

## REPRODUCTIVE HEALTH

## **STI'S IN TEENAGERS IN EUROPE**

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Sexual transmitted infections (STI's) are a major public health problem in countries all over the world. Sexually active teenagers are at higher risk of acquiring these infections than any other age group. The potential sequelae include infertility, ectopic pregnancy, genital cancer, infection of the fetus and newborn, increased morbidity and even mortality. This will have implications for the reproductive health in general and is particularly devastating for young girls.

Today teenagers are becoming sexually active at younger ages, while women are older when they give birth to their first child. The interval in-between are a high risk period for acquiring sexually transmitted infections as well period for many unwanted pregnancies and abortions.

In Europe today Chlamydial infections are the most common threat to fertility of young women, while the frequency of human papilloma virus (HPV), genital herpes and bacterial vaginosis (BV) are increasing. In some countries STI's like gonorrhoea, syphilis, hepatitis B and HIV are rare, while in others these infections are of growing importance for the young generation.

It is imperative that screening, treatment and prevention of STI's in teenagers are given priority. Primary prevention, which involves health and sex education, should be encouraged. The focus should be upon sexual education in schools, strengthening of youth clinics and introduction of youth telephone lines. It is important that countries have screening programs targeted at sexually active young people, and that those infected are offered free antibiotics and partner tracing.

*Key words: STI, teenagers*

## GENITAL CHLAMYDIAL AND HUMAN PAPILLOMAVIRUS INFECTIONS IN THE STUDENT HEALTH SERVICE POPULATION (22)

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**INTRODUCTION:** Chlamydia trachomatis (CT) is the most common bacterial sexually transmitted infection (STI), and Human Papillomavirus (HPV) is the most common viral STI. Both are associated with significant morbidity.

**SUBJECTS AND METHODS:** We studied the prevalence of CT and HPV in the student health clinic population during 2000-2003. The mean age of the students was 23 years (range 19-47). For CT, first void urine (FVU) or cervical sampling was used. For HPV, vaginal self sampling was used. Nucleic acid amplification tests (NAAT) were used for CT. Hybrid Capture II was used for HPV.

**RESULTS:** The overall prevalence of CT was 1.5% (46/3131). The prevalence was 1.3% (33/2479) among women, and 2.0% (13/652) among men. In women, the prevalence was 2.2% (20/951) among first year students undergoing general health examination, 0.7% (7/996) among those seen by gynecologists for contraception or cytological screening, and 1.1% (6/550) among those seen by general practitioners for contraception. The overall prevalence was 4.1% in 2000, 2.4% in 2001, 1.4% in 2002, and 1.1% in 2003. The overall prevalence of HPV among women was 33% (434/1307). Of all HPV DNA positive women, 85% were positive for the high risk HPV types.

**CONCLUSIONS:** The prevalence of CT was surprisingly low, and decreased over time suggesting that the sexual health program introduced in the student health clinic is effective. The prevalence of HPV was strikingly high suggesting that most sexually active individuals are exposed to HPV. More studies are needed of the natural history of HPV infection.

*Key words: genital Chlamydia infection, HPV, prevalence in students*

## SEXUAL BEHAVIOUR AMONG HUNGARIAN ADOLESCENTS (41)

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**INTRODUCTION:** The sexual activity is growing among adolescents and the time of the first intercourse is shifting back to earlier age. This is a world-wide phenomenon. Early start of sexual life and unprotected sex can lead to ill health and can influence private life and can have further social consequences. For this reason it is considered to be risk behaviour. To learn more about the adolescents' sexuality, identifying factors that influence the safe sex is essential for the prevention.

**SUBJECT:** Analysis on sexual behaviour (rates of sexually active children, determinants of protected and unprotected sexual intercourse) was conducted among 15-17-year old Hungarian adolescents in the sample of the Health Behaviour of School-aged Children (HBSC) study.

**METHODS:** According to the international protocol anonymous, self-reported data collection was carried out. Data analysis was performed using SPSS-11 statistical software.

**RESULTS:** More than 2/3 of sexually active respondents can be characterised with protective sexual behaviour. Those who have good relationship with parents, are under reasonable parental control, have positive attitude towards school are more likely to behave safely. 3/4 of sexually active young people have already used condom, though more than 1/3 of them did not use any means of contraception during their last intercourse. Other health risk behaviours (smoking, alcohol consumption, cannabis use) are associated with risky sex as well.

Good body image, high self-esteem, good communication with friends of the other sex are associated with high prevalence of sexual activity.

**CONCLUSIONS:** As sexual activity is a two-faced, challenging phenomenon, on the one hand it is associated with the good self and social integration, on the other hand it can be harmful. Professionals who want to protect children from the harmful effects have to consider all above listed factors.

*Key words: sexual behaviour, risk taking behaviour, unprotected sexual intercourse, contraceptive methods, HBSC*

## SEXUAL BEHAVIOUR OF SECONDARY-SCHOOL STUDENTS IN SLOVENIA, 2004 (183)

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**INTRODUCTION:** This present research was the second representative study on sexual behaviour of secondary-school students in Slovenia (the first was done in 1996). The aim of the study was to evaluate the sexual behaviour of secondary-school students in Slovenia in 2004.

**SUBJECTS:** The research was done on a representative sample of 2380 1st and 3rd grade secondary-school students of both genders in Slovenia.

**METHODS:** The data were obtained by self-administered questionnaire in April 2004. In the analysis a descriptive statistic was used.

**RESULTS:** The average age of the 1st grade students was 15.4 years, and 17.4 years of the 3rd graders. The students had experiences in being in love (88% of 1st graders, 92% of 3rd graders), dating (66%, 82%), kissing (77%, 87%), caressing (62%, 78%) and petting (37%, 61%). Sexual intercourse ever had 23% of the 1st grade students and 53% of the 3rd graders (no gender differences). The median age at first sexual intercourse was 17 years. The main reasons for the first sexual intercourse were love (40%, 44%), incident (30%, 27%) and curiosity (13%, 12%). Contraceptive methods used at first intercourse were condom (74%, 75%), pill (6%, 7%), pill and condom combined (4%, 2%), withdrawal (3%, 4%), other methods (4%, 5%) and no method (9%, 7%). Contraceptive methods currently used were condom (64%, 49%), pill (11%, 32%), pill and condom combined (6%, 4%), withdrawal (3%, 4%), other methods (3%, 4%) and no method (8%, 7%). Almost all (92%) students thought they were well or very well informed about safe sex. In their opinion, the most appropriate sources of information on sexuality were professionals (34%), different sources (25%), parents (14%) and friends (10%); less appropriate were books (6%), individual experience (5%), the Internet (3%), radio and TV (2%), and school (1%). Homosexual contacts ever had 2% of the boys and 10% of the girls.

**DISCUSSION:** The median age at first sexual intercourse in secondary-school students in Slovenia has decreased from 18.5 years in 1996 to 17 years in 2004. However, the effective contraceptive use has increased from 74% in 1996 to 85% in 2004.

**CONCLUSION:** By the age of 17 about one half of secondary-school students in Slovenia experience sexual intercourse. The majority of students use effective contraception, condom being the most popular. The students are willing to talk about sexuality with professionals and less with parents and friends.

*Key words: sexual behaviour, intercourse, contraception, adolescents*

# HIV/AIDS MISCONCEPTIONS AND PREJUDICES AMONG HIGH SCHOOL STUDENTS

## REFLECTION OF SCHOOL DOCTOR'S AND TEACHER'S KNOWLEDGE AND ATTITUDES? (234)

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**INTRODUCTION:** The HIV/AIDS is one of today's most important public health challenges. Lack of knowledge, misconceptions and risk-taking sexual activity result in adolescents being the epicentre of the pandemic. Almost half of all new HIV infections are among young people. Therefore education, being the basic of prevention, puts teachers and school doctors in the first line of defence.

The aim of this study was to compare knowledge and attitudes of students, teachers and school doctors, and to present sexual behaviour of secondary school students.

**SUBJECTS AND METHODS:** Study was conducted in secondary schools. Two stage sampling, stratified by type of school and by number of students in school, gave representative sample of twenty schools. Study was conducted among 1026 students in 1st and 3rd grade. All teachers in school boards were included, 411 of them responded (69%). All school doctors participated (144). The survey contained anonymous questionnaire regarding attitudes, behaviour and knowledge of HIV/AIDS adjusted for each group individually.

**RESULTS:** Thirty nine percent of male and 24% of female students had sexual intercourse, mostly at the age of 16 (19% male, 17% female). Thirty seven percent of female and 57% of male students always use condom with their regular partner in comparison to 30% of female and 60 % of male students with their occasional partners. Girls show better knowledge on HIV/AIDS in general. Twenty percent of male students think they could get infected by sharing a meal with HIV positive person. Only 67% of all students know they could be protected from HIV/AIDS by using condom. Less than 20% would see a HIV positive doctor or a dentist, but 75% of male and 89% of female students approve "HIV positive student attending school".

Thirteen percent of teachers think person could get infected by mosquito bite. Although 80% answers person can't get infected by sharing meal, only 50% would share it. About 42% would see a HIV positive doctor and 24% dentist.

School doctors show excellent knowledge about HIV/AIDS. However, 71% would take care of HIV positive relative in own home. Eighteen percent would not share meal with HIV positive person, 17% would not buy food from HIV infected salesman.

**DISCUSSION:** Knowledge is insufficient, especially in group of students, therefore prejudices and misconceptions are still present. School doctors must overcome fear and become role models while providing health education. School doctors and teachers need each others support in order to achieve mutual goal – improving HIV/AIDS related knowledge and changing sexual behaviour among students.

*Key words: HIV/AIDS, adolescents, teachers, school doctors*

## CONTRACEPTION USE BY 15 YEAR OLD STUDENTS– RESULTS FROM 25 COUNTRIES FROM THE 2002 HBSC CROSS-NATIONAL STUDY (126)

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**INTRODUCTION:** Wide variations exist across western nations in early sexual behaviour. Great concern exists about whether early adolescents take appropriate precautions to protect against unintended pregnancy. The 2001/02 HBSC survey asked 15 year-olds standard questions about sexual health.

**SUBJECTS:** Subjects from 25 mainly European nations were asked whether they ever had sexual intercourse and if so, whether they (or their partner) wore a condom or used a means of contraception the last time they had sexual intercourse. Students were allowed to report more than one method (e.g., birth-control pill, condom, spray/foam, withdrawal); 13 nations offered a national choice option (natural methods or morning after pill).

**METHODS:** This paper examines cross-nations differences in contraceptives used by youth. Analyses by individual allow to identify redundant, complementary or contradictory use of methods. Analyses examine differences across countries and genders in the types of contraception used by individuals.

**RESULTS:** Boys are far more likely to report condom use (77.9% boys vs. 67.5% girls) and girls use of birth-control pills (resp. 19.95% vs. 29.0%), but likelihood of reporting use of both is equal (resp. 14.8% vs. 15.9%). Large differences exist across nations and within nations between boys and girls. Sprays/foams are reported by less than 2%, with nearly all already using condoms and/or birth-control pills. Only 7 nations asked about the morning after pill: it is used by 8.2% of their youths. Over three quarters of MAP users also report use of condoms and/or birth-control pills. All together, 11.5% report use of withdrawal. Only 16.8% of boys and 19.5% of girls are not effectively protected (e.g. by condoms and/or pills); only 13.3% use no method at all.

**DISCUSSION:** The vast majority of youth report use of a condom and/or birth control pills during their last intercourse. Many compromise condom use by also using withdrawal. Those who use the morning after pill generally do so as a backup and not a primary method.

**CONCLUSION:** To understand contraceptive methods used by youth, it is imperative to conduct analyses by individual to identify redundant, complementary, and contradictory methods. Further analysis is needed of multiple method use. Youth need additional information to help them avoid unnecessary redundancies and compromising effective methods, cease relying on ineffective methods, and adopt effective methods where none are now used.

*Key words: contraception, adolescents' cross-country survey*

**CONSULTATIONS CONCERNING CONTRACEPTION AND INDUCED ABORTIONS  
AMONG UNIVERSITY STUDENTS - TRENDS IN FINLAND  
1986 – 2003 (46)**

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**INTRODUCTION:** Modern contraceptive methods and legal induced abortions have made it possible for women in Western countries to control childbearing more effectively. The University Students' Survey revealed that 51% of female Finnish students currently used oral contraceptives in 2000. In case of failure of primary contraception, they are well aware of and can use emergency contraception. The revised abortion law is from 1970 and accepts social grounds as a sufficient reason for an abortion.

The Finnish Student Health Service (FSHS) provides primary health care services to university students in Finland. The aim of this study was to describe trends in consultations concerning contraception and induced abortions among Finnish university students in the period 1986 – 2003 and to compare induced abortion figures with figures among the Finnish population in general.

**MATERIAL AND METHODS:** The material for this study was drawn from the statistics of the FSHS from 1986 to 2003. The statistical methods used were frequencies and frequency ratios.

**RESULTS:** The number of students increased by 50%, while physician consultations did not. Contraception has been the most common single reason for physician consultation during all documented years, from 9.9% to 13.6% of all contacts. The numbers of family planning consultations fell from 358 to 217 per 1000 female students. The induced abortion rates were low compared with the population in general and decreased from four to three per 1000 female students.

**DISCUSSION AND CONCLUSION:** The long-term registration of coded data from the FSHS affords a good basis for evaluating the use of family planning contacts. Students have a strong motivation to practice contraception to postpone pregnancy until after studies. They are responsible and they take full advantage of the FSHS contraception services. The FSHS has succeeded guaranteeing contraception services and in preventing unwanted pregnancies and minimizing the need of induced abortions while at the same time decreasing physician consultations. This was possible by changing the distribution of tasks among physicians and nurses, and by adding telephone contacts instead of face to face consultations with physicians.

*Key words: contraception, induced abortions, family planning, university students*

## HOW TO LIVE A HEALTHY LIFE WITH A HIV POSITIVE PERSON (217)

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The aim of this study was to determine the change in knowledge and attitudes of teachers and parents after educational sessions and workshops. The study covered 285 teachers and 384 parents of primary and secondary school students. All participants attended the lectures on the epidemiology of AIDS, and after four months they actively participated in the workshop sessions. The participants were divided into small groups and acted out scenarios, based on real life situations, in which they found out that a person they are closed to is HIV positive. Each participant was asked to provide a «decision tree» and explain in writing and orally how he/she would react to a given life situation of living together with a HIV positive person and what would be the consequences of such a decision. A questionnaire providing information on their knowledge and attitudes was anonymously completed by all participants on 3 separate occasions: before the lectures, three months after the lectures and three months after the workshop sessions.

**RESULTS:** The first questionnaire revealed that participants had a fear of HIV positive persons and insufficient knowledge of how the disease can be transmitted, with 33% believing the disease could be transmitted by hand shaking, 59% saying that it could be transmitted by a mosquito bite, and 35% believing that it can be transmitted if an infected person coughs in the face a healthy person. Only 25% of respondents said they would allow their child be in the same class with a HIV positive child or be taught by a HIV positive teacher. They insisted that the school doctor must disclose the names of HIV positive persons so that healthy people could be more effectively protected. Responses to the second questionnaire, given 3 months after the workshop sessions, showed a change in attitudes, with 83% of respondents accepting the possibility for HIV positive persons to attend and/or work at school.

**CONCLUSION:** The school doctor has an important role in informing and educating, and changing attitudes toward the acceptance of HIV positive persons at school. Simply informing is not enough. It is necessary to take parents and teachers through the experience of «living through» the situation and teach them how to protect themselves by responsible personal behaviour and not by isolating infected people.

*Key words: AIDS, decision tree, attitudes*

## **WHAT CAN SCHOOLS DO IN AIDS PREVENTION: RESULTS FROM PORTUGUESE SAMPLE OF HEALTH BEHAVIOUR SCHOOL AGED CHILDREN STUDY AND FOCUS GROUPS (58)**

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**INTRODUCTION:** Schools offer an advantageous setting because they are the only venue where nearly all youth can be reached in a structured environment and because HIV prevention efforts and attitudes towards HIV infected people can potentially be integrated into the sexual health education and/or family life education programs in most schools. This study examines the impact upon sexual behaviour of school involvement and attachment, academic achievement, and sexual education programs in school.

**METHODS:** Data were collected from the Portuguese sample of the "Health Behaviour in School-Aged Children (HBSC) - a collaborative WHO study". In addition, 12 focus groups discussions were conducted.

**RESULTS:** In general, adolescents have a good knowledge about the main HIV/AIDS transmission routes and how to protect themselves from becoming infected. It was noticeable in this study that the existence of misconceptions and gaps in knowledge regarding AIDS transmission has impact in adolescents' sexual risk-behaviour and attitudes towards those infected with AIDS. A logistic regression model identifies several associations among school variables and sexual risk-taking (having sex and not using condom during last sexual intercourse). The results of focus groups showed that adolescents consider the role of schools in helping to increase adolescents' attachment to school, to develop future aspirations and reduce school dropout, factors that can effectively delayed sex or reduced AIDS infection and pregnancy rate. They think that information regarding pubertal development, sex, relationships, protecting against AIDS and contraception should be provided to adolescents in an age-appropriate manner from schools. However, important topics are not covered in many schools. According to students there is no evidence for causing a higher risk by sex education, although adolescents who are already sexually active can be influenced to have fewer sexual partners and to increase safer sex methods.

**CONCLUSIONS:** Because most youth are enrolled in school for many years schools have the potential for reducing adolescent sexual risk-taking. An effort has to be made in order to improve the sense of affiliation and agency of adolescents in schools settings, as a way to increase their perceived positive school "ethos", sense of belonging, perception of self-efficacy, plans to attend higher education, and consequently their choices of healthier life style, including sexual behaviour.

*Key words: schools, AIDS prevention, adolescents*

## RETHINKING SEXUAL EDUCATION (123)

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In developing European countries especially in Central and Eastern Europe, there is a serious epidemiological situation regarding sexually transmitted diseases, especially chlamydia, human papilloma virus infection, AIDS etc. The risk for these diseases is increased due to poor economic conditions, high unemployment, migration and lack of proper sexual education. Adolescents are under great pressure from the media, movies, teen magazines that convey hedonistic and consumer attitude, promoting a lifestyle devoid of responsibility. There is a real need for holistic and accurate sexual education for adolescents.

One of the other important issues for the sexual education program is to recognise current epidemiological situation of the country/region. Programs that are usually dealing with only one STD, usually AIDS neglect other STDs and therefore are improper. Although risk reduction and treatment of existing infection is important, the promotion of optimal lifelong health can be achieved most effectively through delayed sexual debut, partner reduction, and the avoidance of risky sexual behaviours.

Recent findings showed that the consistent condom use doesn't protect from human papilloma virus infection and that the condom effectiveness is limited in preventing other STDs. Recently published studies showed that despite condom use during vaginal intercourse HPV DNA was detected in vaginal and cervical swabs.

There are many programs that are dealing with adolescent sexual health, some of them are focused on promoting condoms, and contraceptives, some of them promote only abstinence without informing adolescents about contraceptives and other methods.

There are only a few programs that were designed on current adolescent needs. One of them is TeenSTAR (Sexuality Teaching in the context of Adult Responsibility). TeenSTAR includes all aspects of person. The program is based on interactive approach, there are no lectures, it is designed as problem solving program. During the program attendants acquire skills and knowledge that help them to acquire responsible attitude to their own sexuality, to avoid risky sexual behaviour.

Increasing evidence appears to support the adoption of a health-oriented approach that addresses sexual attitudes and behaviours by both educating about STDs and consistently recommending delayed sexual debut and partner reduction.

*Key words: sexual education, HPV, abstinence, contraception*

## **PREVENTION OF SEXUALLY TRANSMITTED DISEASES IN ELEMENTARY SCHOOL STUDENTS (197)**

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**INTRODUCTION:** Sexually transmitted diseases (STD) pose a public health problem due to their wide spread and serious sequels. Preventive programs focused on reproductive health promotion are needed to prevent the spread of STD in adolescent population.

**AIM:** To evaluate the program of STD prevention carried out by three school medicine teams at 15 elementary schools in Zagreb, academic year 2004-2005.

**SUBJECTS AND METHODS:** Preventive activities included 995 eighth-graders and 184 teachers. A lecture entitled STD and HIV/AIDS and a workshop Transmission of HIV Infection – Handshake were held for students, and respective lectures for teachers, followed by a questionnaire distributed to both audiences on the knowledge, attitudes and satisfaction with the program performed.

**RESULTS:** The lectures were attended by 93.8% of students. Only 11% of students had not previously listened to or read about STD and AIDS. School ranked first as the source of information. 82.1% of students considered that a HIV positive student should attend regular classes; 24.7% of students would keep normal relationship with a HIV positive student, 65.4% would do it with some caution, whereas 9.5% of students would avoid contact with such a school mate. Workshops were organised in 36 classes and included 90% of students. On the 1-5 scale, the students scored the workshop content with 3.9, their own contribution to the workshop with 3.6, and workshop conduct with 4. The students' knowledge about HIV/AIDS was assessed by use of a questionnaire containing 6 questions. The question: Could an individual that appears healthy be HIV positive? had the highest rate (94.5%), and the question: Can HIV infection be acquired by a mosquito bite? the lowest rate (67.7%) of correct answers. The content of lectures delivered to teachers was evaluated as very good or excellent by 95.7% of teachers, while 84.3% of teachers found them useful for their work at school. The teachers considered workshops to be the most appropriate method of work of school medicine practitioners in health education, to be followed by small group work, lectures, and target public sessions.

**CONCLUSION:** Results of the questionnaire and the interest shown by both the students and teachers indicate that programs to improve the knowledge, to acquire desirable attitudes, and to prevent risky behavioural patterns related to reproductive health should be implemented as early as possible, i.e. at elementary school.

*Key words: STD, school children*

## TEACHERS TRAINING FOR REPRODUCTIVE HEALTH EDUCATION IN SCHOOL (261)

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Sponsored by Procter & Gamble

Health education in schools demands special education and training for teachers. In the study, the project is presented in which the educational model for health educational work with students is developed.

Aims of the programme: 1. to ensure educational materials for teachers (from the package “About you”, pamphlets, and others, for work with students in puberty are, growth and development, 2. to prepare professional methodological guidance to teachers for conducting every method units and work with the students. 3. to enable the teachers for qualitative conducting of method units, 4. to distribute the pamphlets to teachers and the parents.

Program conducting: Teams of school medicine specialists and biology teachers or psychologists were involved in teachers education ( mostly biology teachers) . On one day seminar, teachers were presented with educational package and its conducting in work with the students. Response rate on seminar for teachers was from 52% to 85% of planned one. Education was done through workshops in which teachers with team manager were practicing conducting each methodological unit using materials from educational package, in the way it should be done in the classroom with the students. Especially big attention was paid to teachers training in answering students’ questions and communicational skills development. Education evaluation showed that teachers were almost unanimous in valuation of need for this kind of education. They consider educational materials very good quality, acceptable, and missed so far. They praised the way education was conducted for teachers, but pointed out that parts from human reproductive health and sexuality should be thought by school doctors. They suggested, for a good model of teamwork, that after covering certain unit , school doctor answers the students’ questions.

36 000 pamphlets were distributed to the students as a part of the project ( around 80% of one generation fifth grade students) and the same number to their parents. Parents graded, on their own the pamphlets that were distributed to them very positively.

*Key words: teachers, sexual education*

## **SEXUALITY AND SEXUAL EDUCATION - ATTITUDES OF THE STUDENTS AT THE UNIVERSITY OF SPLIT (115)**

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**AIM:** To identify the adolescents' attitudes towards sexuality and sexual education.

**EXAMINEES AND METHODS:** The study was conducted in 2001, on the 30% sample of the first year students from the University of Split, (818 students; 415 boys and 403 girls) who answered on anonymous questionnaire. Attitudes, measured by the scale of summed-up estimations, were divided in those measuring sexual traditionalism, attitudes towards condoms and peer conformism.

**RESULTS:** Attitudes measuring gender and sexual traditionalism showed moderate untraditionalism expressed more among boys than among girls. Only 18.4% of surveyed boys and 11.8% of girls agreed that informing about sexuality encouraged promiscuity. Necessity of open conversation about sexuality is approved by 83.8% of boys and 95.5% of girls. Out of all surveyed respondents, 66.3% of boys and 75.9% of girl have religious allegiance; also in that group 84% of boys and 95% of girls want to discuss sexuality openly. Attitudes towards condom usage are positive among 78.5% of boys and 78.1% of girls. Religious allegiance, attitudes towards informing about sexuality as well as those about discussing sexuality openly do not influence significantly the positive trend of those attitudes. The attitude that one should not involve in sexual relations with new partner unless condom is used is supported by 60.4% of boys and 82.1% of girls. At the same time the attitude that condom usage is suggested only by those who often change partners deny 56.9% of boys and 68.2% of girls. Condom usage seen as a sign of distrust towards partner rejects 80% of boys and 86.9% of girls.

**CONFORMISM:** Majority esteems own opinion, but in same group 42.6% of boys and 31.4% of girls say that their friends' influence on their sexual behaviour is important. Implementation of sexual education at school is said to be desired by 84% of surveyed adolescents, 12% are undecided and 4% do not want that.

**CONCLUSION:** In spite all the adolescents' individual differences; there is a significant need for open discussion of sexuality. It is clear that there is need for systematic implementation of health-education programs for the young in schools, as well as for counselling and open door approach.

*Key words: sexuality, students' attitudes, sexual education*

# **THE CORRELATION OF KNOWLEDGE AND ATTITUDES WITH REPRODUCTIVE HEALTH AND SEXUAL BEHAVIOUR OF SECONDARY SCHOOL STUDENTS (137)**

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**INTRODUCTION:** While educating secondary school children on their health we noticed their insufficient knowledge of reproductive health, sexually transmitted diseases, family planning and necessity of regular gynaecological examinations. The aim of this study was to investigate if there are any differences between knowledge and attitudes and reproductive health and sexual behaviour in relation to sex, school success and their school orientation.

**SUBJECT:** In our study we included 240 second and third-grade secondary school students of both sexes, 50 male and 190 female between the ages 16 and 18.

**METHODS:** The students completed an anonymous questionnaire.

**RESULTS:** It was noticed that the knowledge on reproductive health positively correlates with the general school success. Students gather the information on sexuality and reproductive health almost exclusively from their friends. Turning to their family members or health personnel for advice is almost non-existent. They have positive attitudes about the relationship between partners and sexes. The majority 65% feels the need to be more informed about reproductive health. The majority of students does not know enough about sexually transmitted diseases, 40.4% numbered only 2-3 diseases, mostly AIDS and syphilis, and very few of them 14.2% mentioned hepatitis.

**DISCUSSION:** Likewise, we noticed that a large part of students has not understood the difference between the protection from pregnancy and the protection from sexually transmitted diseases. Unfortunately, the female responders do not know the exact definition of menstrual cycle, there are only 16 correct answers or 8.6%! It is worth mentioning that they had a choice of three very similar answers. Nevertheless, 58.3% of the females stated that they know how to calculate fertile and infertile days, and a menstrual cycle calendar is kept by 58.3% of them. If they got pregnant at that age, 48.9% of the females do not know what they would do or would terminate pregnancy. 28 of 33 sexually active females have never visited a gynaecologist, which makes 84.8%!

**CONCLUSION:** The results of this support the idea that a further continuous education of secondary school students is necessary, perhaps starting even in the last grade of elementary school, because, at the age of 17, already 28% of male students and 17.4% of female students is sexually active. What is more, 21.6% of them have not used any form of protection every time.

*Key words: reproductive health*

## **SEXUAL BEHAVIORS, KNOWLEDGE AND ATTITUDES OF SECONDARY SCHOOL STUDENTS IN PRIMORSKO-GORANSKA COUNTY (140)**

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**INTRODUCTION:** Sexually transmitted diseases (STD) and unwanted pregnancies are serious problem for our young population. Most of the research in this field shows high and rising number of youngsters engaging early in sexual relations with inadequate knowledge and use of protection. The aim of our study was to determine sexual behaviours of secondary school students in Primorsko-goranska County, their knowledge and attitudes toward sexuality and STD, and compare them with results of the study conducted in the 2000.

**SUBJECTS AND METHOD:** The study was carried on a 965 (randomly selected) secondary school students of Primorsko-goranska county (568 girls, 377 boys) who where, on average, 17 years old. The ammoniums questionnaire was developed by University of Zagreb, Department of sociology. The data were compared with earlier results (2000) with descriptive statistic program: Statistics for Windows.

**RESULTS:** We have found 48% sexually active students (465 students) with no greater gender differences. Most of the students (boys and girl) have had its first sexual intercourse between age of 14 and 16. Doing so, girls have had an older boy for a partner, while boys had a partner of the same age. These results match those from 2000. Furthermore, most of the students have very good and excellent knowledge on STD and birth control (91 %) as well as positive and very positive attitude toward use of condoms (82%). Compared with earlier studies the number of sexually active students doesn't using any sort of contraceptive protection declined significantly. The 2000 study showed 27% sexually active students who doesn't use protection and our study found only 9, 2%. It is interesting that 12% of students use combined method for birth control and STD (hormonal therapy and condoms).

**CONCLUSION:** Results from our study have clearly showed an increase of sexually active students. Furthermore we've found better knowledge on STD and birth control which resulted in increase of use of adequate protection. Entering age for sexual relations showed no difference. These results support our health education program which we're running in Primorsko-goranska County. The program consists of teaching and group work with school children conducted by school medicine teams and peer to peer education supervised by the same team. Need for this kind of work, as well as the results, is clear and we're hoping to boost them up with our new Youth friendly Service – Open door counselling!

*Key words: youth, free time, choice*

## **SEXUALITY AND SEXUAL EDUCATION-ATTITUDES OF THE STUDENTS AT THE UNIVERSITY OF SPLIT (160)**

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**AIM:** To identify the adolescents' attitudes towards sexuality and sexual education.

**SUBJECTS AND METHODS:** The study was conducted in the 2001, on the 30% sample of the first year students from the University of Split. The sample, stratified according to sex and study type, included 818 students; 415 boys and 403 girls, who answered to anonymous questionnaire. Attitudes, measured by the scale of summed-up estimations, were divided in those measuring sexual traditionalism, attitudes towards condoms and peer conformism.

**RESULTS:** Attitudes measuring gender and sexual traditionalism showed moderate untraditionalism, expressed more among boys than among girls. Only 18.4% of surveyed boys and 11.8% of girls agreed that informing about sexuality encouraged promiscuity. Necessity of open conversation about sexuality is approved by 83.8% of boys and 95.5% of girls. Of all surveyed respondents, 66.3% of boys and 75.9% of girls are religious declared. In that group 84% of boys and 95% of girls also want to discuss sexuality openly. Attitudes towards condom usage are positive among 78.5% of boys and 78.1% of girls. Religious allegiance, attitudes towards informing about sexuality as well as those about discussing sexuality openly do not influence significantly the positive trend of those attitudes. The attitude that one should not involve in sexual relations with a new partner unless condom is used is supported by 60.4% of boys and 82.1% of girls. At the same time the attitude that condom usage is suggested only by those who often change partners deny 56.9% of boys and 68.2% of girls. Condom usage seen as a sign of distrust towards partner rejects 80% of boys and 86.9% of girls. Conformism: A majority appreciate most their own opinion, but in the same time 42.6% of these boys and 31.4% of girls say their friends influence on their sexual behaviour is important. Implementation of sexual education at school is said to be desired by 84% of surveyed adolescents, 12% are undecided and 4% are contrary.

**CONCLUSION:** Apart of all the adolescent individual differences there is a significant need for open discussion of sexuality and necessity of implementation of sexual education in schools.

*Key words: sexuality, attitudes, education*

## **EDUCATION ON SAFE AND RESPONSIBLE SEXUAL BEHAVIOUR PROVIDED BY SCHOOLS IN SLOVENIA (184)**

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**INTRODUCTION:** The sex education is not obligatory nor in primary nor in secondary school curriculum in Slovenia. Instead, contents targeting sexual health are only partially included in some subjects in primary school and as a facultative subject in secondary school. In addition, there are no common criteria regarding the contents of neither sex education programmes nor sex education providers.

**SUBJECTS:** With no systemic sex education in schools the quality of information and the impact of sex education are limited. In addition, sexual behaviour and related topics are often not spoken themes in families. Facing increasing sexual activity among adolescents and increasing risks for unwanted consequences of sexual activity in adolescents, formal sex education is strongly needed in Slovenia.

**METHODS:** In the need to fill the gap in the school system and to motivate the teachers (mainly biology teachers and school advisers) to deal with sexual health topics in the school in 2001 the program "About you", didactical and methodical program, developed and sponsored by Procter & Gamble, was introduced into the primary school system. The idea was further developed and in 2004 the program "About you two" for secondary schools was developed by Slovenian professionals and sponsored by Schering AG Slovenia.

**RESULTS:** The program "About you" consists of handbook for teachers with six overhead transparencies and booklets for girls, boys and parents. The main topics are puberty and personal hygiene. The introduction of the program was supported by several seminars for teachers. By now more than 90% of primary schools in Slovenia are involved in the program. The program "About you two" consists of handbook for teachers with ten overhead transparencies and booklets for students. The main topics are sexual behaviour, contraception and sexually transmitted infections. In this first year of the program more than half of secondary schools in Slovenia have already been introduced with several seminars into the program.

**DISCUSSION:** Evaluation have shown extremely positive feedback of both programs and confirmed a strong need for this kind of support to the teachers and students.

**CONCLUSION:** The success of programs »About you« and »About you two« has shown a huge need for formal sex education in Slovenia. In the lack of official systemic support the help of industrial and pharmaceutical companies has proved to be very beneficial.

*Key words: sex education, contraception, puberty, teachers, "About you"*

## **DO WE PAY ENOUGH ATTENTION TO DETECTION OF VARICOCELE IN ADOLESCENTS? (193)**

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**INTRODUCTION:** Varicocele refers to varicose enlargement and extension of the veins of the pampiniform plexus, usually in the left scrotum. It is a potentially reversible cause of infertility among men. According to investigations, it causes about 30% of male sterility.

**THE AIM OF THE STUDY:** To determine incidence of varicocele in adolescent population in Split schools, detected during compulsory medical examinations.

**SUBJECTS AND METHODS:** In a retrospective study including students from 10 high schools in Split (first and second grades, age 16-17, in the school year 2004/05), 1537 preventive medical records were processed. It was 41.43% out of the total 3710 students in Split high schools. It was also the age of making varicocele diagnosis that was concurrently noted (fifth or eighth grade of elementary school, age 12 or 15; or first grade of high school, age 16).

**RESULTS:** According to the results obtained, the diagnosis of varicocele was made in 142 students or 9.23% of the examined sample. The majority of these cases (88.8%) were referred to the additional specialist examination and treatment, whereas the others were followed up by the school doctor. Out of the total number of cases diagnosed so far (end of April 2005), 50% (71 student) of them were operated on.

**DISCUSSION:** The results of our study have shown that students with varicocele were well provided for, either having been operated on or under competent follow-up care. Lower incidence of varicocele in our population in relation to the results published in the literature was likely to be due to subdiagnosis of this condition. In other words, medical examinations of high-school students are most commonly performed at schools, under inappropriate conditions, so that complete examination and counselling of students fail to occur.

**CONCLUSION:** Given the significance and role varicocele plays in reproduction, both its early diagnostics and surgical care are extremely important.

Our results of 9.23% of varicocele incidence in adolescents are below the average in relation to the similar studies in the world (about 15%). Therefore, more complete medical examinations of students, under more appropriate conditions, as well as additional education and animation of school doctors need to be carried out.

*Key words: adolescent, varicocele, medical examination, student*

## URINARY INFECTIONS REGISTERED IN SCHOOL DISPENSARY IN MUNICIPALITY STRUMICA, MACEDONIA IN THE PERIOD 2001-2004 (202)

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AIM: To show the significance and the number of urinary infections of totally registered diseases in school dispensary of Strumica Medical Centre in period (2001-2004).

MATERIAL AND METHOD: The annual summary report of the school dispensary was used, as well as the laboratory analyses and results from urinal-cultures, ultrasound, checking of abdomen and RTG survey. The descriptive-epidemiological and statistical methods of working were used.

RESULTS: In the analysed period, a total number of 49,913 medically surveyed patients were registered out of who 459 or 0, 92% had urinary infections. Female patients were registered in bigger number 333, or 72, 55%. There were 126 male patients or 27, 45%. By age, the most frequent was the group over 20 years old, with 128 patients. The next was the group from 15 to 19 years old, with 125 patients. The distribution in terms of time of appearance of the infection is with no significance. Diseased patients were registered in all months, but the biggest number was reported in February, with 47 cases. Cystitis (acute and chronic) was on the first place in this group of urinary infections with 76% or 349 diseased patients. Renaltubulointerstitial diseases covered 2, 34% of the patients or 11 cases. Further urolithiasis as one of risk factors for urinal infections covered 1, 96% or 9 of the cases and on the other non specific infections belong 19,70% or 90 cases. For 404 patients, urinal culture tests were carried out from which 30, 06% or 138 cases. From that number the most common bacteria, which were isolated were the following:

- Escherichia coli in 62 diseased patients or 44,93%
- Proteus vulgaris in 28 diseased patients or 20,29%,
- Pseudomonas aeruginosa in 18 diseased patients or 13,04%
- Staphylococcus aureus in 16 diseased patients or 11,60%
- Streptococcus faecalis in 14 diseased patients or 10,14%.

CONCLUSION: Lasting uncured infections of urinary system are usually followed by complications. Thus, preventions of the urinary infections with survey of asymptomatic bacteria on the school children are with special significance. Thus, necessity arises for pointing of our efforts towards prevention of infections and their progression towards the upper urinal ways.

*Key words: urinary infections*

## SEX HEALTH COUNSELING FOR STUDENTS (240)

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**BACKGROUND:** Depopulation and aging of the population have been generally recorded in Croatia over the last four decades. The proportion of young population groups, school children and students that make the basis of reproduction has been on a steady decrease (reproductive depopulation). Sexual behavior of adolescents influences the population fertile potential and ability of reproduction. Besides school medicine specialist, a gynecologist has been included in the work of the student counseling clinic since the academic year 2004-2005. The Institute laboratory of microbiology and psychologist's consultation are used as necessary.

**AIM:** To analyze the state of reproductive health, sex and other risk behaviors in first-year students enrolled in the academic year 2003-2004; and to propose measures for sex health promotion and control.

**SUBJECTS AND METHODS:** Systematic examination included 3679 (22%) first-year students at the University of Zagreb, 1425 male and 2254 female. Data were obtained by retrospective analysis of the clinical examination findings and history data.

**RESULTS AND DISCUSSION:** In the study population, there were 67.1% of sexually active students, 74.0% male and 61.2% female, with the highest rate recorded at School of Transport Studies (80.0%) and lowest at School of Science (51.14%); 48.1% of sexually active female students did not present for gynecologic examination. Considering protection and contraception, regular or occasional use of condom was most commonly reported (65.83% and 16.66%, respectively), followed by coitus interruptus (16.16%), fertile-day based protection (15%) and hormonal contraception (3.33%). Menstruation cycle disturbances associated with hirsutism were processed as a separate entity. Varicocele was detected in 11% of male students. Pathologic Pap test with cervical intraepithelial neoplasia 1 (CIN 1) was recorded in 31%, CIN II in 1%, and HPV related lesions in 4% of female students that underwent gynecologic examination. Data were also collected on other risk behaviors that may influence sex behavior and health in general. Cigarette smoking was recorded in 41.5% (52.3% male and 37.9% female); alcohol intoxication on more than three occasions in life in 55.9% (72.5% male and 44.1% female); and marijuana experimentation in 16.9% (22.7% male and 14.4% female) of students included in the study.

**CONCLUSION:** The program of health measures for reproductive health control in adolescents implemented to date has proved inadequate. The program should cover both sexes and be conducted through multidisciplinary collaboration. The establishment of respective counseling centers is indispensable for successful program implementation. A protocol for the initial gynecologic examination, clinical examination of male students, and work with couples should be developed and adopted by consensus.

*Key words: depopulation, sexual behaviour, education*

## **PATHOLOGICAL FINDINGS OF FEMALE PATIENTS AGED 0 DO 26 YEARS OPERATED FOR SEX ORGANS TUMORS FROM 1978 TO 2003 (258)**

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Aim of study was to analyze patohistological findings of female patients aged 0 to 26 years operated for sex organs tumors from 1978. to 2003. Study was conducted at Clinical gynaecological hospital Petrova Clinical Hospital Centre Zagreb. Medical records of age, clinical findings, surgical procedure and patohistological findings were analyzed. Total of 3391 women of that age group had surgical operation. Lowest number of patients 27 was in 1979, and highest number of patients was 425 in 1998. Uterine cervix surgery makes 73,6 % of all operations, followed by adnexal and uterine corpus operations. In uterine cervix surgery group most common are operations for cervical intraepithelial neoplasia (CIN) which makes 59,6 % of operations. number of uterine cervix surgery operations rise sin analyzed period from 10 in 1978. to 217 in the year 2003. Ratio was 35,7 % of all surgical operations in the year 1978 with rise to 45,2 % of operations in 1984. In the year 1985. surgical operations of uterine cervix for the first time make majority with 57,6 % of procedures to 89,6 % in the year 2003. In uterine cervix surgical operations group most common are those caused with high grade intraepithelial neoplasm CIN III 62,9 %, followed with CIN II 21,2 % and CIN I with 15,9 % of operations. Youngest patient in this group was 16 years old. This emphasize a change in female genital tract pathology and make a need for new diagnostic and prognostic protocols implementation.

*Key words: sex organs tumor, cervical intraepithelial neoplasia*

## HPV INFECTION: CLINICAL IMPORTANCE AND CURRENT DIAGNOSTICS (250)

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Sponsored by Adriamed-Roche Diagnostic

Cervical cancer is the second most common cancer among women worldwide with 440 000 new cases reported annually. Persistent infection with human papillomavirus (HPV) is the principal cause of cervical cancer and its precursor cervical intraepithelial neoplasia (CIN). The presence of HPV has been detected in greater than 99% of cervical cancers. There are more than 100 different genotypes of HPV, and approximately 40 different HPV genotypes that can infect the human genital mucosa. The high-risk HPV genotypes (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68) are associated with high-grade cervical dysplasia and cervical cancer, while the low-risk HPV genotypes (6, 11 etc.) are often associated with benign low-grade intraepithelial lesions or condylomas.

Sexually transmitted infection with HPV is extremely common, with up to 70% of all women experiencing exposure to HPV at some point. The majority of HPV infections clear spontaneously, but persistence of a high-risk HPV is a significant risk factor for the development of cervical cancer.

There is a general consensus that CIN 3 is a lesion at high risk of progressing to invasive cancer and requires treatment.

So the general purpose of cervical cancer screening programmes today is to detect the presence of high-risk HPV in CIN lesion.

Papillomavirus is extremely difficult to culture in vitro, therefore nucleic acid (DNA) testing by is the method of choice for determining the presence of an active cervical HPV infection.

Development of standardized molecular techniques has enabled detection of HPV DNA in cervical smears which resulted in the introduction of these methods in cancer screening programmes, either as primary or secondary screening in combination with Pap smear.

In 2000, Digene hybrid capture II HPV DNA<sup>®</sup>test (based on soluble DNK/RNK hybridization with high and low risk probe cocktails), has been FDA approved and since then many evaluations of the test have been published.

This method has very high negative predictive value but the crossreactivity between two risk groups has been found in up to 11% of cases. Therefore standardized PCR tests promise better sensitivity and specificity.

Recently Linear array HPV genotyping test has been developed which detects 37 anogenital HPV DNA genotypes. Application of an HPV typing test include the evaluation of acquisition and clearance of specific HPV types, monitoring persistence of specific high-risk types, monitoring incidence of reinfection, effectiveness of therapy, screening programmes in pre- and post-vaccine introduction as well as epidemiologic tracking of the natural history of HPV infections.

*Key words: cervical cancer, human papillomavirus*

# CHLAMYDIA TRACHOMATIS INFECTION IN THE FEMALE REPRODUCTIVE TRACT

## A MAJOR CONCERN FOR REPRODUCTIVE HEALTH (253)

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Sponsored by Pliva

Chlamydiae are small gram-negative obligate intracellular microorganisms that preferentially infect squamocolumnar epithelial cells. Chlamydiae have a unique biphasic life cycle that is adaptable to both intracellular (reticulate body) and extracellular (elementary body) environments.

Chlamydia trachomatis (CT) is one of four species who belong to genus Chlamydia, family Chlamydiaceae and order Chlamydiales.

CT is the most common sexually transmitted bacterium, one of the leading causes of pelvic inflammatory disease (PID) and infertility in women. CT infection is responsible for a wide spectrum of diseases that include cervicitis, salpingitis, endometritis, urethritis, epididymitis, preterm birth, intrauterine growth restriction, low birthweight, conjunctivitis and neonatal pneumonia. Untreated, CT infection can lead to serious complications. Ascending infection may include endometritis and salpingitis leading to PID. Salpingitis may lead to tubal scarring, infertility and ectopic pregnancy. About 50-80% of these women are asymptomatic. Chlamydial infections increase the risk for acquiring HIV infection by genital mucosal inflammation.

The rates of chlamydia are highest in adolescent women. Approximately 30% of women who are not treated will develop PID, and one-third of them will become infertile, have ectopic pregnancies or develop chronic pelvic pain. About 20% of all CT infected women suffer from partial or complete tubal occlusion. CT infection during pregnancy leads to infant conjunctivitis, pneumonia and maternal postpartum endometritis. In studies of infants born of mothers who have cultured positive to CT, approximately 25% of the infants have subsequently cultured positive to CT.

Clinical significance of persistence has been proved. Indirect indices of the existence of persistent CT infection are: duration over two months or undefined duration, previous episodes of urogenital chlamydial infection, inefficacy of previously applied antimicrobial therapy, use of antibiotics ineffective to chlamydia, absence of chlamydial infection in sexual partner and immune system insufficiency.

CT acute infections have been diagnosed by cell culture, direct immunofluorescence, enzyme immunoassay, direct DNA hybridization and more recently by nucleic acid amplification tests. In chronic or persistent chlamydial infections, conventional tests are negative.

Today, a single oral dose of 1 g azithromycin is the preferred treatment for acute infection. For the treatment of persistent types of chlamydial infections, the total dose of 3.0 g azithromycin is recommended, applied as single therapy 1x1.0 g on the first, seventh and fourteenth day from the treatment onset. As chlamydia is a sexually transmitted infection, her partner (or partners) will also need treatment. She and her partner must abstain from sex until they have completed treatment to avoid reinfection. A test of cure is then unnecessary.

The use of condoms provides the best protection. Prevention of these consequences is dependent upon screening to identify asymptomatic infection and effective partner management to decrease the risk of reinfection.

*Key words: chlamydial infections, reproductive health*

**EVRA: FIRST WEEKLY CONTRACEPTION  
EFFICACY OF THE PILL  
SIMPLICITY OF THE WEEKLY DOSING (255)**

Sponsored: Janssen-Cilag, div. of Johnson & Johnson S.E.d.o.o.

Evra is a first transdermal hormonal contraceptive method that enables efficacy of the pill combined with simplicity of the weekly dosing.

Oral hormonal contraception is a highly effective contraceptive method, if taken properly.

Yet, according to the USA national statistic data, more than 20% of unintended pregnancies happen due to irregular oral contraception usage. The problem of non-compliance with oral contraception is even higher among adolescent population and it is often a cause of unintended pregnancies in adolescents.

According to the marketing research data conducted in Croatia, year 2005, one of the main obstacles for women taking the oral contraception is necessity of pills usage every day in the same time. In the studies that have explored women opinions regarding the optimal usage schedule of contraception, women prefer the weekly administration.

Evra was first registered in USA in 2002 and represents a first throw innovation after the 40 years of the pill invention.

Evra contains 20 mcg of ethinyl estradiol and 150 mcg of norelgestromin, which is an active metabolite of norgestimate (highly prescribed gestagen with a very low androgenicity).

Efficacy and tolerability of Evra are comparable to the efficacy and tolerability of the pill.

Evra has no effect on body weight (same as placebo during 13 cycles), and has very low incidence of breakthrough bleeding, even from the first cycle of usage.

Evra offers stable serum concentration of hormones (estrogen and progestin) with only once a week application. Beyond simplicity of usage, additional advantage with Evra is 2 days "forgiveness" period (compared to only 12 hours with missed pill).

Preferable application sites are: upper outer arm, buttock, abdomen or upper torso (except breasts).

Evra patch is equally effective and adhesive no matter of climate or activity conditions.

Evra patch was tested under different conditions (swimming pool, sauna, treadmill, cool water).

Due to unique transdermal administration route, Evra avoids hepatic "first pass" effect.

In clinical trials Evra showed to have a superior compliance, compared to oral contraception. The additional compliance is the highest in the adolescent population.

In conclusion, Evra offers same efficacy and tolerability as a pill, with significantly more compliance, specifically in adolescent users. This can lead toward less contraceptive failure.

With oral contraception, each month, a woman has 21 chance to forget and only 12 hours to remember.

With Evra, a woman has only 3 chances to forget and 48 hours to remember.

*Key words: Evra, contraception, transdermal administration, efficacy, simplicity, weekly dosage, 2 days "forgiveness" period, superior compliance, less contraceptive failure*

## STUDENTS & SEX & STD (259)

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Students & Sex & Std is a research among Dutch students about determinants of safe sex and testing on std. The main question of the research is: *“What determinants are of influence on ‘std-prevention behaviour’ of students?”*

The research contains three main subjects;

- primary prevention of std (sexually transmitted diseases) / safe sex,
- secondary prevention of std / testing on std and
- information methods.

The methodology used in this research is written questionnaires. These questionnaires have been distributed personally during several lectures of the courses ‘Commercial Economics’ and ‘Social Pedagogical Aid’ within University Windesheim in Zwolle. A total of 164 students completed the questionnaire.

Results - Primary prevention of std

Condom use and the intention to use a condom under young people is low. Many research participants are risking std because their reason for not using a condom does not exclude the danger of std. The participants have a negative attitude towards using a condom and also the knowledge concerning std is insufficient. It turned out that condom use is predicted by the subjective norm ‘partner’ for a large part. This means that the opinion of the partner is an important predictor of condom use.

Results - Secondary prevention of std

Only a few participants of the research 'Students & Sex & Std' have been tested for std in the past. The reasons the participants give for not being tested is that they have no symptoms or consider the chance on std small. The intention for testing on std without having symptoms is low. Std however can be present without symptoms, but apparently students are not really aware of this. Many participants did not know that the Regional Health Service (GGD) offers testing on std, so the Health Service can gain a lot here, also because shame is a bigger issue within testing on std at the general practitioner than it is within testing on std at the Health Service. Knowing someone who has been tested on std in the past appears to ensure people are more conscious in considering the possibility of testing themselves on std. It is interesting to know that the intention to test on std when there are no symptoms is partly predicted by the intention to use a condom with a new partner. This relation is positive; it means that when the intention to use a condom with a new partner decreases, the intention to test on std, when there are no symptoms, will also decrease. This is of course not favourable for std prevention.

Results - Information methods

Participants of the research say they have very little need for information, although it is also concluded that the knowledge regarding certain topics is not sufficient. Friends appeared to be the most important source of information. ‘Information by a nurse of the Health Service’ was for the participants the most suitable information method for information about both safe sex and testing on std.

Recommendations

The research has many interesting conclusions, but also a number of proposals for interesting follow-up studies. Besides this the next five recommendations have been developed:

- To raise the familiarity with testing on std at the Regional Health Service
- To make young people more conscious that std can be present without symptoms
- To stimulate save sex even with a steady partner
- To combine ‘fun’ and information
- To increase knowledge on std

*Key words: STD / sexually transmitted diseases, STD-prevention, primary prevention, secondary prevention, information methods, determinants, students*