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# Health Information for Adolescents on the Internet

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Appendix E	)- U		Y HONORS PRO ROJECT - APPRO			
Name:	Jennif	er Nalle	2			
College:	Nursi	<u>ng</u>	_ Department: <u>es_Philpot</u>			
PROJECT	TITLE:	Health	in formation	for	Adolescents	
	<u>on</u>	the In	ternet			

I have reviewed this completed senior honors thesis with this student and certify that it is a project commensurate with honors level undergraduate research in this field. (

Signed:	Dolores Phelpot	Faculty	Mentor
Date:	<u> </u>	-	

Comments (Optional):

Jennifer has been a pleasure to work with on this project. Her product is the outcome of many hours to the task & I'm provid to have the privalege to be to the task & I'm provid to have the privalege to be partojit. It was unique, ior novative and will researched.

Running head: HEALTH INFORMATION FOR ADOLESCENTS ON THE INTERNET

Health Information for Adolescents on the Internet

Jennifer Nalle

University of Tennessee

#### Abstract

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The purpose of this project was to develop a list of useful health promotion web sites by integrating the health needs of school age youth and adolescents with information available on the Internet.

The health needs of the targeted youth group, ages 10 to 14 years, were assessed using information from the U.S. Department of Health and Human Services (U.S. DHHS) as part of the <u>Healthy People 2010</u> campaign, nursing literature, and interviews with a nurse practitioner at the Vine Middle Magnet School Health Center. Sites from the World Wide Web were accessed via several search engines (Yahoo, Google, and Alta Vista) and evaluated using criteria developed by Thede for nursing informatics (1999). Evaluation was subjective; the above criteria, as well as, relevance to health needs of the population and interest level were primary measures for evaluation.

The results of this project are the comprehensive list of Internet sites available at the Vine Middle Magnet School Health Center web page, under useful links for students (<u>http://web.utk.edu/~dolores/vinepg.html#students</u>). This web page is part of a development project by Dolores Philpot, RN, MSN, instructor at the University of Tennessee College of Nursing. While the site is maintained as a resource of this Health Center, it is hoped that it will be a future resource for students in many demographic and geographic areas.

#### Health Information for Adolescents on the Internet

The expansive Internet is a beneficial and practical resource for health information. It is rapidly becoming more accessible to the entire population, and thus the health information presented must be evaluated for accuracy and credibility. Youth often access the Internet daily for entertainment and information, and their use warrants the assessment of the health information that is presented to this population. It is the intent of this project to evaluate health web sites for adolescent youth and create an index of the best sites.

#### Purpose

As part of collaboration with instructor Dolores Philpot at the University of Tennessee (U.T.) College of Nursing, this project was proposed as an evaluation of youth oriented health web sites to be included on a web page designed for the Vine Middle Magnet School Health Center in Knoxville. The web page was designed for health promotion and education of parents, teachers, and students and as a resource for health care providers. The sites included for students must be evaluated for content and accessibility to this population (adolescents ages 10-14). Then, the sites most appropriate in terms of evaluation criteria would be listed as an index of health resources for adolescents.

#### Vine Middle Magnet School Health Center

The Vine Middle Magnet School Health Center is a clinic located in Vine Middle School's facilities in Knoxville, Tennessee. It is a joint effort between the Knox County Health Department, the U.T. College of Nursing, and the Knox County School System and was established in 1996. Nurse practitioners, student nurses and student nurse practitioners provide primary care, immunizations, acute illness care, first aid, physicals, and health education to students at the school. These services are free to students in Knox County Schools. The four-fold mission statement of the Health Center is to keep students healthy in order to learn, to have successful children, to provide health services to the community, and education, scholarship, and service.

The clinic has been well received in the community it serves. Parents must sign permission forms for their children to be seen in the clinic, and a majority of students have this permission and receive care. One of the only complaints reported by parents is that the clinic has limited hours and days, as the schedule is dictated by school hours and school days (Monday-Friday, 8:00 a.m.- 4:00p.m. (Gaylord, 2000).

Through the clinic, the U.T. College of Nursing also provides a summer program for parents called Strong Families. This program is designed as an educational session about discipline, adolescent issues, drugs, and family issues encountered during adolescence.

The clinic is a useful and presently accessible health resource for the community. Designing the web page was meant as an additional resource through this already prolific Health Center. Computers are accessible in the school, and students use them regularly as part of their health education curriculum. The hope is that students will use the web page as part of their personal searches for health information, as part of assigned searches for health education, and when referred to it by the nurse practitioners in the clinic for further health information.

#### Adolescent Health Needs Research

Exploration of the health needs of this population was accomplished through a nursing literature review, interviews with nurse practitioners familiar with the students at Vine Middle School, and a review of the <u>Healthy People 2010</u> initiative. This information was incorporated into the web site evaluation.

Adolescents have specific health needs as defined by their age and the many changes that take place during this time of life. Biologic, cognitive, psychologic, and social developments all make this a complex period for adolescents (Sieving, 1999). Physically, hormonal and pubertal changes are happening, causing increases in height, weight, and a more adult appearance (Sieving). Cognitive growth occurs as well, with formal operational thought emerging; this includes being able to think in abstract terms, to think about possibilities and consequences, and to weigh risks and benefits (Sieving). Adolescents have a heightened sense of self-consciousness and the belief that their experience is unique, which leads to many of the health-related behaviors and beliefs of youth (Sieving). The development of autonomy occurs also, with adolescents learning to make their own decisions and to develop unique opinions and beliefs (Sieving). Finally, adolescents learn social rules and explore new relationships with the opposite sex, with increasing importance placed on their social group rather than on the family unit (Sieving).

The developmental milestones of adolescence relate directly to their particular health needs. Obesity and physical inactivity, smoking, drug and alcohol use, sexually transmitted diseases, violence and injury, and pregnancy are the most prevalent issues in adolescent health. Eleven percent of adolescents are overweight or obese, and adolescents from lower income families are twice as likely to be overweight (U.S. DHHS, 2000). In a study by Muscari, 79% of adolescents surveyed did not participate in moderate physical activity (1999). Three thousand young persons start smoking everyday, which equals about 36% of adolescents who have smoked in the past month (U.S. DHHS). This is an increase from the 28% of adolescents who smoked in the 1990s. Twenty- one percent of adolescents used alcohol, and 10% of adolescents used illicit drugs, in 1997 and 1998, according to U.S. DHHS. Muscari reports substance abuse by teens to be even higher: 52% using alcohol and 25% using marijuana. Risky behaviors with

sexual activity cause other problems for adolescents. Teen pregnancy occurs in almost 1 million teenage women (Alan Guttmacher Institute [AGI], 1999). Three million teens acquire sexually transmitted diseases, which translates to about 1 in 4 sexually active adolescents (AGI). Homicides and violence account for a significant proportion of morbidity and mortality in the adolescent age group. Unintentional injuries and homicides are two of the top three causes of death in the 5-14 year age group (Centers for Disease Control and Prevention [CDC], 1999).

Reports on the health risks that adolescents take, show that older adolescents have more risky behaviors than younger adolescents (Scales, 1999). Prevention activities then must be initiated early to reach youth before they make decisions that could be detrimental to their health. Adolescents must be actively involved, and must be provided with accurate information to guide and assist them in making their own decisions and maintaining healthy lifestyles (Muscari, 1999).

The students at Vine have specific health needs, as identified by Gail Clift, the pediatric nurse practitioner who provides care three days a week at the clinic. The problems most often encountered are allergies and sinus infections, obesity, and sports injuries (G. Clift, personal communication, October 18, 2000). Chronic problems of students at Vine are asthma, allergies, and ADHD and other mental health illnesses (Gaylord, 2000). The biggest health needs of these students are health education about obesity and nutrition, exercise and pre-participation stretching, and injury prevention (G. Clift).

#### Healthy People 2010

<u>Leading health indicators</u>. The health of the nation is the focus of the <u>Healthy People</u> <u>2010</u> document published by the U.S.DHHS (2000). This document provides a plan for the improvement of health in specified focus areas. The public health issues selected as leading health indicators were selected because these issues motivate action and can be measured with existing data and available measuring tools (U.S. DHHS, 2000). The leading health indicators are physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, injury and violence, environmental quality, immunization, and access to health care.

These leading health indicators provided a guide to choosing health promotion web sites during the evaluation portion of this project. Web sites that included information about the leading health indicators or prevention education related to these indicators promote the accomplishment of the goals of <u>Healthy People 2010</u>; thus these sites were included in the final index. Directing adolescents to these health promotion sites was the intention.

Educational and community-based programs. For adolescent health, <u>Healthy People 2010</u> contains an objective that proposes to improve the health education in schools. Increasing the number of schools that provide education on teen pregnancy, drug and alcohol use, injury and violence, mental health problems and suicide intention, sexually transmitted diseases, unhealthy dietary patterns, and inadequate physical activity (U.S. DHHS, 2000) is the goal. Adolescent health is directly linked to performance in school. School must make it their mission to promote adolescent health, as absenteeism, grades, educational achievement and participation are all adversely affected by poor health, childbearing, exposure to violence, and drug use (Hutchinson & Poole, 1998).

<u>Health communication</u>. Another objective of <u>Healthy People 2010</u> pertinent to this project is that of Health Communication. One U.S. DHHS (2000) goal is to use communication strategically to improve health. The risks associated with use of poor quality health information by consumers on the Internet is a challenge outlined by the Healthy People 2010 document; this challenge motivated the completion of this project as a quality health information source on the Internet. This relates directly to the goal for improving health education in schools, as the availability of computers in schools provides the Internet as a valuable tool that can be used to further health education.

#### Methods

With the <u>Healthy People 2010</u> document as an impetus for this project's focus, and with the health promotion of adolescents as the goal, the evaluation of health-related web sites aimed at youth could be completed. The web sites were found using search engines like Yahoo!, Alta Vista, and Google. These were chosen based on their usability and researcher's familiarity with search result format with each of these search engines. Keywords used were "adolescent health," "youth health," "kid's health," "teen health," and "children's health." Many results were pediatric organizations or sites geared at professionals and parents. After these were sorted out, sites targeted specifically at children and teens were evaluated. Only twenty-five sites were evaluated due to time restrictions.

Each site was evaluated using criteria developed by a nursing specialist in computer applications. Thede lists six areas to be evaluated, including accuracy, authority, objectivity, currency, coverage, and usability (1999). Accuracy evaluates the origin of the information for reliability, accuracy, and responsibility for site maintenance and updates, including contact information (Thede, 1999). Authority is the criteria evaluating the reputation of the source of the information presented, including third party awards or evaluations. Objectivity evaluates the biases apparent in the information, whether the site is intended for entertainment or education, and if there are advertisements on the site. Currency evaluates the information's last update, including link usability. Coverage evaluates the audience targeted, the amount of information provided, and level of writing and terminology appropriateness for this audience. Usability evaluates the time for download, features of the site like sound, animation, and graphics, presence of a site map or internal search or index, and ease of navigation. Using these criteria and information obtained from research about the primary health problems of adolescence, the sites were scored as "Recommended" or "Not Recommended" for inclusion on the final web site index. See Appendix A for an example of the evaluation tool used.

#### <u>Results</u>

There were 10 sites chosen to be included on the Vine Middle Magnet School Health Center home page. These sites had information pertinent to the leading health indicators, prevention of health problems of adolescence, education on healthy living for adolescents, and met all of the above criteria. Also included were sites with information on chronic illnesses of childhood like diabetes, Attention Deficit and Hyperactivity Disorder, and asthma, as there was need identified based on the student population at Vine. Along with the web site addresses are specific descriptions for each site, to describe the offerings and entice the user to see each page. See Appendix B for a list of the sites chosen with the descriptions, and Appendix C for examples of some of the sites chosen.

Dolores Philpot, faculty mentor for this project, was actually building the web site where the final index would be located. Her site was a home page for the Vine Middle Magnet School Health Center. It also has information on the clinic's staff and services, and indexes for parents, educators and health care professionals. The index for students encompassed the work of this paper.

#### Use of the Web Site

The use of this web site index on the Vine Health Center web page will hopefully be widespread. The students at Vine Middle Magnet School are the intended audience of the site, but the information provided can and should be used by adolescents at school across the county and state. It is hoped that students at Vine will use the index in health classes as they search for health information, for personal interest and curiosity, and as a resource for health information after seeing practitioners at the Health Center.

#### Future of the Internet and Health Information

With more than 60 million people using the World Wide Web in 1998, and its influence steadily increasing, the communication format of the Internet is a powerful tool for health information dissemination (Kaufman, 1999). Health information is a major search topic, and unfortunately not all of the health information provided is accurate or reliable. In a study by McClung, Murray, and Heitlinger, only 20% of health articles published on the Internet about treating diarrhea in children conformed to the recommendations of the American Academy of Pediatrics, a discouraging finding (1998).

It is essential that the health information currently being sought by the public be accurate, reliable, and consistent. This may be an impossible task, but the evaluation of current health information is a starting point. Health care providers must be knowledgeable about what exists on the Internet, what their patients have access to, and be able to inform patients of correct information and where to go for more reliable information. The Internet can be a useful adjunct to health care and health promotion.

Adolescents, with their rapidly expanding knowledge of and access to information via the Internet, make up a special population of the public, as they may not be as wary of health information they find on the World Wide Web. Without critically analyzing information or bringing the information to a health care provider, adolescents may be misled by false claims by a disreputable source. Often, youth will not approach parents or even health care providers with questions due to embarrassment, but will seek and rely on information in private (Smith, Gertz, Alvarez, & Lurie, 2000). The Internet can provide the privacy or confidentiality desired in obtaining sensitive information.

It is the goal of the Vine Middle Magnet School Health Center web page to be a resource and starting point for those adolescents looking for health information. Health promotion is the focus of the web sites listed as part of the index, and their use will ultimately improve the health of adolescents, accomplishing the objectives of Healthy People 2010 and promoting future healthy behaviors and lifestyles.

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#### Appendix A

#### **EVALUATION OF HEALTH WEBSITES**

Site address -

#### 1. Accuracy

1

Contact person

Origin of info identified?

#### 2. Authority

What is source/reputation?

Author's name found on bibliographic database?

Outside evaluations of site?

References to other sources for info? Links?

#### 3. Objectivity

Biases apparent? Point of view?

Site intended for entertainment/info/reference?

#### 4. Currency or Timeliness

When was last update?

Links up to date and usable?

#### 5. Coverage

Who is the target audience?

Does site say purpose and audience intended?

Enough info present?

Level of writing and terminology

#### 6. Usability

How much sound? Color? Animation? Graphics?

Time for download?

Navigation?

Link usability?

7. Overall

Vine Middle Magnet School Health Center					
		Knoxvil	le, Tenne	essee	
<u>Services</u>	Location	<u>Staff</u>	<u>Mission</u>	<u>About The</u> <u>Clinic</u>	Useful Internet Links

### Useful Internet Links for Professionals, Parents, Students:

#### **Students:**

Here are some sites about health that you may find interesting and fun. When you click on a site, a new browser window opens.

ADDA Kids Area by the National Attention Deficit Disorder Association	www.add.org/content/abc1.htm	This is a site especially for kids with ADD or ADHD. It tells all about medicines your might take, fun facts, like historical figures that had ADD, and tips to help you at school. There is information for your parents too!
Asthmaline	http://www.asthmaline.com	This is another site run by Brain POP, and if you have asthma or know someone with asthma, it is important for you to see this site. There are many tips for dealing with asthma, information on how it is treated, and how it is caused.

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		Take the link from Fairfield University to the faculty page of Joan Fleitas, and you will find this wonderful site about living with chronic illnesses like diabetes,
Bandages and Blackboards	http://funrsc.fairfield.edu	depression, cancer, and others. There are sections for kids and for teens, including artwork and stories by kids with illness. Check out the information about going to the hospital- it will answer all of your questions.
Berit's Best Sites for Children - Serious Stuff: Health	http://beritsbest.com/SeriousStuff/Health/index.shtml	This site has information about links to other pages, along with rankings and download speed.
BrainPOP	http://www.brainpop.com/health	If you have a fast Internet connection, don't miss this one. This is a health site that teaches with games and movies. It is fun and informative. There is a lot of stuff to do and all the questions you could have about your body are answered. You can even email them if there is something you cannot find.

	, 	Health Information 17
Child and Youth Health	www.cyh.com/cyh/youth/index.stm	This is a neat site from Australia! Take a look at some of the great health information they provide for teens. Anything you may have a question about is sure to be here. The Healthy Mind section is especially interesting!
Diabetesline	http://www.diabetesline.com	This is a site run by Brain POP and it is super interesting. If you have diabetes or have questions about diabetes, you should check it out. There is information about treating diabetes, how diabetes is caused, and what exactly it does to your body.
Girl Power	http://www.health.org/gpower/index.htm	This is a fun site for girls only! There is information about health, sports, different cultures, books, and even a place to write your personal diary. Definitely check out the section called BodyWise and the constantly updated sections about health and nutrition
		This is a great index of sites that explores all aspects of the human body. Also there is information about nutrition,

		Health Information 18
Health Windows Jr.	http://healthwindows.org	safety, music, and games. You can find many sites about all of the body systems, recipes, safety tips for all ages, and even alternative therapies. This is a certified SAFE site.
HHS Pages for Kids	http://www.os.dhhs.gov/kids	This is a site by the Department of Health and Human Services, provided by the government. It is an index of many great sites. It has information about safety, nutrition, smoking and drugs, dental health, and environmental health. You should check it out if you are curious about how the government is involved with keeping you healthy, and how you can help keep yourself healthy. There are games and brain teasers to test your mind. This is a certified SAFE site.
Kids Health, and Teens Health	http://www.kidshealth.org/index.html	These are two age specific sites that explore all aspects of health. Both are easy to use, fun, and informative. The question and answer sections are especially helpful. There is even a section for parents to use. Take some time to discover all

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Vine Middle Magnet School Health Cen	ter: Useful Links - Students
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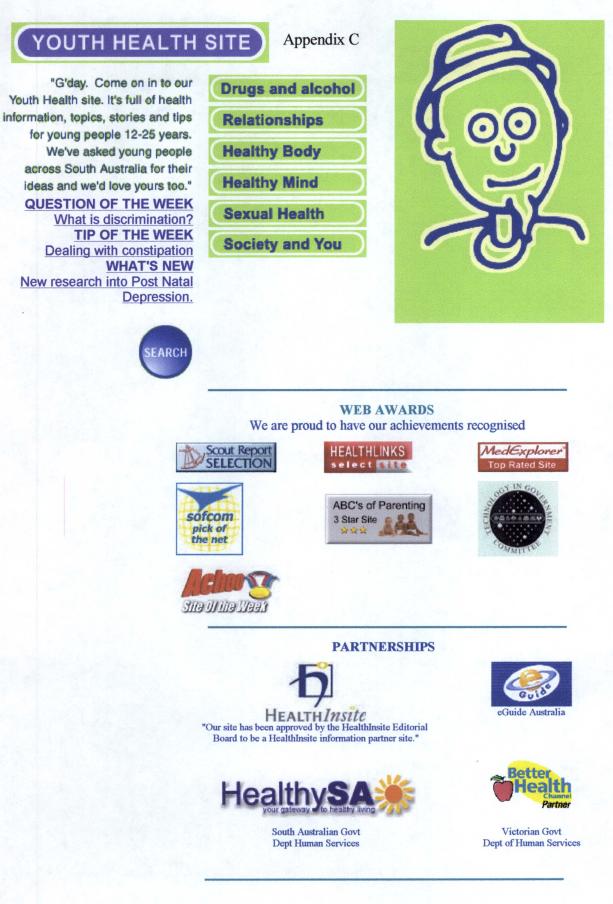
Тор

	net School Health Center on.utk.edu/Clinic/vinepg.html
Back to Vine Health Center Main Menu	Vine Middle Magnet School http://www.public.usit.net/vmagnet/begin.html
Knox County Schools http://www.kornet.org/kcschool.html	Knox County Health Department http://www.korrnet.org/knox/health.html
UT College of Nursin	g http://nightingale.con.utk.edu

Vine Middle Magnet School Health Center intends this page to be informative about the Health Center and internet resources that will be useful to nurses and other professionals, parents and students visiting this page.

This page was created by Dolores Philpot RN, MSN, in partial fulfillment of course requirements for IS 567, at the University of Tennessee. Special thanks to Jennifer for putting together the Student Links information, and to Lydia at Vine Middle School. For comments, contact me at: <u>dphilpot@cn.gw.utk.edu</u>

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ADD

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Home Page

National ADDA www.add.org



# For Kids like me, with ADD!!

What is ADD?







ADD at Home

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Medicine, Me, and ADD



http://www.add.org/content/kids1.htm



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### Books to see about ADD



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HOW DO WE SEE IN COLOR AND NOT **HEALTH**andSCIENCE JUST BLACK AND WHITE? FIND OUT AT .... asthma parents' place free asthma asthma for children about us e-news asthmaline News History Asthma through the Anatomy ages. Definition How our lungs work. History Theory Asthma is a common lung disease that Every body needs was first recognized by the Ancient some mucus, but Triggers Greeks. Their name most asthmatics have for it came from the verb "to pant". too much of it. Signs (more) This weeks poll: Previous poll: Treatment ANATOMY DEFINITIONS •How we breathe. •Inflammation = breathing **Kids Section** •The nose is a filter. difficulties. •Mucus: fly-paper for the airways. •Why do people wheeze when Q+A •Oxygen and the Blood. they have asthma? •Every body needs some mucus, **Education Kit** but most asthmatics have too much of it.

Related Stories •Living With Asthma: Special Concerns for Older Adults •Asthma & Physical Activity in the School

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diabetes for children

#### The History of Diabetes

free diabetes

e-news

Diabetes is a disease that has been known for thousands of years. Although many discoveries about the way it affects the human body were made a long time ago, there was little that doctors could do until the 20th century to treat it effectively. (more)

# This weeks poll:

SYMPTOMS

•Hyperglycemia •Hypoglycemia •Ketoacidosis

Related Stories

Diabetes Overview

-Long Term Complications

about us

diabetes parents' place

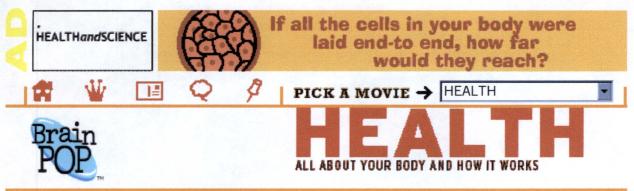
> Diabetes Through the Ages

Diabetes and Long-Term Complications

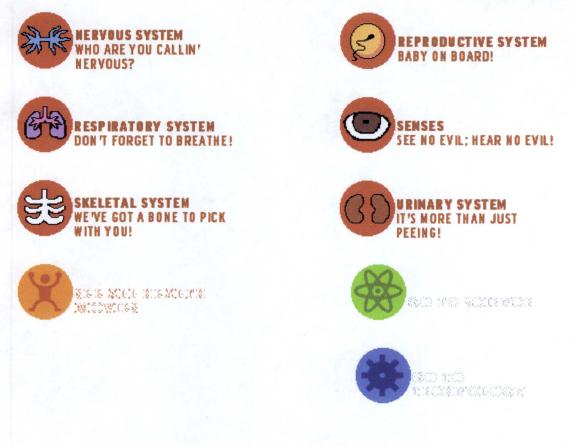
Nutrition and Diabetes

Previous poll: TREATMENT •Medication •Nutrition •Excercise

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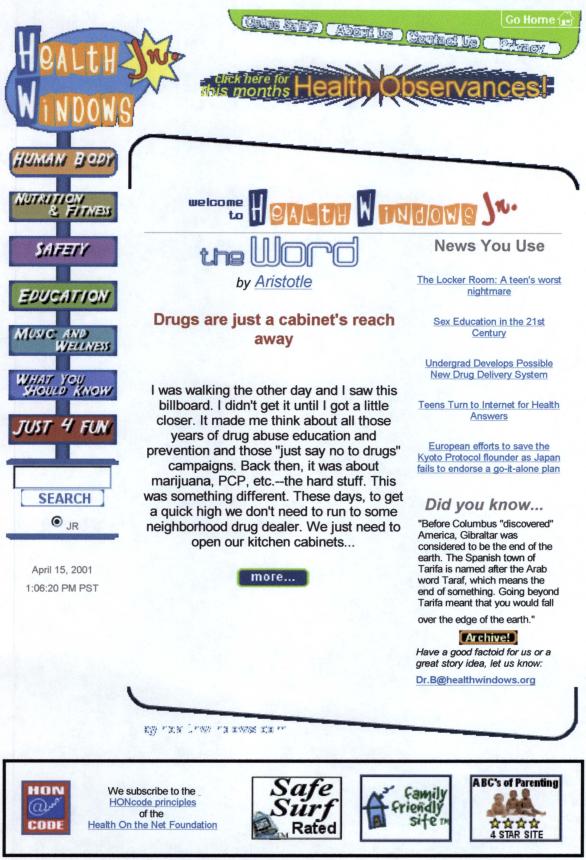




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