

Sexual Health Info Online Can Lead Kids Astray

BY BETSY BATES

LOS ANGELES — Teenagers cruising mainstream Web sites can hardly be faulted for thinking that emergency contraception is difficult to obtain, birth control pills will make them fat, and IUDs are meant for older women, not adolescents.

That's because incomplete and inaccurate information abounds on the Internet, even within very well-known Web sites, according to an analysis performed in 2008 by Stanford (Calif.) University researchers.

"We found a lot of myths about IUDs, emergency contraception, birth control, and when women should be getting Pap smears, especially their first one," said Alisha T. Tolani, a student in the human biology program at the university.

Ms. Tolani and her research mentor, Dr. Sophia Yen of the division of adolescent medicine at Stanford's Lucile Packard Children's Hospital, presented their findings in a poster at the annual meeting of the Society of Adolescent Medicine.

Recommended Sites for Teens

- ▶ Go Ask Alice! at www.goaskalice.columbia.edu.
- ▶ Center for Young Women's Health at www.youngwomenshealth.org.
- ▶ TeenWire at www.teenwire.com.
- ▶ TeensHealth at <http://kidshealth.org/teen>.

Sources: Ms. Tolani and Dr. Yen

Web sites were selected for analysis based on practitioner recommendations and Google searches of key terms, such as "birth control," "morning after pill," and "sexually transmitted disease." The top 10-15 results for each search term were included.

The 35 Web sites examined were assessed for accuracy on 26 topics.

In general, sites provided "fairly accurate" information on STDs, Ms. Tolani and Dr. Yen reported in their poster. For example, 100% of Web sites addressing STDs correctly noted that most sexually transmitted diseases are asymptomatic and that when symptoms are present, they may include burning with urination and discharge.

However, information about transmission was often vague or incomplete. Just 9 of 29 (31%) STD Web sites informed adolescents that herpes can be transmitted by kissing, and 14 of 29 (48%) mentioned skin-to-skin contact as a possible source of transmission.

On other topics, the information on Web sites was inaccurate or incomplete.

More than half of the Web sites that addressed contraception listed weight gain as a possible side effect of birth control pills, a myth contradicted by 47 randomized, controlled trials.

Five Web sites incorrectly stated that the calendar/rhythm method is effective at preventing pregnancy, and three misstated the effectiveness of emergency contraception.

Often, the Web sites omitted important information, considering that approximately a quarter of teens use the Internet to answer "some or a lot" of their questions about sexual health, Ms. Tolani said in an interview.

Although 16 of 34 (47%) Web sites noted that minors need a prescription for

emergency contraception, they failed to mention that in many states, minors can obtain those prescriptions directly from authorized pharmacists. Very few sites explained exactly where emergency contraception can be obtained.

Nearly a third of Web sites failed to debunk common myths about emergency contraception by explaining that is not an abortifacient, and making a distinction between emergency contraception and RU-486, mifepristone.

Just 5 of 27 (19%) Web sites dealing with contraception reflected 2007 American College of Obstetricians and Gynecologists guidelines recommending IUDs as a safe means of contraception in adolescents. Many were neutral, failing to

mention adolescents and IUDs. But three sites incorrectly stated that IUDs should be reserved for parous women, the researchers found.

Most Web sites offering information on Pap smears were updated in the past few years.

Nonetheless, their recommendations for when women should have Pap smears "were all over the place," with 40% offering advice that contradicted ACOG's 2003 guidelines, which state that women should begin receiving Pap smears at age 21 years or 3 years post coitarche, said Ms. Tolani.

Neither Ms. Tolani nor Dr. Yen had any conflicts of interest to disclose with regard to their study. ■

Common Sex Myths on the Internet

Myth: Emergency contraception is difficult to obtain.

Reality: Emergency contraception is over the counter for women 17 and older. Minors can currently receive prescriptions directly from authorized pharmacists in nine states: Alaska, California, Hawaii, Maine, Massachusetts, New Hampshire, New Mexico, Vermont, and Washington.

Myth: Emergency contraception induces an abortion.

Reality: Emergency contraception does not cause an abortion and is not RU-486.

Myth: IUDs are for multiparous women.

Reality: IUDs are safe for use in adolescents, including the nulliparous and serially monogamous.

Myth: Oral contraceptives cause weight gain.

Reality: A review of 47 randomized, controlled trials found no evidence that combined hormonal contraceptives caused weight gain.

Myth: Women should have Pap smears with each change of sexual partner, at age 18 years, or immediately following coitarche.

Reality: The American College of Obstetricians and Gynecologists recommends that women have a Pap smear beginning at age 21 years or 3 years post coitarche.

Myth: Kissing is safe, even if your partner has herpes.

Reality: Herpes can be transmitted by kissing an infected individual.

Source: Dr. Yen

Lower IQs Seen in Toddlers Exposed to Valproate in Utero

BY MICHELE G. SULLIVAN

Children exposed to valproate in utero have significantly lower IQs at age 3 than do children exposed to other antiepileptics during gestation, according to findings from the interim analysis of a large international study.

The drug previously had been associated with a higher rate of birth defects in children exposed prenatally. The combination of findings strengthens a recommendation to avoid valproate as a first-line antiepileptic in women who may bear children, Dr. Kimford J. Meador said in an interview.

"Valproate poses a special risk for both congenital malformations and for cognitive impairment," said Dr. Meador, principal investigator on the Neurodevelopmental Effects of Antiepileptics Drugs (NEAD) study. "Since there are other therapeutic options, it would seem prudent to try those first. At a minimum, it is critical that physicians inform women of this risk when prescribing valproate so

that they may make an informed choice."

NEAD is an ongoing study of 309 children, including three sets of twins, born in either the United States or the United Kingdom from 1999 to 2004, whose mothers were taking a single antiepileptic drug (AED): carbamazepine, lamotrigine, phenytoin, or valproate. The children are being followed to age 6. Dr. Meador, professor of neurology, Emory University, Atlanta, and his associates reported a planned 3-year interim analysis (*N. Engl. J. Med.* 2009;360:1597-605).

All of the 303 women in the study were taking the drugs for a seizure disorder. Their mean age at delivery was 30 years. Most women were well controlled on their AED, with about 80% having no seizures during their pregnancy.

Most children (258) underwent cognitive assessment at either 2 or 3 years of age, or at both ages. Of these, 73 (28%) had been exposed to carbamazepine, 84 (32%) to lamotrigine, 48 (19%) to phenytoin, and 53 (21%) to valproate.

IQ scores were adjusted for factors

that could significantly affect cognitive development, some of which were maternal IQ, age at delivery, education, type of epilepsy, and seizure frequency.

Children exposed to valproate had the lowest mean IQs of any of the exposure groups (92)—significantly lower than those of any other treatment group. The mean IQ in those exposed to carbamazepine was 98; to lamotrigine, 101; and to phenytoin, 99. These did not vary significantly from one another.

The association of valproate with reduced IQ held after adjustment for confounders in both a linear regression and subgroup analysis, the investigators said.

They also examined whether the IQ scores were related to AED dosage. In this analysis, only valproate maintained a significant dose-response relationship. Additionally, higher maternal IQs were associated with higher child IQs in all of the treatment groups except valproate.

The results are consistent with several European studies that have found poor cognitive outcomes in children exposed

to the drug prenatally, the investigators said. A Finnish study reported a mean reduction of 13 points in verbal IQ in valproate-exposed children, compared with controls. A British study found that valproate exposure increased developmental delays, increased special education needs, and reduced verbal IQ, compared with unexposed children and children exposed to carbamazepine and phenytoin.

The findings of both physical and cognitive problems with prenatal exposure show that the drug probably is not safe for use at any time during pregnancy, said Dr. Michael Privitera, director of the Cincinnati Epilepsy Center and another of the NEAD investigators.

"The neural tube defects [with which valproate is associated] occur during the first trimester, so there has been a question whether we might be able to use valproate later in pregnancy. This study shows that the answer is no, because cognitive development in the fetus occurs during the third trimester," Dr. Privitera said in an interview. ■