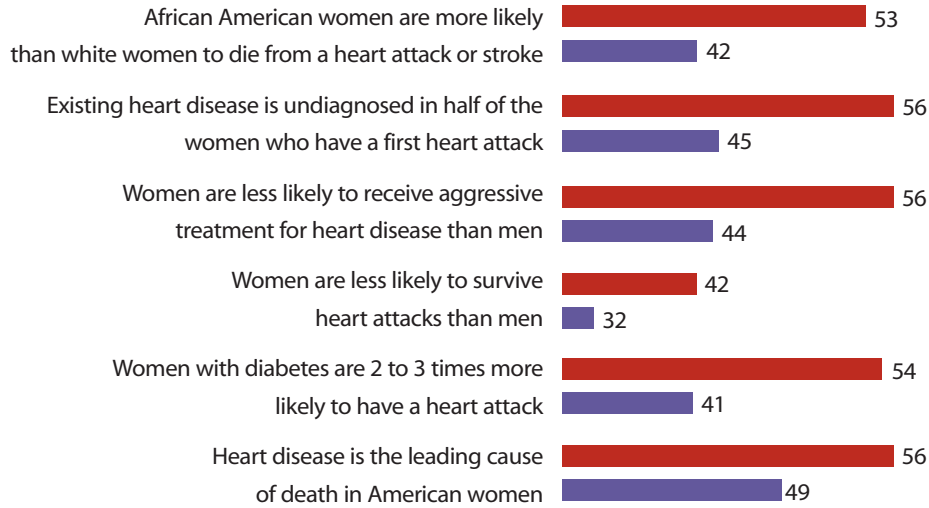
Heart Disease Awareness: Prevalence Among American Women

MEDIZINE CONDUCTED AN ONLINE STUDY IN JANUARY 2008 TO GAUGE HOW INFORMED THE READERS OF HEALTH EDUCATION MAGAZINES ARE TO THE FACT THAT THE LEADING CAUSE OF DEATH IN AMERICAN WOMEN IS HEART DISEASE.

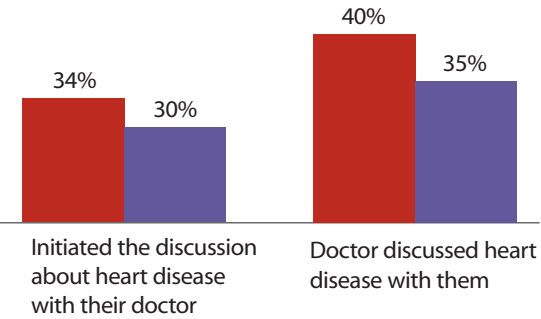
WOMEN WHO READ HEALTH EDUCATION MAGAZINES ARE MORE LIKELY TO BE MORE INFORMED ABOUT HEART DISEASE IN WOMEN



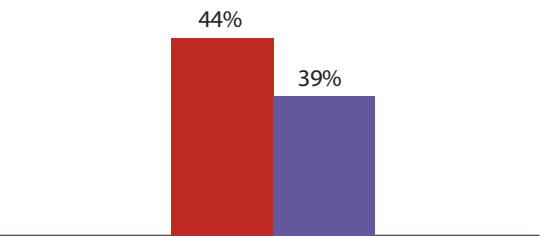
READERS OF HEALTH EDUCATION MAGAZINES ARE MORE KNOWLEDGEABLE ABOUT THE FACTS ABOUT HEART DISEASE IN WOMEN



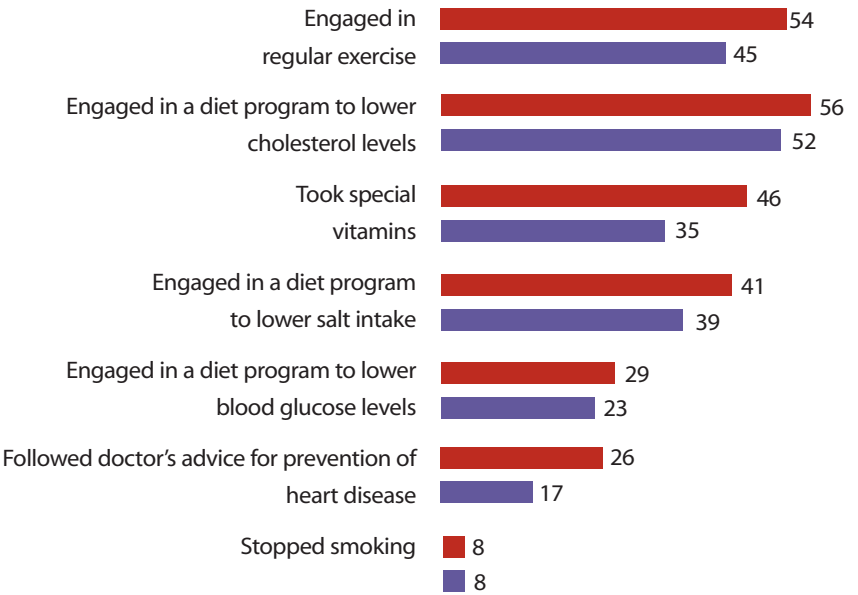
READERS OF HEALTH EDUCATION ARE MORE LIKELY TO HAVE TALKED TO THEIR DOCTORS ABOUT THEIR RISK OF HEART DISEASE



WOMEN WHO READ HEALTH EDUCATION MAGAZINES FEEL MORE AT RISK FOR HEART DISEASE



MORE WOMEN WHO READ HEALTH EDUCATION MAGAZINES TAKE A VARIETY OF ACTIONS TO REDUCE THEIR RISK OF HEART DISEASE



MediZine readers U.S. Population

Notes: MediZine deployed an online survey on Jan. 29, 2008, to 30,000 women 40+ readers. The MediZine study generated 3,859 usable responses within 48 hours of deployment. The same questionnaire was e-mailed to a national panel of 10,000 randomly selected sample of women 40+; this study generated 282 usable responses.
Source: MediZine LLC, Proprietary Research, January 2008, New York.
For more information about this study, contact Suzanne Polizzie at suzanne@medizine.com.

The biggest challenge is to find study sites that understand cardiovascular issues in women.

DR. JULES MITCHEL *Target Health*

ance, and persistency incorporating data results from these studies. This can be done through programs that are entertaining as well as educational. People love quizzes and puzzles, which can be disseminated in different venues such as in magazines, in medical offices, even at sports clubs."

Mr. Preston suggests that such quizzes could be based on a "women's cardiovascular risk assessment model" and might ask a variety of preventive health questions such as, are you a smoker or have you had your blood pressure or cholesterol levels tested within the last 12 months; health status questions, such as do you know what your blood pressure and cholesterol levels are and are they are high, low, or average; nonmodifiable risk factor questions about family history or reproductive status; and opinion questions in a true-or-false format such as I am immune from heart disease because I exercise regularly, etc.

The Market

It is not surprising that both antihyperten-

sive and antidiyslipidemic medications are among the highest prescribed in the United States. According to Urch Publishing, the global cardiovascular market was valued at \$89.7 billion in 2005. It was dominated by the antihypertensives with 48% of the market share.

Antidiyslipidemics came in second with more than 33% of the market.

Of the top 20 products by global cardiovascular sales in 2005, all generated annual sales in excess of \$1 billion.

IMS Health data for 2006 and the first half of 2007 show renin angiotensin antagonists as being the top-selling antihypertensives in the United States, with Diovan/Diovan HCT (valsartan and valsartan/hydrochlorothiazide) dominating this category. Lipitor (atorvastatin) is the top antidiyslipidemic drug for the same reporting time frame.

The global cardiovascular market is forecast to expand to \$116.3 billion in 2010. The



greatest rate of growth is forecast for the U.S. market, which will increase at a compound annual growth rate (CAGR) of 1.4%, compared with the average of 1.1%. The greatest growth in cardiovascular treatments in the major pharmaceutical markets is forecast for hypertension, which will increase at a CAGR of 1.3% between 2005 and 2010. Dyslipidemia and coronary heart disease are expected to grow at rates below the average CAGR of 1.1%. ♦

PharmaVOICE welcomes comments about this article. E-mail us at feedback@pharmavoice.com.

Experts on this topic

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BOB PRESTON. Publisher, *Great Health* magazine, Los Angeles; *Great Health* magazine, published by Basic Media Group and sponsored by CVS/pharmacy, is a monthly health and wellness magazine that will make its debut in May 2008. For more information, contact Bob Preston at bpreston@greathealthmag.com.