

11370

Meeting on the Development of Teaching
Modules on Various Aspects of
Family Planning

ICP/MCH/025/7
UNFPA RMI/79/PO5
26 May 1983

EURO 7-9 June 1983



sex education

TEACHING MODULE IN SEXOLOGY
FOR HEALTH PROFESSIONALS

by

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INTRODUCTION

The purpose of this teaching module is to give knowledge and understanding of the complexity of human sexuality - sexology. And sexology needs an interdisciplinary approach since it consists of parts from many different fields: psychology, sociology, anthropology, law, medicine, biology etc.

In the report of the WHO meeting 1975: Education and Treatment in Human Sexuality - The Training of Health Professionals, it was stated

"A growing body of knowledge indicates that problems in human sexuality are more pervasive and more important to the wellbeing and health of individuals in many cultures than has previously been recognized, and that there are important relationships between sexual ignorance and misconceptions and diverse problems of health and the quality of life." ... and further

"The need for education and training in human sexuality has become increasingly obvious as a public demand for sexual health care and inadequacies in the present education and training, have become evident."

Since feelings, mind and bodily functions are working close together in sexuality, this makes it difficult to present the content of this module in chapters clearly separated from each other. Learning objectives phrased in terms of behaviour can't either be presented for each chapter since these are so intermingled. Instead we will phrase the intentions and the goals for the whole module together, as follow :

INTENTIONS - GOALS FOR THE TEACHING MODULE:

- * To get basic information on sexology
- * To train to discuss own feelings towards different sexual activities

Intentions - goals for the teaching module .. cont.

- * To be aware of own sexual hang-ups and if possible the reasons behind
- * To be able to use appropriate terminology without embarrassment
- * To substitute myths with facts
- * To understand how and that different factors influence the sexuality of the individual
- * To help the client express his/her sexuality without moral judgment

The realization of these intentions - goals will help you to talk freely and openly about sexuality, accept others' views on sexuality, even if they differ from yours - and not to impose your own sexual hang-ups, taboos or attitudes upon your client/s/ in your education/teaching/training or information on sexuality.

Chapter 1	will deal	with Sexual Anatomy and the Physiology of Human Sexual Response
Chapter 2	" "	with Sexual Development and Sexual Behaviour at Different Ages
Chapter 3	" "	with Sexual Identity - Heterosexuality and Homosexuality
Chapter 4	" "	with Sexual Dysfunctions and Disabilities
Chapter 5	" "	with Possible Therapies

Methods of Teaching

Methods of training are: Suggested discussion topics, suggestions for independent individual or group-work, questions to answer on your own and/or in the group about attitudes, myths and facts and role-play.

Some additional advice to the teacher in using the module:

- * Don't follow the order given of the chapters if another order is more suitable for you and/or your group of trainees
- * Ask the trainees to bring articles, books, questions which they want to discuss

Some additional advice ... cont.

- * Establish contact with a librarian/family planning institution/sexology clinic/gynecologist etc who can provide you with materials connected with sexology from your country
- * Do the same way with professionals you regard as knowledgeable in some or all fields discussed in the module. If possible invite them to discussion to get their support/expertise
- * Make a list of resource-persons in the field
- * After collecting own materials distribute it among the trainees to review the different pamphlets etc according to the facts/ideas presented in this module

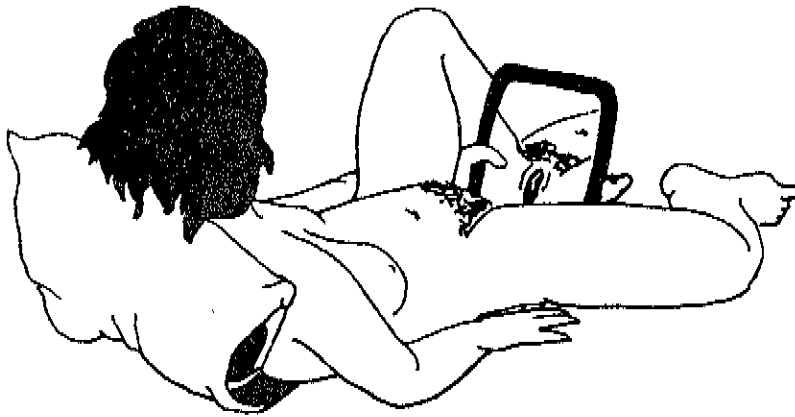
REMEMBER that integrating a new approach and new knowledge on sexuality is a slow process in the individual, which can't be done overnight or forced by others. Every individual trainee and yourself must melt the new information, think it over carefully and decide what to integrate, how and why.

Suggestions to handle and facilitate the communication in the group, and between the group and yourself:

- * In the beginning of the training divide the trainees two by two and let each for the other present two things they are good at. In the introduction of the trainees let each one present their partner, not themselves
- * Try to establish a friendly, permissive atmosphere by:
 - a/ position^{ing} the tables/chairs so every one can see the others' face
 - b/ show^{ing} that you welcome questions and be honest if you can't answer these directly - this can be given to the group as a task to explore
- * Be aware of the feelings in the group - support those who have difficulties with separate talks afterwards
- * Respect the groups special interest for certain questions and deal with these directly - otherwise you can lose the confidence of the group
- * Allow negative attitudes to surface, otherwise you can't deal with the eventual misconceptions that lie behind (you have no possibility to alter a negative attitude if you don't know of its existence!)
- * Be aware of that some aggressive outbursts can be healthy and natural in the process of integration
- * Allow time for small group discussions with no written questions other than the given task to discuss the content of a certain chapter or part of a chapter

CHAPTER 1 SEXUAL ANATOMY - PHYSIOLOGY OF HUMAN SEXUAL
RESPONSE

Many women have never looked at their sexual organs clearly in a mirror, nor examined these by touching. How does that effect their total body image? Their integration of their sexual parts? Their feelings about it?



Even more common is that few women have seen pictures of other womens' genitals. Some have suffered unnecessarily because they think that their genitals are mischaped, or too small, too large, too dark or too extended or assymetric etc.

The female external sexual organs (See figure next page)

- 1/ The labia majora, the external mucuous folds of the vulva (the larger lips, the outer lips). Pubic hair grows on the lateral surface. Both the medial and the lateral surfaces contain many sweat glands. The labia majora usually meet in the middle to protect the opening of the urthra and the vagina.
- 2/ The labia minora, the inner mucuous folds of the vulva (the smaller lips, the inner lips). Labia minora consist of muscular tissue without fat cells and their surfaces contain large glands.
- 3/ The clitoris is built like a minitiature penis with a shaft and a small glans. The clitoris has many free nerve endings, which arc extremely sensitive.
- 4/ The perineum, which is the region of the body at the lower end of the trunk, between the genital organs and the rectum.

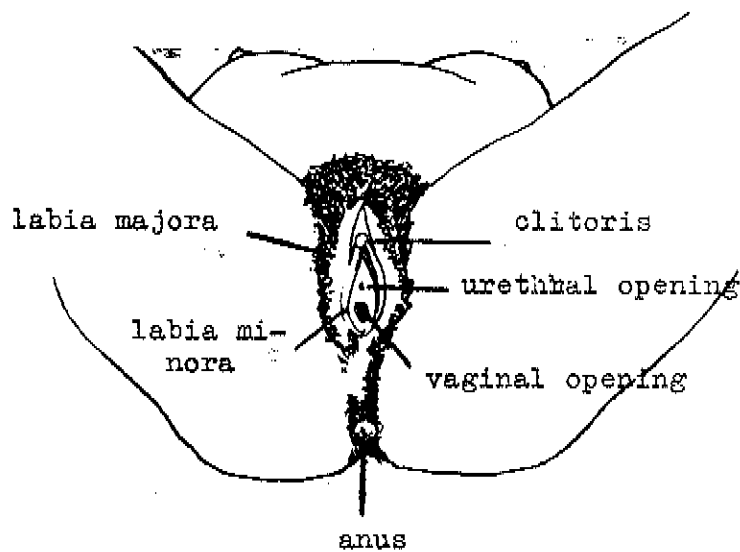
Another word to explain is the vulva, which is the external genital parts of the female including the labia majora and minora, the clitoris and the area between the clitoris and the labia minora.

Excercise: Think about and discuss:

How many names do you know on the female sexual organs?

How many names do you know of the male sexual organs?

If you can find more names on the male's sexual organ discuss WHY?



Variations in appearance of the women's external sexual organs.

Variation of the appearance of the genitals is common and to a great extent from one woman to another. The pubic hair distribution can vary in amount and pattern. The labia can vary in shape, size and colour. The clitoris can vary in position and in size from a couple of mm:s to about one cm.

THE FEMALE INTERNAL SEXUAL ORGANS

- 1/ The vagina
- 2/ The cervix
- 3/ The uterus
- 4/ The Fallopian tubes (two)
- 5/ The ovaries (two)

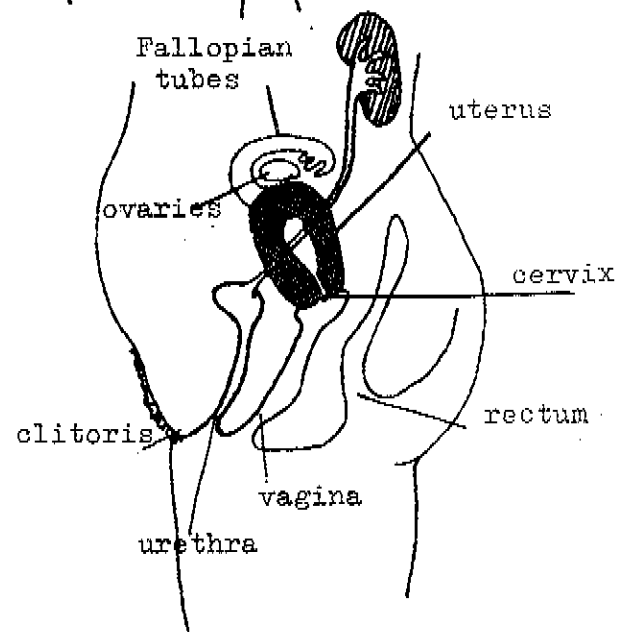
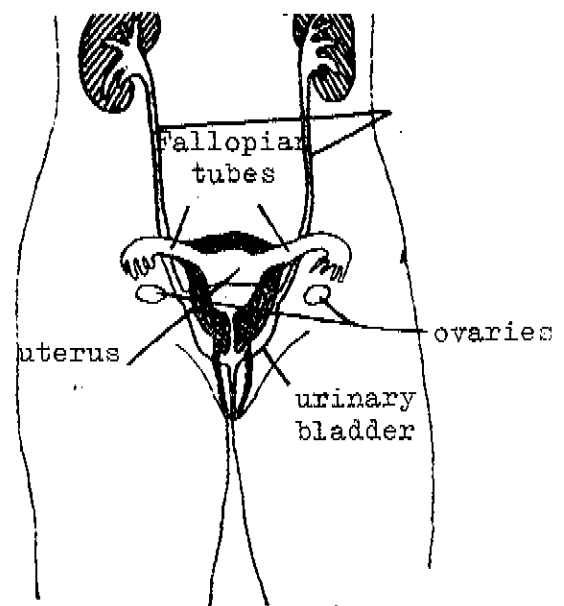
There are individual differences in size, position towards each other and appearance - as well as differences due to childbirth, age and disease.

Question:

How can childbirth change vagina? How can age change vagina?

Discuss this according to experiences in the group.

The vagina is a potential space, rather collapsed in the unstimulated state.



The vagina is a muscular organ, very elastic, and can adjust to the penis during intercourse, independent of the size of the penis. This fact contradicts the myth that a large penis is better than a small one for the female sexual satisfaction. The walls of the vagina are lined with mucosal surface, which is the major source of vaginal lubrication, because there are no secrete (-ion) glands in the vaginal walls.

The opening of the vagina is partly covered by the hymen, a thin skin-fold. The hymen can be thin or thick - some women don't feel it at their first intercourse - some few women with a narrow opening can need help to widen it before intercourse. There is always an opening in the hymen so the menstrual flow can pass.

Farthest into the vagina is the cervix located. It feels like a round, soft protruding object. In the opening of the cervix is an entry to the uterus (the endocervical canal). This entry have numerous secretory glands, that produce cervical secretions, mucus, which vary through the menstrual cycle. The secretions are thin and waterly before or at the time of ovulation, otherwise these secretions are thick and viscous and form a plug which blocks the entry to uterus.

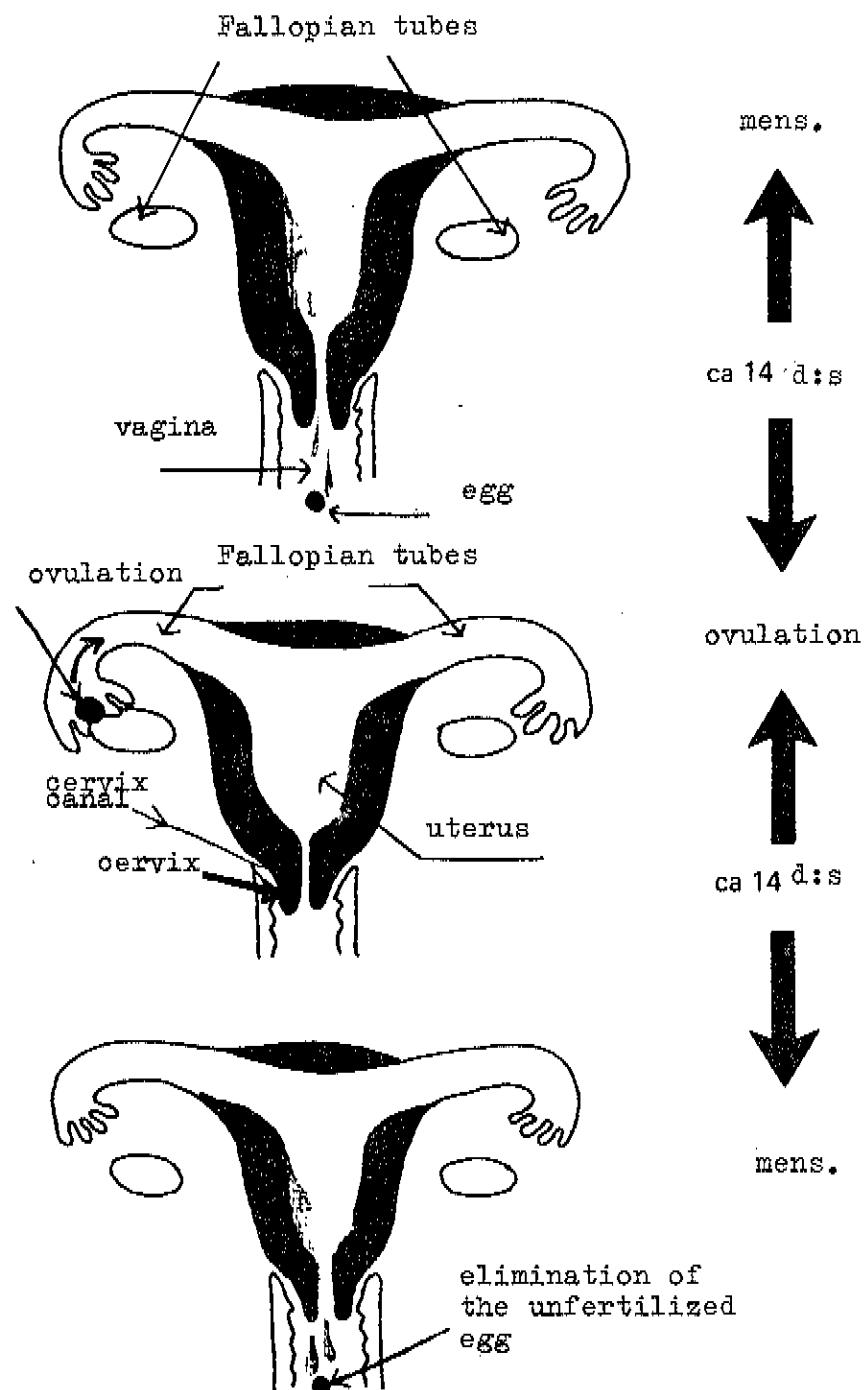
The uterus is close to the vagina. The lining of the uterus (endometrium) and the muscular part of the uterus (myometrium) function separately. The muscular component is at work in the onset and completion of labour and delivery, in breast-feeding, in orgasm, and in eliminating the unfertilized egg.

The lining of the uterus changes cyclicly due to the hormonal influence. To prepare for the possible implantation of an egg the lining thickens and becomes more vascular due to the increasing estrogenic activity. If the fertilized egg implants, the lining changes and participates in forming the placenta (a vascular spongy organ of interlocking fetal and maternal tissue by which the fetus is nourished) and also in forming a bag with fluid, which supports the growing fetus.

When fertilization not occur the thickened lining begins to

break down and is eliminated through the menstrual flow together with the unfertilized egg.

The menstrual period lasts about 3 - 7 days and varies from woman to woman. The lining will be recreated with appropriate hormonal stimulation in the next menstrual cycle. The time between menstruations is around 28 days. Interval variations of 21-30 days in women's cycles are normal. Some women have regular menstruations - some irregular. Worries, travels etc can postpone the menstruation. Variation in the amount of flow is common.



The ovaries are paired structures which periodically release the eggs (ova). From the time menarche starts until menstruation stops at the age of 45-55 ^{if} one or sometimes more eggs released every fourth week (menstruation cycle), but not during pregnancy or if the woman uses oral contraceptives.

The ova looks like a tiny drop of a jelly-like substance. Within it is the nucleus containing the chromosomes. More about this later.

The Fallopian tubes are paired oviducts, which lead from uterus to the ovaries ending in fingerlike extensions. Fertilization usually takes place in the Fallopian tube, when one sperm has succeeded in pressing through the outer wall of the ova. The sperm and the ova, each one with one set of chromosomes, join as one cell. The nuclei break down and rearrange themselves as a single nucleus with one pair of each chromosome.

Discussion - questions:

At what age did you get sex information about the female sexual organs, menstruation, fertilization?

- * Your feelings about it?
- * The content of the information?
- * Misconceptions in compare with the presented material?
- * Which one gave you information?
- * The way of giving it. With positive undertones? With negative?

ROLEPLAY

A nurse/doctor is visited by a woman who seems to know very little about her sex organs and their functions. She is very disturbed about menstruation - Why do women need to have it?

Use the figures, explain the different organs and name these, ask her to name the organs. Check what words she understands. What words do she use?

Alternative roleplay:

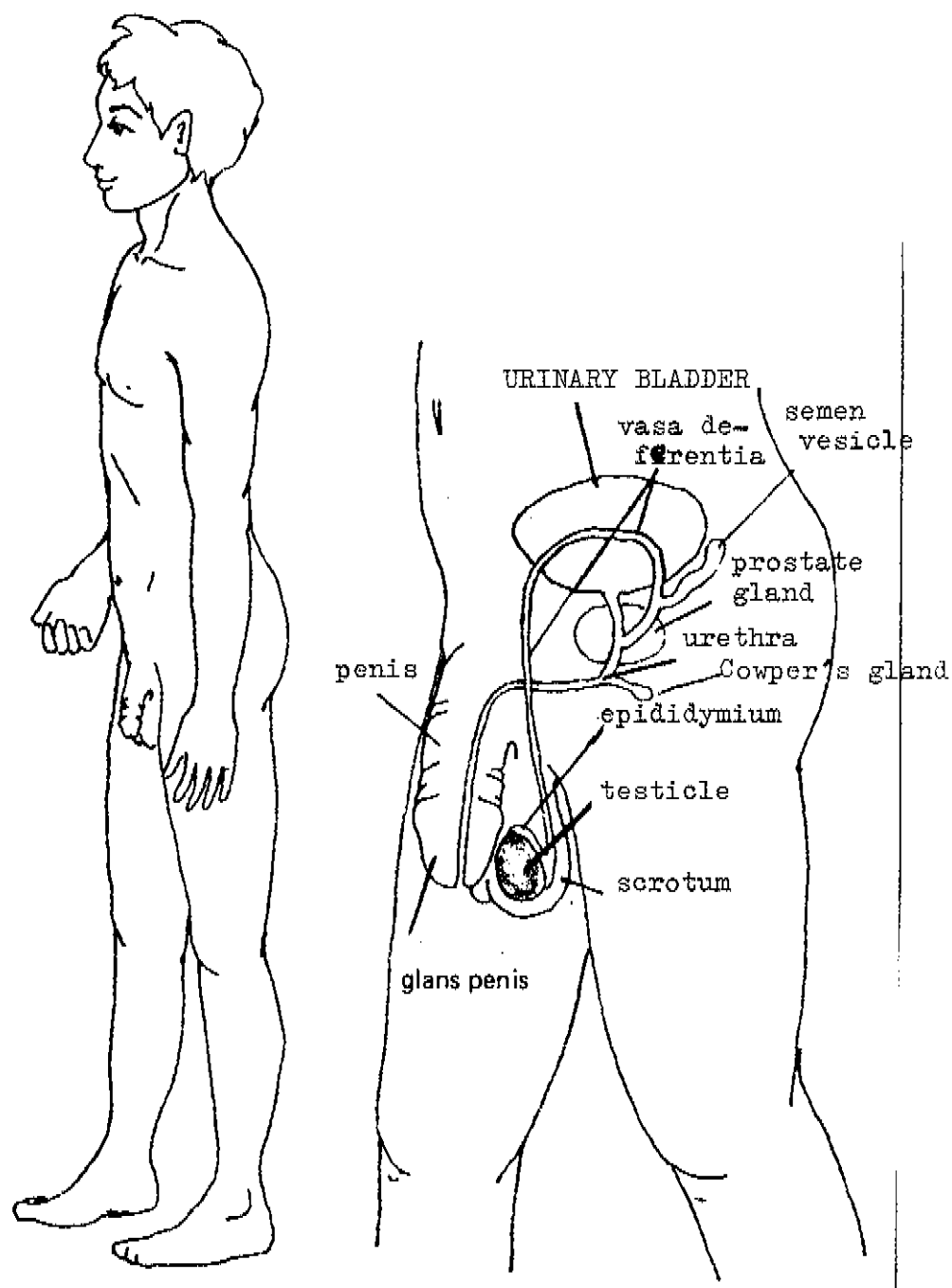
The client is the woman's husband with a wife described above. He is even more ignorant of female anatomy.

Possible roles: Male doctor/nurse, female dr/nurse, wife, husband. Change roles so everyone plays both sexes & client/dr.

The first exercise is meant to create a positive atmosphere by sharing memories from childhood.

The roleplay is meant to make the participants more secure and comfortable in naming and talking/explaining about different parts of female anatomy.

THE MALE EXTERNAL AND INTERNAL SEXUAL ORGANS



The male sexual organs are:

- 1/ the penis
- 2/ the scrotum
- 3/ with the testicles and the Leydig cells
- 4/ the prostate gland
- 5/ the vasa deferentia (two)
- 6/ the seminal vesicles (two)
- 7/ the Cowper's gland (see figures on male sexual response)

The penis consists of three separate erectile tissues, the corpora cavernosa (paired) which lie beside each other, above the corpus spongium, which contains the urethra and also forms the glans penis - the extremely sensitive part (compare with the clitoris' glans) of the penis. The tissues contain a spongelike irregular network of vascular empty, collapsed spaces = the flaccid penis.

During erection the vascular spaces fill with blood and swell. The two corpora cavernosa are surrounded by a thick, rigid fibrous membrane, and become therefore very hard when enlarged. The corpus spongium is surrounded by a relatively thin membrane and becomes not so hard even during maximal erection.

The size of the penis

The size of the penis varies very much from man to man and has constantly been a source of worry for any man without a very large penis. The average flaccid penis ranges from 8,5 - 10,5 cm in length and 2,5 - 3,5 cm in diameter. When erect the penis doubles its length. ^(Small one's more than large one's) - Most men have grown up with tales and myths about the large penis, not only about its benefit to the woman's sexual pleasure but also as a symbol for masculinity, force, success.

The appearance of the penis, apart from its size.

Pubic hair distribution, amount of hair and penis' pigmentation vary also. But men are not so concerned about these variations in appearance, as the women are of their sex organs'. It is more likely that the man is exposed as a child, adolescent and adult to other boy's/man's penis than the women are to other woman's and themselves sex organs - due to position, shape and cultural custom.

The scrotum is a thin sack containing the two testicles (testes), which contracts by exposure to cold and causes the testes to be drawn up against the perineum. The exposure to heat makes the scrotum relax and the testes to hang away from the body. These thermoregulators are important for the development of spermatozoa, because this is temperature-sensitive.

The testicles usually descend to scrotum prior to birth. In contrary to the women's ovaries, which release egg once a month, the spermatozoa (sperm) is produced regularly throughout life, in the testicles where they also mature.

The testes also produce steroid hormones (testosterone) These two functions: the production of sperm and hormones (in the Leydig cells) are under separate control from the pituitary gland. But if testosterone-production is seriously impaired the production of sperm is usually disrupted - but not the other way around. After maturation the sperm is brought by a fluid produced in the testicles through the vasa deferentia to the seminal vesicles.

The vasa deferentia are two tubelike structures that conduct the sperm from the testes and from the seminal vesicles to the urethra.

Vasectomi is sterilization of the male through cutting off the vasa deferentia. Since the sperm is only a very small part of the emission (described later), the individual male experiences no difference in the amount of semen. Neither is the sexual drive, or activity affected by vasectomi. The same goes for the sterilized woman.

The seminal vesicles are paired structures that lie behind the base of the bladder and - together with the vasa deferentia form the ejaculatory ducts. The ejaculatory ducts open into the urethra. Most part of the fluid volume of the ejaculate (semen) comes from the seminal vesicles.

The prostate gland is normally of the size of a chestnut and (can be palpated through rectum, which lies immediately behind) ^{is situated} below the bladder. The prostate surrounds the urethra

where it emerges from the bladder. The prostate produces a clear fluid - one part of the seminal fluid (semen). It is also a major location for prostaglandin. The prostatic function and size are dependent of androgen.

Discussion of following myths -

A sterilization leads to impotence (inability to have an erection).

Female sexual satisfaction is related to the size of the penis.

Write down the correct answers = fact, which you can find in the text above.

ROLEPLAY

A male client approaches you and says that he doesn't dare to be near a woman. He is so ashamed of his penis - he thinks it is too small.

A female client is very afraid of men. The sight of an erect penis, which she saw in a book frightens her and she is convinced that a man can hurt her, if she ever tries a sexual relation with intercourse. - Change roles and sexes!

REPEAT the female and male sexual organs!

Fill in the functions, location, structure/appearance on a separate sheet.

- | | |
|--------------------------|-------------------------|
| 1. The labia majora | 1. The penis |
| 2. " " minora | 2. The scrotum |
| 3. The clitoris | 3. The testicles |
| 4. The vagina | 4. The vasa deferentia |
| 5. The cervix | 5. The seminal vesicles |
| 6. The uterus | 6. The prostate gland |
| 7. The Fallopian tubes - | 8. The ovaries |

THE PHYSIOLOGIC SEXUAL RESPONSE

The general sexual arousal (the physiologic preparation of the body) for intercourse is triggered by outer and inner stimuli (cerebral erection). The complexity of this is huge. Many things join together - sometimes one single spontaneous thought can start the whole development. What we see, hear, smell, memories of other relationships or other sexual situations with a loved one, the sexual signals we send out, interpret and accept, the situation we are in, the environment, music, touching, kissing - all are units that can be combined in sexual arousal. - All senses - body and mind work close together. Even if we here for case of simplicity try to cover the bodily reactions, don't forget that the unity of mind and body are demanded to get fully aroused. As you can see in the chapter on sexual dysfunction, the brain - the mind has the capacity to both create psychogenic sexual dysfunction and to compensate pure organic sexual dysfunction..

The human sexual response can be divided into four phases:

- 1/ The excitement phase
- 2/ The plateau phase
- 3/ The orgasm phase
- 4/ The resolution phase

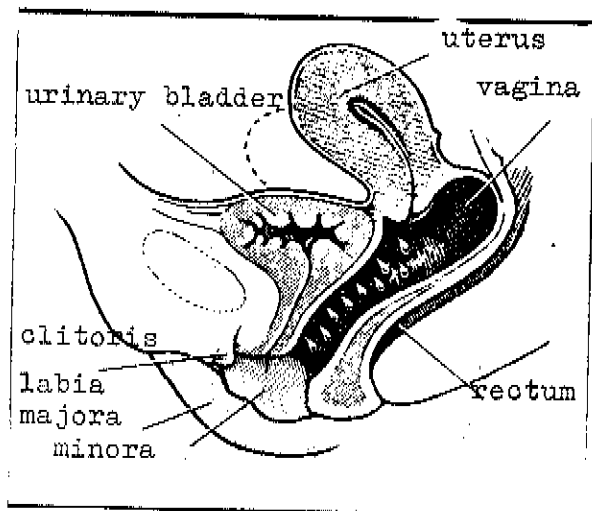
The various phases are not clearly marked from one another and may differ considerably both in one person at different times and between different people.

THE EXCITEMENT PHASE

The first response to any form of sexual stimulation is called the excitement phase, which can vary in time and is characterised by increasing sexual excitement. There is a progressive increase in muscular tension in primarily the genitals in both men and women. For both sexes the breathing, the heartbeats and bloodpressure increase.

Impotence inability to get sexually aroused physiologically:
woman: marked dryness in the vagina together with low, poor bloodflow to clitoris and labia.
man: poor bloodflow to penis.

EXCITEMENT PHASE

The excitement phase, Woman:

Clitoris: increases due to bloodflow to two or three times its normal size.

Labia majora & minora: increase in bloodflow.

Vagina: vaginal lubrication through sweating from the vaginal walls. Vagina expands.

Uterus and cervix: are elevated upward - backward, in the vagina the inner 2/3rds.

Nipple erection.

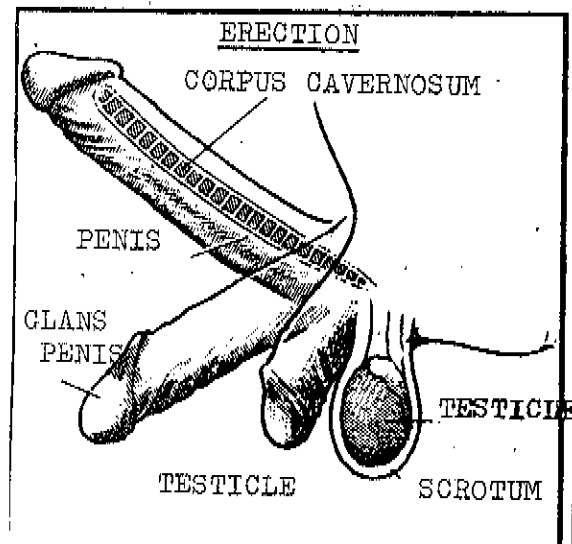
The excitement phase, Man:

Penis: erects, gets stiff, enlarged and lifts upward, due to bloodflow to corpora cavernosa.

Testicles: become partially elevated.

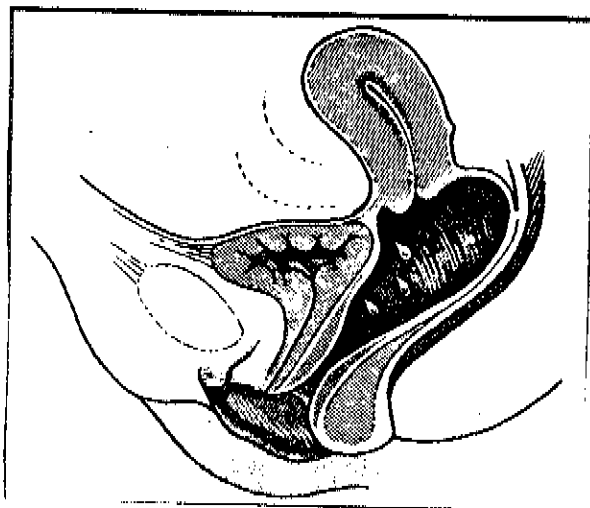
Scrotum: changes in appearance, flattens and the skin ridges smoothen out.

EXCITEMENT & PLATEAU PHASES

THE PLATEAU PHASE

The excitement phase passes into the plateau phase in which sexual stimulation is maintained at a fairly even level. The duration of the plateau phase is indefinite - short or long, and limited by the effectiveness of the mental and situational stimuli, desire, training and biology of the partners involved. It is a high degree of sexual arousal prior to reaching the orgasmic threshold level.

PLATEAU PHASE

The plateau phase, Woman:

Labia majora & minora: swell further and become purple.

Vagina: outer third swells, as a result the opening of the vagina narrows (gripping), which means that the vagina surrounds penis in a "grip". The inner 2/3rds becomes further enlarged and expanded.

Uterus: elevates further at the same rate as the vagina becomes expanded.

Clitoris: the shaft of the clitoris contracts

The plateau phase, woman cont:

and withdraws under the mucuous membrane fold and is no longer visible. If stimulation is discontinued, no orgasm is reached. But the nearest cm:s around the clitoris seem to be equally sensitive, so stimulation of the entire region is sexually sufficient. Some women do not want direct stimulation of the clitoris, for them the area is too sensitive- nearly painful. Late in the phase, the areola become engorged, which masks the nipple erection. Increase in breast size.

Sex flush develops in half of the women and in some men.

Some women only reach the plateau level and do not have an orgasm. If no orgasm occurs, there is no immediate relaxation and the blood, that has accumulated in the genitals fails to disappear after a few minutes, as it does following an orgasm. It can persist instead for a long time and be troublesome since it often produces a sense of heaviness in the loins and pains in the small of the back.

The plateau phase, Man:

Penis: minor increase in the diameter of the glans. The colour deepens.

Testicles: the size increases. As sexual tension reach towards orgasm the testes continue to elevate and begin a process (scrotum) of rotation so the surfaces of the testes rest in contact with the perineum.

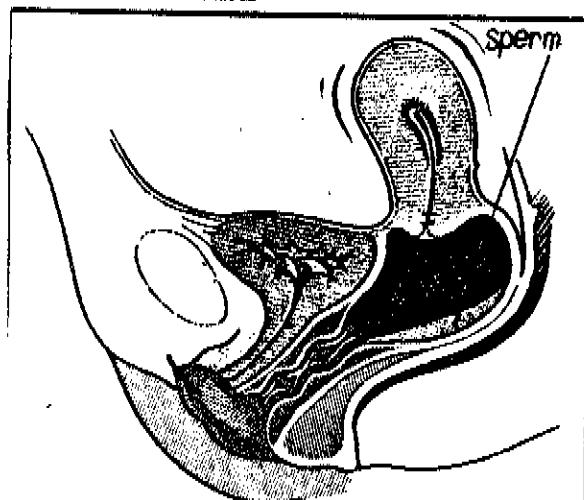
Cowper's gland: a small amount of fluid from the male urethra (see figure on emission phase) may appear - this is secretions produced by C.s gland. Sometimes this fluid can carry live sperm.

THE ORGASM PHASE

The sexual response of the man/woman increases slowly to reach the intense phase of orgasm, which lasts for only a few seconds. Orgasm is the physiological release from the built-up mental and muscular tension. It has been termed "climax" because of its peak of psychological and physical intensity and attendant feeling of satisfaction. Orgasm is therefore not = ejaculation nor the rhytmical contractions of the uterus.

The attention to the psychological aspects of satisfaction is more crucial than the attention to the physiological aspects. Because satisfaction for both men and women may be had without orgasm. The satisfactions of the individuals concerned should therefore be the primary concern for a health care professional.

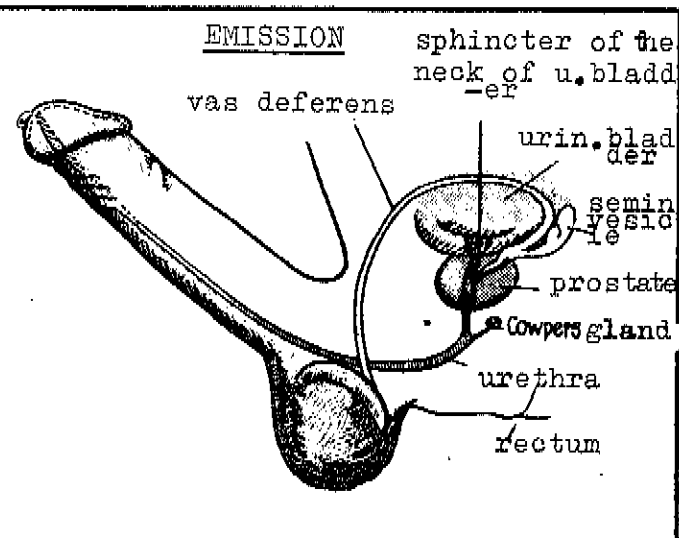
ORGASM PHASE



The orgasm phase, Woman:

Vagina: simultaneous rhythmical contractions of the outer third of the vagina (the orgasmic platform), the uterus and the perineal muscles - rectal sphincter, beginning at 0,8 sec:s intervals and then diminishing. Women who have had a hysterectomy or surgical excision of the clitoris can reach orgasm.

ORGASM PHASE I



The orgasm phase, Man:

In the male there are two physiological coordinated phases of orgasm: emission and ejaculation.

Emission: is the evacuation and collection of the seminal fluid in the posterior part of urethra.

This is caused by a serie of contractions of the vasa deferentia, the prostate, the seminal vesicles. This fluid with its concentration of live spermcells, is produced by the same three sources: the prostate, the seminal vesicles, the vasa deferentia.

Soon before the emission the sphinctor of the neck of the urinary bladder is closed so no semen can move into the bladder.

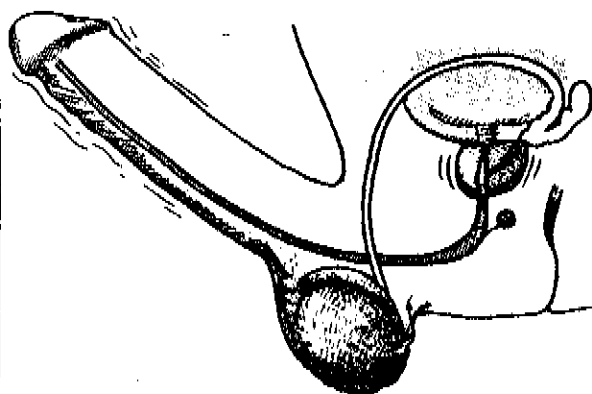
(The equivalent of emission in women is the secretation from the Bartholini glands and contraction of the uterus.)

Ejaculation: consists of a serie rhythmical contractions in the perineum muscles, the prostate, around the urethra which press the semen through the urethra and out of the penis.

Ejaculation is a reflex, which when started can't be affected at will.

ORGASM PHASE II

EJACULATION



Too early ejaculation = ejaculatio praecox

Too late ejaculation = ejaculatio retardata

An analysis if these conditions should be considered as sexual dysfunctions should take into account also the partner's sexual response, how short or long time is preferable for her in different cycles.

The woman's reaction varies greatly from individual to individual and from situation to situation. There are fewer variations in man's reaction in orgasm, except very small deviations.

A number of women can rapidly achieve a further orgasm if they are stimulated again before excitement has fallen below the plateau level. The man doesn't have this capacity. Immediately after ejaculation the man enters the refractory period, a period in which he does not respond to sexual stimulation. The length of this period varies greatly, both within and between individual males.

THE RESOLUTION PHASE

The resolution phase follows, in which the organism in the man or woman returns more or less quickly to its non-stimulated state.

The resolution phase. Woman:

Clitoris & labia majora and minora: diminish in size since the blood is pumped away by the orgasmic muscular contractions.

Vagina: collapses and diminishes.

Uterus: moves back in the pelvis.

Cervix: touches the sperm pool. The best possibilities are present for the sperm cells to enter the cervix canal.

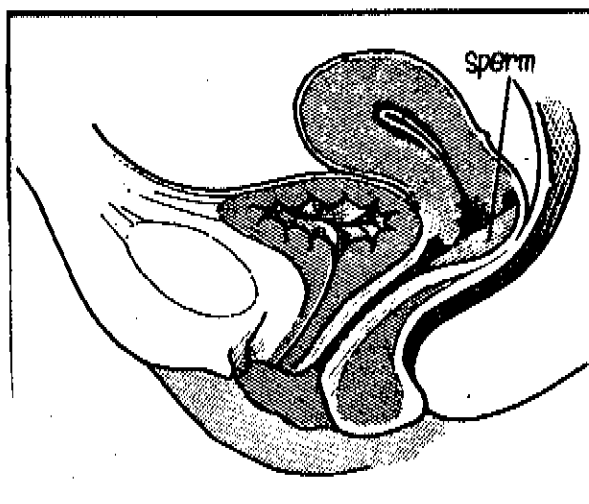
Vagina: the pH in the vagina changes rapidly in the orgasm phase from 4 - pH 7 to protect the movement of the sperm since they become immobile at a pH 5 or below.

The resolution phase. Man:

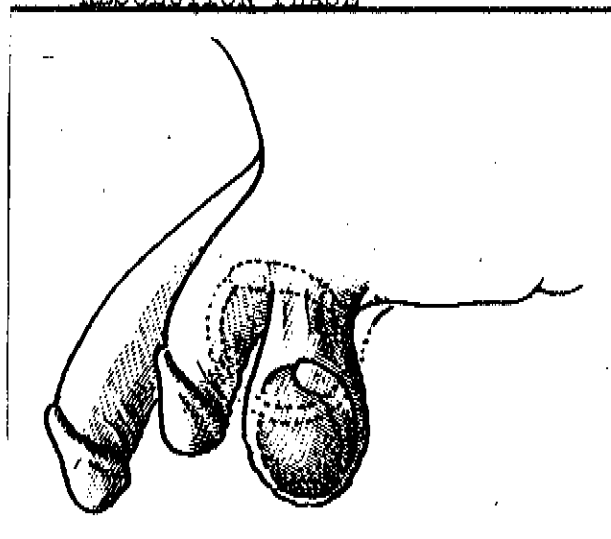
Erection: diminishes in two steps: 1/ promptly due to penile contractions and 2/ a more slow process of return to normal vascular flow.

Testicles: decrease in size and descend into the scrotum unless sexual stimulation is continued.

RESOLUTION PHASE



RESOLUTION PHASE

DISCUSSION:

Use the quotation below to discuss if the problems of the women who do not reach orgasm (estimated to 10-15 %) could be solved to some extent if the whole statement was true for them. Except those women who can't have orgasm due to organic dysfunction, or disease.

From a paper presented in Brussels 1977 conference on sex education, by Dr Preben Hertoft, Denmark:

" We could be a step further towards sex guidance and sex information to our children if we could teach the new generation the following:

that the sexual union is a unique possibility for a man/woman to reach another human being, to seek and find security, peace of mind, nearness and joy. Sexual intercourse is not merely the union of two pair of genitals, not only something physical, but a meeting including body and mind, a union of two persons knowing their vulnerability but believing in their strength, and who do not fear to love and to be loved."

QUESTIONS:

Is the orgasm (except the anatomic difference) different between men and women?

Is ejaculation = orgasm in the male?

In what phase of the sexual response do^{es} the most common problem appear?

A. In the man?

B. In the woman?

What are the differences between the testicles and ovaries?

Is the man infertile after middleage?

ROLEPLAY:

A woman comes to a clinic and complains that her husband doesn't show ^{her} concern in foreplay. She can't get him to stimulate her enough. -

Ask the woman about her sexual life, and let her describe (after you have explained the different phases in relation to the female organs) in what phase of the sexual response cycle, she is not sufficiently stimulated. The technique her partner uses perhaps is insufficient to stimulate her. How is his attention during the day -

Call the man to the clinic and explain your concern to help to diminish the problems and increase the satisfaction for both of them.

Divide the group in threes and change roles between the three of you. Remember - if you can't among your colleagues discuss and ask about the sexual response cycle, how can you later on ask/explain or educate clients?

Afterwards discuss your feelings towards the client, towards her husband/partner, towards the nurse/doctor. Did your attitude toward any or all of the three persons change after the role-play? If How?

Some women do never reach orgasm in intercourse due to different reasons.

Make a list of these reasons!

CHAPTER 2

SEXUAL DEVELOPMENT -- SEXUAL BEHAVIOUR: CHILDHOOD -- AGED
SEXUALITYEXERCISE:

Define sexuality (Sexuality is), write it down on a paper anonymously, collect the definitions!

The reasons behind are: if you haven't clarified for yourself what you mean by sexuality, there can be confusion in the communication between you and the clients, who have uncertain notions about what they mean by sexuality.

Read and discuss the collected definitions and decide/ if you unanimously can vote for the one and only definition. In the end of this chapter one attempt to definition is presented.

Content:

1. Psycho-social aspects of sexual development (see also chapter 4 Figure: "Harmonious sexual life")
2. Childhood sexuality
3. Physical development in puberty
4. Changing standards of sexuality - behaviour - attitudes
5. Sexuality in aged women and men

1. PSYCHOSOCIAL ASPECTS OF SEXUAL DEVELOPMENT
(Some are intermingled in points 2 and 3)

Psychological sexual development is not something that starts with puberty; it begins the very first day the infant experiences an interplay with its immediate environment. Every individual's normal psychological development thus incorporates the mastering and recreation of immature sexual impulses even before puberty, on the way to sexual maturity. Many ignore this fact, and sexual life can then easily become something remarkable, instead of being properly regarded as one aspect of a person's properties and development.

During the pre-school period, many children discover that it is pleasurable to touch and finger their sexual organs

Since touch and satisfaction are linked with the sexual organs, the child's interest in these increases and extends quite naturally also to the sexual organs of others. This, however, often leads to punishment, which gives rise to anxiety in respect of sexual behaviour and everything relating to the genital organs.

(The printed text from my own book "Life together - the situation for the handicapped")

A frequently observed phenomenon at play-schools is that the children expose themselves to each other, look at each other's genitals, and show great curiosity in these matters. This is nothing exceptional, since children of this age are orientating themselves in life, and are consequently inquisitive about everything.

If the parents deal objectively and naturally with the child's questions about sex in the order they appear, they can reduce the anxiety often connected with sexual behaviour. They can also counteract any erroneous information and attitudes to sexual life that the child may pick up elsewhere. The child needs precisely the piece of information at a time that it is asking for. Numerous excellent informative books for children are available for the use of parents and others who feel uncertain.

2. CHILDHOOD SEXUALITY

Infant boys can get spontaneous erections, but it is also known that infant girls can get enlargement of clitoris and some can already have vaginal lubrication. These examples of infant physiologic changes show, that early sexual physiologic function is not learned, but instead examples of inborn reflex responses. So - sexual functioning is a natural process.

The naturalness of sexual function is later affected by the attitudes towards sexuality in the environment (especially the parents). Cultural myths and taboos and a lot of other factors play a part in the changing of a natural function to a function that some adults connect with guilt and shame. We will discuss ^{this} later off and on.

Kinsey stated that some girls and boys can get orgasm from the age of 3 - 4 and nearly all boys can get orgasm 3 - 5 years before puberty. The boy's orgasm before puberty is dry, without fluid, but the intensity of these orgasms are equal with those of sexual matured men and women.

Children begin very early with masturbation (sexual satisfaction by stimulating the genitals), girls often by pressing their thighs together, boys by touching. Girls may often start masturbation after they discovered sexual stimulation during play activities etc., Boys do instead learn to masturbate through other, older boys. Many boys start to masturbate from the age of 6 - 7, nearly the rest of them start before puberty and nearly all boys masturbate regularly when they are sexually mature. Fewer girls seem to masturbate, and they can start anywhere from age 6 to late in the 20:s.

The children's sexual interest is shown very early in their language, From 4 - 6 years are both boys and girls interested in talking about the erect penis. The words for the sexual activities/organs are numerous among boys, but the girls have few if any words for their sexual functions and sexual organs.

Sexual fantasy is common among children from the age of 4. In play the boys' fantasies are more direct sexual and the girls' more directed to "Daddy - Mummy - Child"-play.

In prepuberty there is a marked tendency in both boys and girls to be embarrassed if the parents/siblings see them naked, and to display very puritanic and rigid sexual norms.

Masturbation in general

Masturbation is a good way to learn about own sexual reactions and sexual response. In certain cases of disabilities masturbation is also self-discovery of own sexual capabilities. This gives the needed security before entering a relationship. In young people and adult in institutions, masturbation can often be the only opportunity available for sexual satisfaction. Masturbation becomes dangerous only when it is accompanied by guilt; this does not happen spontaneously, but only under influence of the environment.

Changing of type of relationship - one-sex to two-sex. Expectations of society.

During their early time at school, boys and girls avoid each other and mix rather with friends of the same sex. During puberty, they will later show a positive interest in the opposite sex. This involves one of the most difficult adjustments that young people have to make in the community.

They are expected also to solve the problem of coping with their increased need of sexual satisfaction, which is influenced in its turn by hormonal and anatomical changes. This need becomes increasingly intense as they mature physically. Its importance is reinforced by the mass media, by films, television, and the press. Most young people seek some kind of outlet for their sexual needs, but they can find it difficult independently to make up their minds whether or not to engage in masturbation, petting, or intercourse, or at what age and to what extent.

ATTITUDE-QUESTIONS:

Fill in your opinion, discuss afterwards your society's: (1,3):

1. What place do you think sexuality has in life?

- One important part
- One rather important part
- One part of minor importance
- You can live without it

2. How did you experience the quality of the relationship between your parents?

- Very warm
- Warm
- Neutral
- Cool
- Very cool

3. What are your opinions about masturbation?

- I am very positive
- I am positive
- I am indifferent
- I am negative
- I am very negative

ROLEPLAY:

A three year old girl asks her mother where the babies come from. Her mother doesn't want to answer this properly - is embarrassed and doesn't know so much herself. She goes to a male family doctor for help. The roles marked. Divide in threes. Change roles.

DISCUSSION:

Discuss your memories of your parents and how they talked/or not talked with you about sexuality.

DISCUSSION:

Discuss the poem below in connection with your families attitudes in upbringing and your own attitudes towards own or others' children.

Your children are not your children.

They are the sons and daughters of Life's longing
for itself.

They come through you but not from you.

And though they are with you yet they belong not to you.

You may give them your love but not your thoughts.

For they have their own thoughts.

You may house their bodies but not their souls.

For their souls dwell in the house of tomorrow, which
you cannot visit, not even in your dreams.

You may strive to be like them, but seek not to make
them like you.

For life goes not backward nor tarrics with yesterday.

KAILI. GIBRAN (1923)

3. PHYSICAL DEVELOPMENT IN PUBERTY

GIRLS:

The puberty starts earlier in girls than in boys. The first clear sign in girls is the breast development - later hair grows in the armpits and on the labia majora and mons pubis. The sexual organs change - the vagina will become larger and the labia majora and minora too. The internal sexual organs will grow or change due to hormonal influence, which will be described in the next chapter. (See figure on "Pattern of pubertal development")

The medianage for the menarchoe (beginning of menstruation) is soon before the age of 13. In the first years the menstruation flow is irregular and for a shorter or longer period without release of egg. Some girls have ovulation from the start. The medianage for menarche has decreased and at the same time the menopause comes later. The reproductive period is thus prolonged.

BOYS:

In boys the median age for the first ejaculation is around 13. In some of the boys one or both of the breasts will grow (mastitis adolescentium). This breastdevelopment will dissappear after 1 - 3 years. The muscle development and enlargement of the genitals, growth of pubic hair etc are the same as in boys without enlargement of the breasts.

The size of the testicles is a good measure of their function. The lower limit for a normal testical size in a man is 12 ml. At 15 the testes have reached their adult size. Other secondary sex characteristics: changing of voice, facial hair gr-owth and ~~de~~^{er}stening of the voice are dependent of if there is a production of testosterone in the Leydig-cells (in the testes).

Pollutions:

85 % of the boys and men experience pollutions (spontaneous ejaculation during sleep) often in combination with sexual dreams. Before 14, 25 % of the boys have had their first pollution and of 50 year old men 1/3 experience this still.

PATTERN OF PUBERTAL DEVELOPMENT

After Thamdrup 1977, changed according to earlier onset of puberty. The figure show the median age and the range for the development of the most important sex-characteristics.

GIRLS:	AGE	BOYS:
Vaginal changes		
Breast development	9 - 10	
The growth of pelvis		
FSH increases in blood		
Puberty		The growth of testes and scrotum
LH and estradiol increase in blood	10 - 11	FSH increases in blood
Acceleration of sceletal gr.		
Visible genital growth	11 - 12	The growth of penis
		Puberty
		LH and testosterone increase in blood
Pigmentation of areola	12 - 13	Activity of the prostate
Maximal growth acceleration		<u>Acceleration of sceletal gr.</u>
<u>Secretion of sweat glands</u>		Eventual breast development
Pubic hair		Secretion of sweat glands
Menarche		
Ovulation	13 - 14	Maximal sceletal acceleration
		Voice changes; Pubic hair
		Facial hair; First ejaculation
Acne; Voice changes	14 - 15	Mature sperme; Acne
Sceletal growth stops	15 - 16	Growth of body hair
	17 - 18	Sceletal growth stops

Variations in pubertal development.

There are considerable variations in the physical pubertal development both in boys and girls. Boys who had no testicular growth by age 14, and have had no skeletal growth acceleration at 16 may be considered delayed. The same applies to girls who have no breastdevelopment by 14 or have not had a skeletal growth acceleration by 15. A girl who follows the normal physical and sexual development but with no menarche is not considered delayed.

DISCUSSION:

Discuss the various problems that can meet girls and boys with delayed puberty (key-words: schoolfellows, body-image, social contacts, overprotection)

Own findings on teen-age sexual behaviour. DISCUSSION:

Known teen-age sexual activity can vary greatly due to religious and cultural influence. It is therefore of little use to present figures from Scandinavian countries where an open permissiveness of society can influence the data collected.

Discuss and try to find out from sources mentioned in the introduction if, in your country research has been published on teen-age sexual behaviour and try to get a copy of the questionnaire. Study this to see if any questions show the researcher's own negative attitudes towards sexuality or part of it, and if there are leading questions that point to a certain answer. How many alternative answers can one choose from?

If data on teen-aged sexuality is collected in your country, the religion or culture can influence the findings (=the answers collected and how these are interpreted). Do the teen-aged population answer according to what they do think, or do they answer as they think are expected of them?

OWN QUESTIONNAIRE:

Try to write down own questions about sexual behaviour of teenagers. Do it together in small groups. When the whole group gathers again, compare your results. Fill in the questionnaire in private to check if the questions can be used.

4. Changing standards of sexuality

The basic changes in sexual standards and behaviour during the last century have been in the direction of more equality between the sexes and towards the individual's possibility to choose a sexual standard. - No physical barrier exist to sexual equality. Even researchers on sexuality of the disabled women have began to consider other things than procreation, such as research with the aim to answer questions about a disabled woman's possibility to enjoy and enhance her sexuality instead of, as before state that a woman, even if disabled, is always capable to satisfy a man.

But not so long ago discussion among male and female researchers was animated: Clitoral versus vaginal orgasm. Were clitoral orgasm immature - and of minor status than vaginal orgasm?

That was before Masters and Johnson's research in the 60:ies which concluded in the statement that regardless of the sexual stimuli: masturbation, petting or intercourse the female sexual response was the same - as described in the previous chapter. However the psychological experience of orgasm may differ both in men and women. The most important factors here are the individual's experience and own evaluation of satisfaction.

This orgasm-discussion was also before Shere Hite's studies on sexuality in women and recently sexuality in men. - Another myth spread was that men were insensitive to affection in sexual relationships. Dispelled also by Shere Hite, as all major studies on sexual relationships ^{which} indicate very strong emphasis on the value of affection in human sexuality. More men today than ever before also support the value of affectionate sex.

EXERCISE:

List the most important qualities in a sexual relationship. If there are both male and female trainees divide in one group with only women, one with only men. Gather and discuss the result. If there are differences discuss possible cultural learned expectations.

5. SEXUALITY IN AGED WOMEN AND MEN

There are great variations among the individuals regarding sexual attitudes, sexual interests and sexual capacities.

Physiologic changes in woman after menopause:

The muscle tensions, the "sex flush" and the blood flow to the genitals decrease in intensity. The vagina diminishes and the lining of the vagina gets thin, and is easily caused to bleed. Irritation of the vaginal lining after intercourse can be seen. The vaginal lubrication starts slower. The elevation and enlargement of the vagina decrease. The "gripping-function" of the vagina is less prominent and the contractions during orgasm are fewer and slower to start. The uterus is diminished.

If the woman continues sexual activity up in the years, the changes are less radical than if she stops suddenly.

Sexual interest and capability can be maintained into the 70:ies, 80:ies and 90:ies if a person is reasonable healthy and has an interested and interesting partner.

Physiologic changes in men:

The changes in the man's sexual response are similar to that of the woman's. The erection of penis takes longer time and demands more intensive stimulation. The refractory period is prolonged after ejaculation and between ejaculation and a new erection. The two phases in orgasm change, the ejaculation can follow immediately after emission or the emission phase is prolonged and ejaculation fluid can be very sparse. After orgasm the erection disappears quickly.

Both sexes:

In spite of the changes due to age, it is thus possible and healthy for both sexes to continue the sexual activity up in the years if both partners show consideration for the changed conditions. The sexual relation - activity demands longer time and more intensive stimulation. The frequency in intercourse decreases. The ability in the man to have erection is better sustained than the ability to ejaculate. Both the man and the woman must be aware of that if the older man fails to have ejaculation, this does not depend on the quality of the relationship. It has been shown that the woman's frequency of intercourse is dependant on if the man is sexually active. Even if results from different studies show that aged men in general seem to be more se-

sexually interested than aged women, many older women masturbates as opposite older men, often as a compensation for poor sexual relations. An american study showed that 50 % of couples 60 years old had sexual intercourse. In couples with one partner over 80 10 - 20 % had sexual intercourse.

ROLEPLAY:

A 70 year old woman visits you, a gynecologist and complains about her husbands loss of interest. He doesn't ejaculate and she thinks he doesn't love her any more. She doesn't like to masturbate - it is sinful.

Explain the age changes in both male/female. As her why she thinks masturbation is sinful. Support her. - Change roles.

ATTITUDEQUESTIONS:

Fill in your own answers to the 3 questions below. Discuss what alternative answers are the most common shared in your country and why.

1. What are your opinions about petting (mutual satisfaction to mostly orgasm)?
 - Very positive
 - Positive
 - Indifferent
 - Negative
 - Very negative
2. In what cases do you accept sexual intercourse?
 - Casual acquaintance
 - Outside marriage (extramarital intercourse)
 - Going steady
 - Only in marriage
3. What are your opinions about pornographics (picture/photos with explicit sexual activity - physical)?
 - Very positive
 - Positive
 - Indifferent
 - Negative
 - Very negative

DEFINE PHORNOGRAPHICS!

DEFINITION OF SEXUALITY:

Look back to the beginning of this chapter and your collected definitions of sexuality. Compare with the definition below! Perhaps yours are better.

"Sexuality is the feelings we have of ourselves as sexual beings, the ways we choose to express those feelings towards ourselves and towards others, and the psychological - physical capacity we have to give and experience sexual pleasure."

CHAPTER 3

SEXUAL IDENTITY - HETEROSEXUALITY AND HOMOSEXUALITY

There are many different factors, that determine the sexual identity of the individual; some are biologic, some are psycho-social:

Biological factors:

1. The chromosomes
2. The gonads
3. The hormonal regulation during intrauterine life
4. The development of the internal and external genitals anatomic structure
5. The role of hormones in the differentiation of the hypothalamus
6. The regulation of hormones during the postnatal development

Psycho-social factors:

7. The sex given at birth
8. Subjective acceptance of given sex
9. The choice of sexual partner

We will start with describing the biological factors and at point 5. describe at length the hormonal functioning and influence in men and women.

During different phases of the development of sexual identity, numerous things are combined and determine if the individual will become a male or a female. Many things must happen at the right time and in the right way. There are many possibilities to wrong development and it is therefore more strange that this does not happen more often.

1. The sex determined by the chromosomes

When fertilization occurs the spermcell with the X or the Y sex chromosome join the ovum with the X-chromosome.

There is a total of 44 other chromosomes with genetic material.

The genetic pattern for a male = 46, XY

The genetic pattern for a female = 46, XX

There must be two X-chromosomes to develop ovaries, and there

must be one Y-chromosome to develop testicular structure, no matter how many X-chromosomes there are.

2. Sex determined by the gonads (testes and ovaries)

During the first weeks the genetic male and female fetuses do not differ anatomically from each other. At this time (6th week) primitive gonads develop and can either change to testes or ovaries.

Differentiation into functioning testes occurs at the 8th week when the secretion of testosterone (a male sex hormone =androgen) by the fetal testes have been shown.

Differentiation into ovaries occurs at the 12th fetal week.

3. Sex determined by the hormonal regulation during intrauterine life

The direction of the sexual differentiation (see points 4,5) is determined by the presence or absence of testosterone within the fetus. There must exist testosterone for male development to continue even if the pattern is 46, XY. In the absence of certain amounts of testosterone, differentiation occurs in the female direction, regardless of genetic pattern.

Another factor of importance here is that the mother does not have any disturbances in her sex hormones and that she is not given any sex hormones of wrong kind or amount.

4. Sex determined by the development of external genitals and the internal sex structures.

In the 7th week male and female fetuses are identical in internal and external sexual anatomy.

Internal sex organs:

a/ male: The sex hormones determine the male differentiation. Substance from the fetal testes causes a regression of the müllerian-duct-system, circulating androgens develop instead the wolffian-duct-system, which become the vasa deferentia, the seminal vesicles and the ejaculatory ducts (see chapter 1). There is a clear difference in the anatomy of the internal sex organs by the 14th fetal week.

b/female: In the female fetus the gonads are unchanged until the 3rd month, after that the gonads differentiate into ovaries. No androgen is circulated nor any substance that causes regression of the müllerian-duct-system - so the Fallopian tubes, uterus and the upper part of vagina develop out of this system. The wolffian-duct-system regenerate due to no androgen-production.

External genitals:

a/female: If no adequate levels of androgen is present in the 8th-week fetus, the external genitals develop in the female direction. A clitoris, the labia majora and minora and a vagina develop.

b/male: With androgen stimulation the male external genitals are formed: the penis (from the urogenital folds/-in the female the labia minora/ which will grow and form the shaft of the penis; the glans penis develops by the genital tubercle /becomes the female clitoris/), the scrotal sac /labia majora/ and the testes, which migrate into the scrotum during the 8th - 9th fetal month.

Now we have the genital sex!

5. Sex determined by the role of hormones in the differentiation of the brain

The androgen-production of the testes develop the hypothalamus so its function changes from cyclic to a continuing function. This is also important for the interaction between the pituitary gland and the male gonads.

With no androgen-production the cyclic function of the hypothalamus-pituitary-gonad system will be maintained ~~and~~ be clearly shown in the menstruation-cycle in the sexmature woman.

This is the cerebral sex!

/natal development,

6. Sex determined by the regulation of hormones during the post-

The hormones and their importance:

Hormones have an important influence on reproduction and sexual behaviour (sex-drive = libido). The brain itself is the major regulator of these processes, with secretion of hormones from hypothalamus, which in its turn control the functions of the pituitary gland. The brain is influenced by the sex steroid hormones produced in the gonads (testes, ovaries).

These hormones are essential in the sexual differentiation of the brain during intrauterine life (see point 5), they initiate puberty (see "pattern on pubertal development" chapter 2) and as said above, regulate sex behaviour, but not solely - there are many more factors involved in the outcome of the individual's sexual behaviour.

Estrogen = the female sex hormones

Androgen = the male sex hormones

Progesteron = hormone active in preparing the uterus for the fertilized egg

All the three hormones above exist in both men and women, but the difference between the sexes are the concentrations of these hormones and what this means. In a normal man the androgen (testosterone) dominates and in a woman the estrogen. If a man gets too much of estrogen his sexdrive diminishes and breast-development can occur. If a woman gets too much androgen, she will develop facial hair, deepening of the voice etc.

Estrogen level in men is about the same as this level in women after menopause - this means $1/7 - 1/9$ of the estrogen-level a woman has during ovulation.

Progesteron-level in men is about the same as the lowest level in women during and after menstruation.

THE HORMONAL REGULATION IN GENERAL:

Hypothalamus produces a hormone (gonadotropin-releasing LRF), which controls the release of two hormones: LH (luteinizing) and FSH (follicle-stimulating) by the anterior pituitary gland. High levels of circulating sex hormones turn off the hypothalamus hormoneproduction and lower therefore the pituitary releasing of LH and FSH. Low levels of sex hormones stimulate the hypothalamus production of hormone which stimulates the pituitary gland to produce LH and FSH etc.

The regulation of hormones:

Man:

LH controls the production of testosterone by the Leydig-cells in the testes, and FSH controls the production of sperm.

Low testosterone = LH levels must compensate.

With low spermproduction - FSH-levels are elevated.

Severe low testosterone can, apart from diminishing the sex-drive and malfunction in erection and ejaculation, also influence the amount of seminal fluid since the prostate and seminal vesicles are androgen-dependent.

The level of testosterone is about the same in male from the onset of puberty to the age of 50 - 55 and decreases slowly after that time, at the same age-period the feed-back mechanism between the testes and the hypothalamus-pituitary system diminishes.

Boys:

There are three peak-changes in the male's level of testosterone: The first in the 12th fetal week, another steep rise shortly after birth and the third peak occurs at the time of puberty. The level-increase of testosterone at that time is 10 times its level before. The greater muscle mass in late adolescent boys is one of the results. The hypothalamic hormone acts on the pituitary secretion of first LH, then FSH, which increase at the same time as the third peak of testosterone.

Before puberty there is little difference in testosterone-levels between boys and girls (this part of androgen-secretion mostly develops from the adrenal glands under the kidneys).

Woman:

Women have a series of cyclic hormone changes from the menarche to the menopause. The menstrual cycle is divided in two phases by the ovulation.

The first part: the ovaries are influence by FSH, which brings about the maturation of one or more eggs. During this maturation estrogen hormones develop (which influences the growth of the lining of the uterus after the end of menstruation). The ovulation occurs depending on LH-secretion, and yellow cells gather together (corpus luteum) from the place where the egg is released. Progesteron and estrogen are formed by the corpus luteum - this combination of releasing hormones affects ^{also} the lining of the uterus to grow. With no fertilization corpus luteum stops its production of hormones and the menstruation starts. FSH and LH are regulated as usual by releasing hormone from hypothalamus.

Estrogen levels have, as said above, importance for the appearance of the lining of the uterus, but also for the responsiveness in the woman's sexual functioning. Lack of estrogen makes the lining of the uterus pale, thin and dry - which can be seen after the menopause. There are ^{than estrogen} higher ~~androgen~~-levels after ~~menop-~~pause. A special hormone: oxytocin is released from the posterior pituitary gland in a sexually excited woman.

Girls:

A cyclic interaction seem to occur between the hypothalamus, the pituitary glands and the ovaries, before the onset of menstruation. (Puberty in girls is more related to weight than age.) In late childhood the maturing of the hypothalamus and thus the changes in the sensivity of hypothalamus to circulating sex hormones, initiate the onset of puberty. LH and FSH-levels are higher in girls after menarche.

Estrogen levels increase in blood at puberty, but testosterone-levels do not increass above the prepuberty levels.

QUESTIONS:

What happens if a man gets too much androgen?

What happens if a woman gets too much androgen?

What happens if the testosterone-level decreases severe in a male?

What happens to women in the hormonal regulation after the menopause? To changes in sexual functioning?

Describe the 6 biological factors of influence for the sexual identity! Discuss which factor has the greatest influence!

Can absence of testosterone cause a female differentiation even if the genetic pattern is 46, XY.?

What are the gonads?

Which organs are involved in the cyclic function of the brain?

Why do we need hormones?

Above we have discussed the biological factors, that determine the sexual identity of the individual. Different biological disturbances such as chromosome-anomalies, genetic defects etc will not be discussed in this module.

The outcome of the right combination and interaction of these biological factors is our sex-drive (=libido or need for sexual satisfaction) and our "physical capacity" in a sexual relationship (see definition on sexuality in the end of Chapter 2).

The sex-drive is very individual and varies not only between individual men and women, but also within an individual according to different situations in life, stress, illness, happiness. Among both men and women are single individuals, which are totally uninterested sexually. The reason can be a severe lack of sex hormones or a specific brain damage. A few men and women have a very strong sex-drive and a few a very weak drive. Most men and women are placed in the middle part of this "drive-scale".

SEXUAL IDENTITY - PSYCHO+SOCIAL FACTORS:

In each described factor, numerous influences from different sources both within and outside the individual play a part.

Below we will try to describe some of the roots of:

"feelings we have of ourselves as sexual beings"

"the ways we choose to express those feelings" and

"the capacity to give and experience sexual pleasure".

Psycho-social factors:

7. The sex given at birth and the upbringing
8. The subjective acceptance of given sex
9. The choice of sexual partner.

In discussion on homosexuality, which follows point 9., the content of points 8 and 9 can't be clearly separated.

The sexual identity determined by the sex given at birth and upbringing.

Social learning is far more important in developing own sexual identity than the biologic factors described earlier. Nevertheless biologic factors do also interact.

As soon as the midwife declares that a boy or a girl is born, a process starts. Both parents do behave in a different way towards an infant boy than towards an infant girl. They not only behave in a different way, they have also different expectations on how a girl or a boy should react and thus reinforce certain behaviour in the girl or the boy. In general, the child who from birth is regarded as a girl and is brought up according to the rules of "girl-upbringing in the particular society to which she belongs, will see herself as a girl and will develop a feminine sexual identity. And the child, who is called "boy" and is brought up the ways boys are, will see himself as a boy and will develop a masculine identity according to his society.

A mother in an article about mentally retarded described her child's development. Nowhere did she mention the child's sex. The child was a 10 years old girl. - This is an example on how some parents can't accept the sexual identity of their disabled children out of different reasons, and try to give their children a neutral identity - a sex-less identity, which seldom can develop into a true identity without external support.

One study on children with the sex given at birth in opposite to the hormonal sex, could accept the sex given at birth. The few who could not, were children of parents insecure if the child really belonged to the sex given and not fully had accepted the situation, and therefore showed ambivalence in their sex-oriented upbringing. So the sex given at birth can therefore often influence the way children perceive themselves sexually.

The child's sexual identity in masculine or feminine direction is rather deeply anchored at the time the language develops, about 18 months - 3 years. At that time they perceive how other people react to them and also become more aware of how they are dressed - an additional source to the sex, defined by the given culture or society (see Chapter 3 - psychosocial aspects on sexual development).

The child's sexual identity is also influenced by the parents attitudes towards sexuality in general and their own sexual identity as a man and a woman, and if their parents show any ambivalence in their perceptions of themselves.

Cultural or religious environment versus immediate family environment. The sexual attitudes of the parents in their turn depend on the sexual attitudes their parents displayed according to the norms in society, the culture they were brought up in and the norms dictated by their religion. It is very difficult to differentiate these cultural and religious influences from the parents' own attitudes towards sexuality. These are intermingled and further shown in the interplay between parent-children and between members of the whole family. Their views on sexuality as a wonderful thing or as a foreboding thing, are transferred to their children as well as the ways they show affection.

Personality development. How the boy or girl in early childhood experienced their parents' acceptance of them and how they were shown tenderness and love influences the child's attitudes towards trust and warmth in sexual expressions later in life. This love and tenderness can also be given by a substitute parent - a close relative; It is difficult to trust and to love someone, to give and to receive fully in a love-sexual-relationship if an adult hasn't experienced love early in life from someone.

The sexual identity determined by subjective acceptance of given sex.

Above we began to touch the matter of subjective acceptance of given sex, since satisfaction in and acceptance of male or female roles are greatly influenced by early childhood-experiences with parents, as well as other members of the close environment at home. Acceptance of peers is another factor - and with this comes also the possibility to develop a personality through close interaction with the same age-group. In this inter-play the child learns how to behave to be accepted by others outside family and also learns about own reactions to other people and other people's reactions towards him or her, as a growing boy or girl. Remember the question about delayed puberty. How does this affect a teen-aged boy - a teen-age girl, and how much of this does the adolescent bring into a relationship as an adult?

Sex education. How we are taught about sexuality does also affect our attitudes of sexuality. It depends very much on the

sources of education if we as adults have a sex knowledge based on factual information or if our knowledge is full of misconceptions, that can instil anxiety and fear of sexual relations in us, later on and on the spot. - Back to cultural and religious influence. Is it good to be a boy, is it good to be a girl in the society you are brought up in? This also affects subjective acceptance of given sex. A lot of supportive assistance is needed to counteract, if society declares " a boy is better than a girl". This is especially needed to make the woman feel good about herself as a woman.

Sexual experiences of traumatic nature such as rape, incest and repeated harsh punishment for masturbation can or cannot influence attitudes towards sexuality as a whole, or towards ~~acceptance of~~ ^{on} ~~the sex-role.~~ It depends if feelings of guilt and own fault are reinforced by the family-members' attitudes towards the special situation (rape, incest).

Sex-role and sex identity, has been described of some author as: "Sex identity is the private experience of the sex role and sex role is the public expression of sexual identity". We can of this see that these definitions overlap each other, and that role- and identity-formation in children are complex and can't be clearly separated, since so many factors are combined in the process.

The sexual identity determined by the choice of partner.

Some young people may have difficulty in making a satisfactory heterosexual adjustment. The extent of their difficulties may depend largely on the nature of the early parent-child relationship. The attitudes developed by the child in its early interplay with its parents can persist in youth, and be generalised to relationships with other men and women.

If a girl, for instance, has experienced love and admiration from her father, she will expect as a woman her relationships with men in general to lead to love and admiration. On the other hand, a girl whose father has been cool and indifferent to her may tend as an adult to fear rejection by all males. In the same way, a boy who has been dominated by his mother will be prepared for similar behaviour on the part of other women.

Parent-child relationships can thus facilitate or hinder the child's chances of achieving satisfactory adjustment to the opposite sex as an adult. Other factors that can complicate such adjustment include an acquired fear of sexuality, and a fear of social relationships in general; such fears should be particularly observed and combated in handicapped children.

Complications in adjustment to the opposite sex do not mean that an adult chooses a sexual partner of the same sex.

HOMOSEXUALITY

Homosexuality means that a person is interested or attracted not by the opposite sex, but instead sexually prefers members of the same sex. Homosexuality includes sexual desire or fantasy uniquely directed to the same sex, as well as overt sexual behaviour. Most people are heterosexual, while others are homosexual. As long as history has existed, homosexuality has. Homosexual men and women are as heterogeneous a group as heterosexuals in regard to occupation, education, life-style, personality characteristics and physical appearance.

Due to increased permissiveness in society members of homosexual declare themselves as such more than earlier. In 1948 in Kinsey's data 4 % of men were exclusively homosexual, 10 % predominantly homosexual and 37 % men had had one homosexual experience leading to orgasm after puberty. The figures of female homosexuality were lower.

No one has so far been able to answer the question of why persons become homosexual. Most researchers believe in a combination of genetic inheritance (mostly hormonal) and environmental. What is known, is that homosexuality is deeply rooted in the personal identity during the first years. It is not something that happens in puberty out of a sudden. And more important, a person can not be homosexual through a homosexual seduction. Misconceptions about seductions can stem from the fact that many homosexual relations exist during adolescence. To feel affection for someone of the same sex is a part of the personality development - to work with feelings about sexuality, to create an own identity before growing up. What do I want? What do I need? What do I believe in?

Laws against homosexuality still exist in some countries. In other countries the laws have been changed and a classification as criminals has been taken away - around 1940, or the permitted age for sexual intercourse has been changed to the same as the age for heterosexual intercourse - around 1975. It depends very much on the permissiveness towards homosexuality where contacts can be established between homosexuals. It can be easier in restricted countries to live as^a homosexual woman and to have homosexual relations, due to the ingredients in the female sex-role of showing affection etc.

There are no differences between heterosexual and homosexual love - sex - relationships. A restrictive environment can although make it difficult to develop a longstanding affectionate homosexual relation. Many hidden, temporary short homosexual relationships are the consequences. - Other consequences of a negative culture, society or environmental attitudes towards homosexuality, are the difficulties homosexuals have 1/ to accept their homosexuality (in spite of their families disapproval) and 2/ to begin to seek homosexual relations. Some may never dare to experience sexual relations and force themselves either to celibacy or a heterosexual relation, without the mutual ingredients of trust and preference of the opposite sex.

The sexual behaviour in homosexual men and women do not differ so much from that of the heterosexual population (except from using intercourse). Petting, oral sex (using mouth and lips on the genitals), anal sex (using anus instead of vagina), the use of a dildo (artificial penis) among homosexual female couples and masturbation are the sexual activities all: hetero- and homosexual, can use. As in heterosexual couples the preference of type of sexual activity depends on the couple's agreement and on the individual's own attitudes towards the specific sexual activity.

One aspect on how medical professionals treat homosexuals with a competent professional service without transferring own negative attitudes towards homosexuals or towards anal sex, is when a surgeon, in cases of cancer in the rectum, tries to save as much as possible of the anus, when dealing with a homosexual male.

DISCUSSION - QUESTIONS:

- * What is libido?
- * Which psycho-social factors have influence on a child's sexual identity?
- * Around what age and why that age, are children's sexual identity rather set?

Discuss:

How strong is the cultural and or religious influence on sexuality in your country?

EXERCISE AND TASK:

Invite a religious leader to express his/her view on sexuality and upbringing. Discuss with him/her how you best can inform parents about upbringing, with the end-result: a sexual healthy man and woman with as little misconceptions and sexual fears as possible.

Question:

- * What factors influence a person's acceptance of the given sex?

EXERCISE:

1. Try to recall , each of you, misconceptions you had about sex. List them!
Discuss: what made you give it up and substitute it and with what?
Make an own role-play of one^{of} your remembrances.
2. Discuss: Do attitudes towards rape differ between men and women?
Divide in groups, one with men one with women.
List the attitudes of men/women in each group.
Gather and discuss if the attitudes the men showed in reality are the same as the women-group expected. Do the same versus women's attitudes - real and expected by the men's-group.
Discuss: What factors influence attitudes towards rape?

ATTITUDE - QUESTIONS:

- * What are your opinions on homosexuality?
Very positive
Positive
Indifferent
Negative
Very negative.
- * What are your opinions on heterosexuality?
Very positive
Positive
Indifferent
Negative
Very Negative
- * What are your opinions on oral sex?
Very positive
Positive
Indifferent
Negative
Very Negative

Attitude-questions cont.

- * What are your opinions on anal sex?
 Very positive
 Positive
 Indifferent
 Negative
 Very negative

EXERCISE:

1. Discuss: How many of you know any homosexual man or woman? Are the attitudes shown in the attitudequestion above, different among those of you who know a homosexual person, than among you, who do not know a homosexual person?
2. Discuss: What kind of homosexuality are you more positive towards?
 Female homosexuality? or
 Male homosexuality?

 Discuss WHY (if you prefer any sex)
 Is more positive = less threatening?

ROLEPLAY:

A hospital setting. A surgeon has discovered cancer of rectum in a male 40-year old patient. The surgeon must tell the patient of his findings, how the surgical treatment will be, most of the rectum and the anus must be removed. - When informing about the anus the patient suddenly begins to speak about his relation with a man. The surgeon can't understand what this has to do with the anus.

Continue the role-play with how the surgeon more and more begins to understand that his patient in his sexual behaviour uses anal sex. Portray different types of attitudes towards homosexuality and anal sex. Change roles.

CHAPTER 4
SEXUAL DYSFUNCTIONS AND DISABILITIES

We will first describe the most common types of sexual dysfunctions in men and women together with probable causes to these problems. The second part of this chapter deals with sexual function/dysfunction - disabilities and begins with an analysis of the various factors involved in the development of a harmonious sexual life for a person with a disability. Neurologic aspects on sexual response are described briefly, followed by function/dysfunction in some disabilities.

Some sexual dysfunctions in both sexes can have an organic origin based on physical causes, others are depending on psycho-genic factors - and some can have a mixed organic - psycho-genic background. In this context we will only deal with the sexual dysfunctions with psycho-genic causes. The organic sexual dysfunctions will in some part be described in the section on disabilities. Below are the physical factors included among the various possible factors involved in causing sexual dysfunctions:

Physical factors
Lack of knowledge and misconceptions
Poor sexual stimulation and technic
Psycho-social factors (fear of sexuality - sex-role ambivalence*)
Conflicts between partners
Problems in communication

MALE SEXUAL DYSFUNCTIONS:

IMPOTENCE

Impotence is the inability of the man to obtain or maintain an erection of sufficient firmness to allow intercourse. Erective failure in men is the equivalent to certain kinds of sexual dysfunction in women. The sex-drive is intact, but the bloodflow to the genitals is not sufficiently increased by sexual stimuli. Impotence can be primary, the man has never been able to have intercourse. Impotence can also be secondary (in most cases), the previous function has been normal, he has been able before to have intercourse. About 85 - 90 % of men with impotence seem to have primarily psychogenic causes to their dysfunction.

But isolated episodes of inability to obtain or maintain an erection are very common and can depend on acute illness,

tiredness and anxiety in the specific situation.

Psycho-genic causes of impotence can stem from psycho-social factors in childhood-adolescent-development, for instance: difficulties to identify with a too weak or too strong father-figure, very rigid parental attitudes towards the boy's expressed sexuality. Intra-psychic factors, such as anxiety, guilt, depression and poor self-esteem can be mingled with developmental factors or relationship difficulties. Homosexuality can also be a reason.

Since impotence can be the first sign of untreated diabetes, it is important with a careful physical examination to exclude this diagnosis.

PREMATURE EJACULATION

Premature ejaculation is a common sexual dysfunction and is difficult to define, depending on the interaction with the female partner's sexual response cycle. In some cases, rapid ejaculation does not impair the ability in the woman to achieve an orgasm. Socio-cultural and personality factors complicate the evaluation of how long a man can be active in intercourse before ejaculation. Thus, a rapid ejaculation can reflect an attitude of, that a man's sexual gratification is the most important in a sexual relationship between man and woman.

There seem to be a strong learned factor in the development of premature ejaculation with early coital experiences (intercourse) when the man ejaculated rapidly, for instance out of fear to be discovered. Some mean that relationships-problems, unconscious hostility toward women or fear of women, can be factors in the underlying process.

Masters and Johnson's definition on premature ejaculation is: " the inability to control ejaculation long enough to satisfy the partner in at least 50 % of their intercourses, when there is no female dysfunction; or inability of the male to exert voluntary control over the ejaculatory reflex". - The man's orgasmic satisfaction is therefore reduced because he stops before he reaches the peak of satisfaction.

EJACULATORY INCOMPETENCE

Ejaculatory incompetence means both retarded ejaculation (ejaculation retardata) or inability to ejaculate in the vagina. This male sexual dysfunction is the least common of sexual dysfunctions in males. The man with this dysfunction has seldom difficulties to obtain an erection and is able to maintain erection (firm) during very long time of intercourse - the opposite of premature ejaculation.

The most common form is primary ejaculatory incompetence, the man has never been able to ejaculate in the vagina. Some of these men can ejaculate with masturbation, others with manual or oral stimulation of the penis. Some men however can never ejaculate with any form of sexual activity. Secondary ejaculatory incompetence can be seen in some men, who before had normal functions.

Most cases of this dysfunction are of psycho-genic nature - and many the same as in development of impotence: childhood-experiences of instilling negative sex attitudes, for instance if masturbation to ejaculation is regarded as destructive. Relationship problems, hostility, fear and rejection of the female partner, homosexuality can also be factors of importance in development of this sexual male dysfunction.

Combination of sexual dysfunctions can appear. Premature ejaculation and impotence is the most common; sometimes men can have both impotence and ejaculatory incompetence.

FEMALE SEXUAL DYSFUNCTIONS:

In the origin of female sexual dysfunctions many myths and misconceptions about female sexuality are still mixed, even if the attitudes of female sexuality have changed to a more accepting one, regarding a woman capable of sexual arousal and own sexual satisfaction, corresponding to the man's capability.

Basic knowledge on sexual anatomy, human sexual response, sexual identity-forming and description on female sexual experiences counteract myths on female sexual inferiority. In spite of this psycho-social aspects of upbringing and development, can however still transfer old myths and old misconceptions to the

VAGINISMUS

Vaginismus is defined as involuntary constriction of the muscles surrounding the vaginal opening and the outer third of the vagina. It can be seen in young women in their first attempt to intercourse as well as in aged women. Vaginismus can vary in severity. In some women intercourse is impossible, the penis can not enter the vagina due to spasm and pain. These women are unable to use a vaginal tampon during menstruation.

In others intercourse is possible but painful. Sexual arousal in women with vaginismus is usually normal, and so is the sex-drive. A few women can be uninterested of sex or inhibited. Vaginal lubrication exists and sexual activity without intercourse can lead to orgasm.

The sources to vaginismus can be a variety of psycho-social factors. As described in earlier conditions of male/female sexual dysfunctions, a negative, punitive upbringing versus sexuality can also be the origin in development of vaginismus. Some women with unconsummated marriages (due to vaginismus) may have had difficulties in making a psychological transference from "sex is sinful" to "sex is good". A severe traumatic experience physical or psychological can be the underlying factor.

Vaginismus can further be described as an unvoluntary reflex in the woman where vaginal penetration is connected with something unpleasant, painful or dangerous.

ORGASMIC DYSFUNCTION

Some ten years before (1970:s), frigidity was used as a term to describe many female sexual difficulties (women uninterested in sex, nonorgastic women, women with deficiency in lubrication and sexual arousal etc.), but this definition was lacking in adequacy and implied negative attitudes towards women.

Many professionals now instead use this classification:

Primary orgasmic dysfunction = a woman who has not achieved an orgasm under any circumstances

Situational orgasmic dysfunction = women who have experienced orgasm on one or more occasions, but only under certain circumstances (=during masturbation etc)

Coital orgasmic inadequacy = women who can't reach orgasm during intercourse, but during many other sexual activities

Secondary orgasmic dysfunction = women who regularly became orgasmic before, but no longer are

Analysis of one large series of women with orgasmic dysfunction revealed that in 95 % of the cases, the dysfunction was psychogenic.

It is difficult to trace the origin of orgasmic dysfunction, due to the negative cultural influence on female sexuality. The adolescent girl was ^{once} ~~only~~ allowed to develop romanticism and have fantasies about future maternity. Apart from this influence, factors in psycho-social development seem to play a part, with the earlier mentioned negative attitudes towards sex and nudity and traumatic sexual experiences.

Note that such traumatic events as rape, incest and male seduction, do not necessarily imply sexual dysfunction in adulthood. Many more women can cope with such negative influence without any sexual problems. Why a few women and a few men develop dysfunctions due to traumatic experiences are not known.

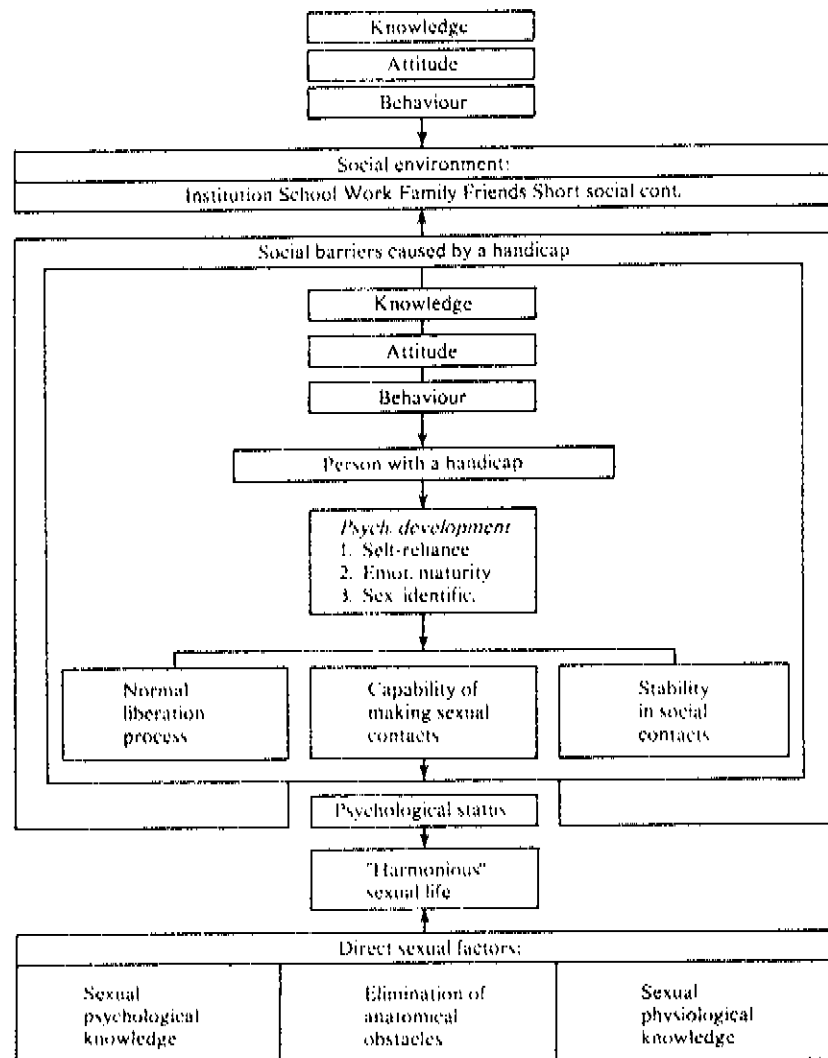
Guilt can be a factor in the cause of orgasmic dysfunction and stemming not only from events under childhood - adolescence, but also be reflected in the personality. Anxiety to perform and to be physical attractive can be underlying the guilt-feeling and be partly due to self-perceptions - partly to demands from the partner.

Fear of loss of control during orgasm in a few women, can result in these women's blocking of sexual arousal. Low self-esteem can be a factor here. - In many cases orgasmic dysfunction may stem from poor communication, hostility towards or distrust of the partner. To communicate sexual preferences to their partners is often blocked by a lot of things: " I can't tell him what I like, what would he think about me?"

Possible therapies in sexual dysfunctions will be mentioned in chapter 5.

SEXUAL FUNCTION/DYSFUNCTION IN CERTAIN DISABILITIES:

We begin with an attempt to analyse which further conditions than described in Chapters 2 and 3, have influence and cooperate in the development of a harmonious sexual life for a person with a disability. (The text and constructed figure from "Sexual Counselling for Disabled Persons" by I. Nordqvist Chapter 9 in "Total management in muscular dystrophy" Ed. E. Krog 1982.)



A harmonious sexual life.

- " The Figure "Harmonious sexual life - persons with disabilities" is my attempt to analyze the various factors involved in this context. Which conditions do then cooperate in the development of a harmonious sexual life for a person with a disability? In the middle we recognize a person with a disability surrounded by social barriers. These barriers are, for instance, caused by *attitudes* (lack of knowledge, lack of habit in socializing with disabled, anxiety for the unknown frequently held by basically insecure people), *economy* (difficulties in having a free choice of activities, lack of

means to travel even shorter distances), *communication* (and here I mean both ability and skill in relationships and communication in the sense of transport), *work* and *dwelling*s. How these barriers are obstacles and to what degree depends on the disability and utmost, how this particular disability is, or in general, how disabilities are regarded in our culture.

All the time there is an interaction between a person with a disability and his social environment, which consists of both longer and shorter contacts. Family and institution (in case upbringing takes place there) are more important than shorter contacts; peer-contacts and working-contacts have unfortunately in some cases a far minor importance than they have for non-disabled.

Three ingredients: *self-confidence*, *emotional maturity* and *sex-role identification*—all important for realizing an emotional and sexual relationship—form the psychologic development and are influenced by the quality of the interaction mentioned above.

Self-confidence, for instance, stems from being aware of, from early on, and constantly being reminded that you have human worth and that you are loved and trusted. In contrast with the child who is disabled by guilt-feelings of parents, the attitudes imposed from the parents environment and so on. The tendency in our culture to more easily criticize and foster certain goals in the disabled child set up by others in accordance with the non-disabled's perspective—not so much to show feelings and give praise and encouragement—strikes against the concept of self-confidence. We are forgetting how much damage negative support can give and how much more encouragement is needed to outweigh this, to at least equal balance.

Emotional maturity demands learning to master the difficult task to dare to express your own feelings and to interpret those of yourself and others. If you are met with double messages, due to the commonly held belief "you must never hurt the feelings of a disabled person", then this can make it much more difficult to integrate what sort of person you are, with what sort of person you want to be, and accept it. It is the same with sex-role-identification—but society's ideals and the minor leisure time spent with peers on your own are things to take into account. Also, the parent's lack of knowledge on sexual possibilities for disabled grown-ups makes it more difficult for them to provide the understanding climate which points to future family and sexual life, which is common to non-disabled.

Some other important phases and requirements you must go through and which must be met, are that the *liberation process* from the parents has been worked through, that the *psychologic capability* to make sexual contacts is there and that there is a capacity to maintain the contacts achieved (that is: *stability in social contacts*).

These three requirements in their turn depend on the psychological development, and on the interaction with the social environment that surrounds the person with a disability. You play the role you are allowed to play.

The liberation process must be seen both in a practical sense as a more emotional-psychological connection, where both parts should be worked on towards a solution. For parents the most important goal regarding emotional liberation, should be in the direction of "the need not to be needed" than "the need to be needed". This can be the most difficult readjustment for parents to make—as well as staff—and demands much support. The psycho-

logical capability to make sexual contacts depends on all former stages in cooperation, as well as the stability in social contacts where more honesty and straight-forwardness are needed from earlier contacts to mould your behaviour and make your self an easier, more outgoing person to have contact with.

The psychological development including the liberation process, choice of sexual contacts and the stability in social contacts, I choose to call "the psychological state" and this is the starting point for the capacity for a "harmonious" sexual life.

How can you eliminate these unfavourable conditions as much as possible? Knowledge, spread to the social environment and to the disabled person himself, including information, that also handicapped persons have possibilities of a sexual life, might change the attitudes in both groups in a positive direction. The behaviour

might alter this way and might have a positive impact on the quality of interaction between them. This, of course, influences the psychological development and the "psychological state" in favour of a "harmonious" sexual life.

The social barriers must be broken through by wedges of communication possibilities (broader surface of contacts), dwelling possibilities (liberation process etc.), financial possibilities (stability of contact in the practical sense, i.e. being able to afford to meet someone regularly) and working possibilities (choice of contact, but also self-confidence and other related psychological facts).

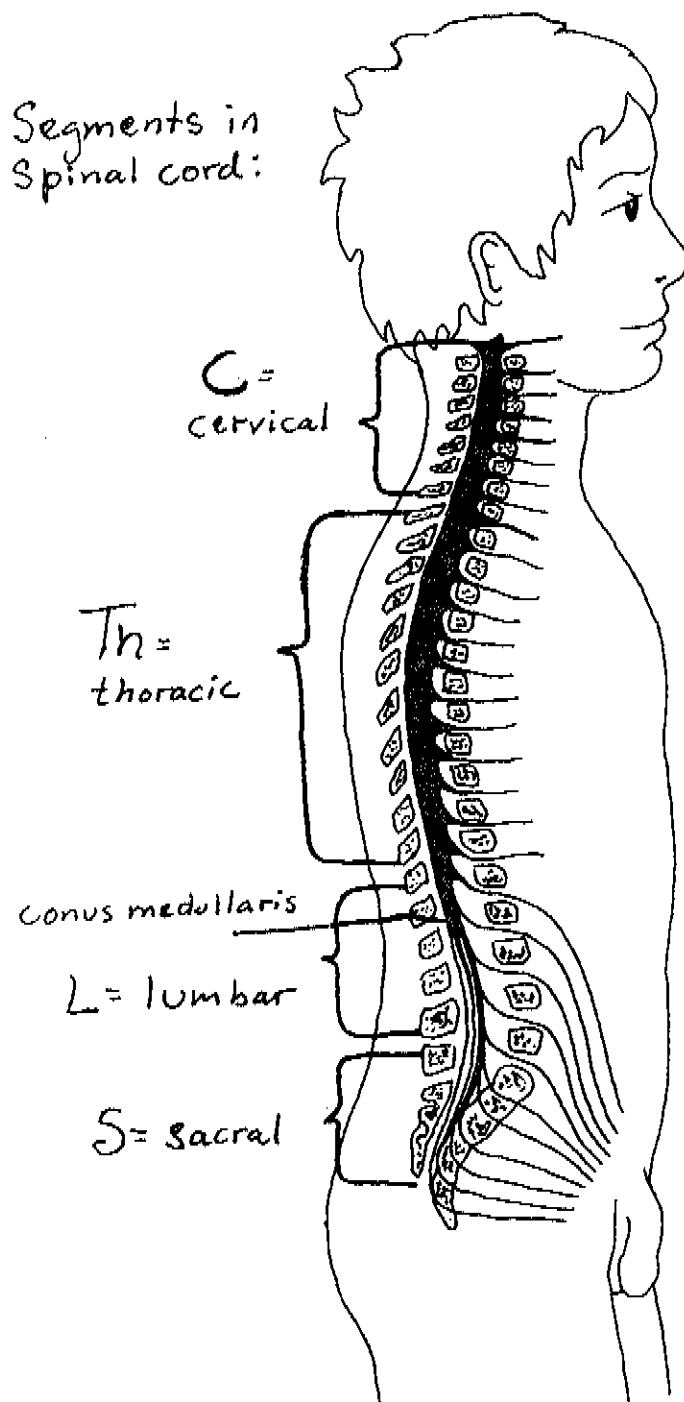
I have discussed the influence on the psychological development for a person with a disability and the social barriers. Furthermore, there are conditions which directly or indirectly have connection with the performance of the sexual activity.

For certain persons, where the disability directly or indirectly influences the sexual functions, there might still be valid direct sexual possibilities. The therapeutic measures here are: Providing sexual psychological knowledge, elimination of eventual anatomical obstacles (for instance total hip replacement where contractures or ankylosis make sexual intercourse impossible, or more concentrating on prevention of contractures in cases of muscular dystrophy). The most important target groups are both partners in a sexual relationship, disabled or not. "

Before describing the effects on physiologic sexual response in men and women with disabilities, certain important factors must again be stressed. - It has been shown that rigid negative attitudes towards sexuality as a whole in professionals of all kinds, strongly correlate to their treatment of disabled men's and women's sexual concerns. This finding mingle with lack of knowledge, misconceptions and myths about sexuality - disability and attitudes towards disability, and result in an amount of various interceptions, direct or indirect, in the sexual identity and sexual life of a disabled man or woman; i.e.:

- * False, none or censured information on sex life
- * Transference of guiltfeelings
- * Encouragement to a sex-less existence, sometimes a condemnation
- * Transference of own inhibitions in sexuality, thus blocking sexual alternatives

Neurologic mechanisms governing physiologic sexual response:



31 pairs of peripheral nerves branch out from the brain and spinal cord. Each pair of nerves belong to one segment of the spinal cord - the numbered segments correspond to the level of the surrounding vertebra of bones of the spine (see figure). The cord terminates at the second lumbar vertebra = L2 = the conus medullaris.

Sexual excitement phase:

Erection: the type of erection described in Chapter 1 (by thoughts and external stimuli) is a cerebral erection or psychic erection. The sense organs, the central nervous system (including the spinal cord), the reflex center in the spinal cord (along the entire length of the spinal cord are reflex arcs - basis for motor activity) and the peripheral nerves must be intact for erection to happen.

Erection is mediated by parasympathetic fibers from the Sacral spinal cord segments S 2 - 4 via the pelvic nerves. Cerebral erection may also be triggered by impulses transmitted through the sympathetic fibers, that leave the spinal cord at the junction of the Thoracolumbar

segments. There is another type of erection - The reflex erection which is brought about by tactile stimulation of the genital region. The neural mechanism described above (S 2-4) is essential for reflex erection, which depends only on the peripheral nerves and the reflex center and may happen even if there is a lesion of the spinal cord above the reflex center.

Female: In the woman the equivalent to erection is the bloodflow to the labia, the vagina and clitoris and the lubrication of the vagina - This bloodflow and events of lubrication are triggered by the same nerves as in the man - both in cerebral and reflex arousal.

The emission in the male and the closing mechanism of the bladder's neck, are governed by the symphatetic nervfibers transmitted through the segments T 11 - L 2 of the spinal cord. In the woman the contractions of the uterus, in the beginning of the orgasm phase, and secretion also meditate from T 11 - L 2 (One counts the segments from above), as described above.

Ejaculation is achieved by a series of contractions of the striated muscles in the pelvic floor, innervated by somatic nervfibers from the sacral spinal cord segments S 2 - 4, through the pudental nerve. The woman's equivalent is a serie of contractions in the same muscles as the man, at the peak of intercourse, and is also meditated by S 2-4.