

Reproduction Health 2006

“What to do so that you have children when you want to have them”

Translation

© Hana Konečná- editor

Faculty of Health and Social Studies, University of South Bohemia, České
Budějovice

Maternity Hope Foundation, Prague

Czech Society for Sexual Medicine

Czech Family Planning Association, Prague

Reviewers:
prof. MUDr. Ladislav Pilka, DrSc.
prof. PhDr. Petr Weiss, PhD.

© Hana Konečná – editor

ISBN 80-7040-855-3

This publication was created under support of Organon s.r.o. company
and did not undergo language editing.
The material and language accuracy is responsibility of the authors.

Content

A word for introduction

Eva Domorázková

To be or not to be (parent)?

Hana Konečná, psychologist

Successful conception – myths and superstitions

Radim Uzel, sexuologist

Influence of nutrition on reproduction

Petr Sák, gynaecologist

Bodybuilding, anabolic steroids and reproduction health

Vladimír Kubíček, andrologist

Success rate of assisted reproduction

Tonko Mardešić, gynaecologist

Socio-economic support to parenthood in the Czech Republic

Lucie Kozlová, economist

Adoption and foster care (substitutive family care)

Blažena Papáčková, psychologist

Development of gonadotropins for infertility treatment

Tomáš Mařík, biochemist

A word for introduction

The introduction words have always the task to introduce the reader or the listener into an issue, to explain the aim of an event or publication. Let me approach my task a little lengthily.

I am a person who was not blessed with children, despite of maximum long-term effort and trying all possibilities available in the given period. I was neither blessed with an adopted child. As a paediatrician, I was in daily contact with children, which allowed me to spend my time with them, but on the other hand, it reminded me constantly that I had none at home. This experience branded my life very much, and so when I got some property after 1990, I decided to use it to establish an organization which would devote to people in similar situation as mine had been. In 1995 I founded the “Nadace Mateřská Naděje” (“Maternity Hope Foundation”) foundation with several friends, predominantly doctors.

Our aim is to help infertile partner couples and women who have repeated miscarriages. The foundation puts main stress on complete examination with all means available and on psycho-social support to the whole partner couple. It offers, besides provision of expert ambulant laboratory examination paid by all health insurance funds, the provision of all information available related to procedures, diagnostics and treatment of infertility and repeated miscarriages. The foundation offers help in form of personal interviews, as well as correspondence, exchange of e-mail messages, consultations of a psychotherapist, advice concerning right regime for support of becoming pregnant, and also addresses of physiotherapists using the Mojžíšová exercises close to the patient’s domicile.

The foundation is based on volunteer work. We are member of SKOK, an association of non-governmental non-profit organizations working in social and health-social spheres. Further, we are member of Koalice zdraví (Health Coalition) associating patient organizations. The foundation is here as an isle of solidarity, associating experts who try to empathize with the worries and suffering of others. The most efficient form of help is personal contact in informal environment where the patient can ask questions about everything he had no time or courage for in the consulting room. The help of the foundation consists in establishing contact, confidence, and ability to hear and to co-experience the life stories of others.

The ten year work has brought us rich experience. We are hugely pleased at each message that other baby was born, we are hugely pleased at messages that an appropriate abandoned child was found and that there is a new complete family, and we are also pleased when we get a message that the couple stays without a child after vain effort, but that it has accepted this fact and lives a content life. There are times where it is difficult to find good solution. We bother our heads very much with these stories and we think sometimes: ...if only this couple had had such-and-such information! ...if only they had not waited so long, there would have been greater chances! We sought a possibility how the Maternity Hope Foundation could influence such situations as well, and the possibility was found. An inspiration was the World Infertility Month declared by the American Fertility Association (AFA).

AFA is an American non-profit organization, founded in 1999. It deals with education and support to men and women in the sphere of reproduction health, fertility protection and starting families. A very significant group helped by AFA is persons suffering from infertility. AFA offers them e.g. the necessary information of diagnostics and treatment of infertility and of adoption. AFA focuses its attention on increase of knowledge of broad public about medical and social topics in the sphere of reproduction health and infertility including prevention. It wants to help young people to make qualified decisions in their sexual life and when starting a family. In 2002 AFA declared June as World Infertility Month for the first time. The aim of this worldwide campaign is to support the effort of millions of involuntary childless couples all over the world, to inform the public of infertility problems and to create conditions for better possibilities of solution of such complicated life situation.

We found understanding at the Faculty of Health and Social Care of the University of South Bohemia in České Budějovice and we started to organize the Day of Reproduction Health (Den reprodukčního zdraví) together. Other organizations have been joining this activity gradually. As the Czech name indicates, the aim is not only to inform of the possibilities of solution of involuntary childlessness, of their efficiency and of the related psycho-social and health care issues, but also to deal with prevention

in the sphere of reproduction health. The Day of Reproduction Health focuses the attention of people on the factors reducing the chance to have a baby, and as the age of the partners, particularly of the women, is a significant factor as well, it deals with psycho-social causes of postponing of parenthood as well. There are several target groups for which the Day of Reproduction Health is intended, and they are varied: those whose wish to have a baby has not been fulfilled for some reasons; those who have been only considering whether to become parents; broad public. The Day of Reproduction Health should also become - and it is becoming - a possibility of interdisciplinary communication and cooperation among experts from different professions.

I started personally, and I will conclude personally as well. I think that I am a good example of the fact that you can live a full and quite happy life without a child. But I wish with all my heart to everybody who wants to have a baby that they can have it. I hope that this activity of ours will help it.

MUDr. Eva Domorázková, CSc.
president of the Maternity Hope Foundation
e-mail: info@materska-nadeje.cz

In Prague, on 22.5.2006

To be or not to be (parent)?

Hana Konečná, psychologist

This publication bears the subtitle “What to do so that you have children when you want to have them” While other contributions deal with the circumstances of “what to do”, I would like to focus the readers' attention to the part “when”. The short article does not set the target of describing a topic that would take several very thick books in scientific library and that is a similarly extensive topic for artistic elaboration, but I believe that it can invite to reflection.

Today, the child does not have to be undesirable consequence of sex thanks to available and reliable contraception. It is not existence necessity either; a lonely old or sick person is cared for in developed countries. And although the demographers and economists of these countries stress more and more strongly that there will not be resources to sustain old and sick people, a childless person is not perceived as a not full-bodied and asocial one any more (which I welcome very much, as a person dealing with involuntarily childless people), so that to be a parent is not more equal to succumb to social pressure; the impulse leading to the efforts to get pregnant is usually not the continuous questions from the parents or the neighbours: "when finally?"

The literature mentions the following reasons why a person wants to have a baby: biologic motivation – parent instinct and psychological and social motivation. However, there are strong doubts about the existence of parent instinct. “If we looked for a special instinct of children procreation, we would not find it because it does not exist in itself. And it does not have to. It is not present in animal kingdom either. There, it suffices that the animals are equipped with a strong instinct of sexual activity, which together with the mechanism commanding them to protect and not to eat their own offspring is fully sufficient for the procreation to run quite naturally. In man, the knowledge that the delight of sex need not be accompanied by a (often unwelcome) conception and the transformation of this knowledge into comfortable means preventing reliably the conception as a consequence of sexual activity have created conditions for the possibility to exclude children fully from the individual's life cycle," says the sociologist Rabušic (2001) and continues: “It is true that childlessness is not a massive phenomenon even in the modern hedonistic society, which indicates that the existence of children must contain something that fascinates us and leads us to procreate them.” And another opinion: “The ability to live in a partner couple is ideally followed by the ability to assume such an important life role as parenthood. But this gradual process is by far not so simple and straightforward. It was assumed that it

is governed by instincts, that the tendency to genus conservation plays a role here, that the almost omnipresent mother instinct exists, forcing the woman to feel irresistible wish to fulfill her life by giving birth to a child in a specific period of her life. But this simple concept stops applying gradually in the so called developed countries and it seems to be more and more covered by powerful cultural and generally social factors," the pediatricist Dunovský (1999) writes. The French sociologist Badinter (1998) deals with the relation to the child as an instinct. On the base of her extensive analysis of historical materials recording primarily the behaviour of mothers towards children, she comes to the conclusion that "... mother instinct is a myth. We have not met any universal and inevitable mother behaviour... mother love is only an emotion, accidental in its substance as such... All depends on the mother, on her private history and on the history as such... Mother love does not arrive on its own accord. It is "extra". Even the classics of sociobiology, scientific study of biological base of all forms of social behaviour in all species of organisms including man, say that "man differs among the animals by being governed by culture, i.e. by learned and transmitted impulses." (Dawkins, 2003).

It is probably not possible to rely on mother (and what about father?) instinct; it does not release the person from the responsibility for the decision whether to become or not to become parent. Nothing remains but to think about one's psychical needs - and to decide. The decision whether to be or not to be a parent, why, when or how many times, is a free process. And that is why it is so difficult. The complexity of this decision is increased by the fact that it is – usually – decision of two persons.

The physiological needs, e.g. hunger and thirst, are present at everybody, they must be satisfied and it is obvious by which (food, drink). It is true that psychologists have not agreed on a definition and list of psychical needs (e.g. the need of security and safety, love, acknowledgement and estimation, self-implementation, the need of knowing and understanding, ... are stated), but it is well known that they can be differently developed in different persons, or can be missing. The psychologist Matějček, known worldwide by his works about unwanted children and psychic deprivation, calls attention to the fact that some needs are fulfilled by the birth of the child, but other needs are limited at the same time, see table (in Dunovský, 1999):

Having Children	Not Having Children
1. Stimulation	
A child is a full of movement, it brings many stimuli into one's life, there is no shortage of entertainment and worries or anxieties. Without a child, life would be boring, and also marriage would be boring, empty.	A child prevents stimulation. One is bound to it, cannot fully enjoy life – cannot use up one's leisure. Life with a child is monotonous and because of all the worries one cannot fully enjoy even one's marriage.
2. Learning, Exchange of Meaningful Stimuli	
Parents bring up children, but children strongly influence their parents. Children bring unique experiences to the parents. They mutually complement each other, they grow inwardly. Only a life with children provides specifically human experiences.	A child prevents one from gaining experience, it ties one at the cooker, nappies, school homework. One gets nothing out of it all!
3. Feelings (the feeling of life certainty, of security)	
Children receive love, but they return it as well – there is a relationship here. There is someone who is bound to me through the deepest and purest bond. He or she cannot leave me, I will be taken care of in my old age. For relationships to people are the best guarantee of life security.	Children bring about a permanent frustration in terms of security needs. I would always worry that something will happen to them, that they will be disobedient, that they will go astray. Having children means being vulnerable precisely through them. They can put me under pressure, they may not be accepted to university, they may not find a good job – I am bound and limited by them.
4. Identity (individual autonomy, social status, individual consciousness)	

<p>Having a child gives worth to a person, it provides a woman and a man with social status. In the relationship to a child we lose anonymity and we are not threatened by the anonymity of a crowd. The child needs me and I need the child.</p>	<p>Having a child prevents one from the attainment of more important social roles. If I did not have a child, I would have achieved more, I would have been in charge of socially more important things, I would have had a higher social status. "Having a child" places me in the anonymous crowd of ordinary people with ordinary worries.</p>
---	---

When you think about the table, you will find that it is not so that some needs are satisfied and other limited by the child, but that the same needs are satisfied and limited at the same time. It seems illogical, but it is exactly so. The evaluation of "satisfiability" or "limitability" depends on a lot of circumstances: on the personality disposition of the evaluating person, on his or her life situation, on his or her instant mood and last but not least on the child to which the evaluation is related and to his or her age. Everybody likes other period in the child's life: one remembers with horror the baby period of his or her life, when only growing cry was the answer to questions after the cause of the cry, and is happy with an adolescent who is able to express his opinion; other could not tear away from the helpless baby, but seeks psychotherapeutic help because of the adolescent's clearly formulated opinions.

But parent experience is nontransferable. Therefore the human can evaluate the "satisfiability" or "limitability" of his or her needs only when he or she is a parent; before that, it is only more or less qualified estimate. Therefore human decides with considerable level of uncertainty. But most life decisions are made with considerable level of uncertainty, with high level of risk of deciding wrong. However, the impact is not so fatal in a lot of decisions: you can stay an unpleasant holiday, you can leave a wrongly chosen school, sell a bad house and divorce an inoperative marriage. It is true that it is possible to give up a child, but this variant is chosen rather by people whose parenthood did not result from their decision.

In spite of that, there are some securities in deciding whether to be or not to be parent. From research made with persons whose wish of child is not fulfilled, the finding resulted that childlessness brings freedom. Time, financial and emotional freedom. Personal freedoms are on the top of the value charts in developed democracies, and sometimes the reason for decreasing marriage and birth rate is seen in it. But the freedom of parents increases with increasing age of the child as well (provided that the child is healthy). It is certain that the time freedom will come back gradually. It is certain that the financial freedom will come back gradually as well. But emotional freedom will never come back.

Similarly irreversible as the decision to have a child is also the decision not to have a child, for the couple or at least for the woman. In the Czech serial "Život na zámku" (Life in the castle), a childless pensioner in an old peoples' home says towards a bed of her recently died roommate (paraphrased): "You always complained that the children came to visit you only when you had something to give them. I would like to give, but nobody comes..."

Maybe the interrogation point in the title provoked some expectations that the contribution offers an answer or at least its indication. But there is no unambiguous answer to this question, valid for everybody; no serious scientific research will give clear advice whether parenthood will bring more joy than suffering to a specific person. In any case, it is better to find the courage and to risk with awareness of responsibility, than to wait for the calling of the parent instinct; in centres of assisted reproduction, too many couples are known, which were forced to efforts to get pregnant by biology, but not in form of instinct, but in form of ticking of biologic clock dying down...

Although I intentionally wrote my contribution in neutral tone, I would like that optimism radiates from it. I do not want to question the choice of those who do not hesitate and clearly choose childlessness. But I want that my contribution gives courage to those who are hesitating and only miss courage. As a content mother of four children, I cannot write a neutral contribution.

Literature

Badinter, E. (1998): *Materská láska od 17. storočia po súčasnosť*. Vydalo Zaujímavé združenie žien Aspekt, Bratislava.

Dawkins, R. (2003): Sobecký gen. Praha, Mladá fronta.
Dunovský, J. a kol. (1999): Sociální pediatrie. Praha, Grada.
Konečná, H. (2006). On the Quest for a Child. Praha: Triton
Rabušic, L. (2001): Kde ty všechny děti jsou? Praha, SLON.

Contact to author:

Nadace Mateřská naděje (Maternity Hope Foundation) Praha, Ke Džbánu 385/17, 161 00 Praha 6
Zdravotně sociální fakulta Jihočeské univerzity (Faculty of Health and Social Sciences, University of South
Bohemia) České Budějovice, B. Němcové 54, 370 01
e-mail: materskanadeje@volny.cz

Successful conception – myths and superstitions

Radim Uzel, sexuologist

In 2004, my book on sexual myths and superstitions was published for the second time. Long-term cooperation with consulting columns of different newspapers and magazines, participation in radio and television talk shows, as well as continuously repeated trivial problems of internet consulting would quite surely provide rich material to further exposition of frequently mistaken opinions and superstitions related to human reproduction.

Let me list the most frequent here. At first sight they are completely trivial problems; no special education is necessary to answer these questions, an instructed layman can deal with them quite well. But there is the question what percentage of population has available at least basic information from the sphere of human reproduction biology. The above mentioned consulting agenda indicates rather that quite a high percentage of our inhabitants pass basic school completely untouched by sexual education, and so nothing else remains that to organize some sexuologic postgraduate education for them in the scope of mass media. It is particularly useful in the sphere of successful conception.

The significance of the so called fertile and infertile days in woman's menstruation cycle as a consequence of religious propaganda. It is completely logical that the highest probability of conception comes in the periovulation period; in case of a regular 28-day cycle, it is the 12th – 14th day of the cycle, counted from the first day of menstruation. The monitoring of cervical mucus and evaluation of the curve of basal temperatures definitely helps to determine the so called "infertile" days – immediately after the end of menstruation and particularly in the second cycle half – three days after continuous increase of the curve of basal temperatures. The existence of the so called provoked ovulation, common in some rodent, is not excluded in humans, and even cases of apparently inexplicable successful conception during menstruation are known. Thus the method of periodical sexual abstinence is successful as contraception measure only to certain level, and in some cases it is by right designated as "Vatican roulette".

Also the aimed date of intercourse in the scope of effort of successful conception can be called debatable. Numerous studies recorded substantial influence of psyche and suggestion not only on menstruation cycle, but also on ovulation mechanism. We can often see careful monitoring of symptothermal indicators and highly frequent intercourses in the period of the so called highest fertility in the scope of pro-conception measures. But even such meticulous monitoring is sometimes the cause of anovulation cycle, so that the trivial lay advice "do not go to bed with menstruation calendar in the hand" can be quite useful. It is also necessary to stress the negative influence of excessively frequent ejaculation on fertility. During ejaculation, less mature forms of sperms are produced, they are less mobile and the general conception ability sinks. This phenomenon can be also the cause of the so called physiological "honey moon infertility", when the woman gets pregnant only after the frequency of the after-wedding intercourses sinks a little.

An incredibly high number of questions concerns discharge of the semen from the vagina after the intercourse. A lot of people believe that this phenomenon can be the cause of infertility. It is necessary

to explain here that the vagina is not a tubular body, but a gap in which the front and rear wall fit closely together, and after the penis being pulled out, this space can in no case hold 3-4 ml of liquid, which is the common volume of ejaculate. Primarily the first dose of semen serves for a possible conception, containing usually the most mobile highest-quality sperms. These blend immediately with the mucus in the cervix, from where they penetrate into higher parts of the genital tract. Therefore the possible immediate irrigation of the vagina is inefficient as contraception measure. Only a minute part of the semen liquid stays in the vagina arch, particularly in the rear arch, and the major part of the ejaculate runs out from the vagina after the intercourse, which can be considered as a completely natural phenomenon.

Therefore, different exercise manoeuvres after the intercourse, which could make possible to hold more semen liquid, are useless as well. Especially women with uterus retroflexion, i.e. the so called "uterus reversed backwards", are recommended to have intercourse "a la vache", or when they refuse such intercourse from behind, to lay on the stomach immediately after the intercourse. This exercise has usually rather psychological effect than allowing better penetration of sperms into the woman's internal genital.

Also the significance of woman's orgasm for successful conception is often overestimated. It is true that it was demonstrated by experimental research that a kind of suction of the cervix mucus takes place during orgasm in consequence of muscle contractions, but there is no scientific proof that orgasm would really increase the possibility of conception. To the contrary, frequent cases of repeated successful conception in permanently and reliably anorganistic women are known. A woman can get pregnant also in coma, in deep total anesthesia or in total alcoholic drunkenness, possibly even not knowing about the intercourse. Let me state here that from forensic point of view, all such cases can be qualified as rape because they misuse the phenomenon of woman helplessness.

A lot of doubts is connected with fertilization in drunken state. It must be stated here univocally that the instant level of alcohol in blood in the moment of the fertilizing intercourse has no influence on the quality of the offspring and on the course of a possible pregnancy. The foetal alcoholic syndrome of the mother is known, but it is caused by repeated alcohol consumption during pregnancy. In the man, the conception success follows the law "everything or nothing", which means that only high-quality semen penetrates to higher parts of the vulva and only the most healthy sperm fertilizes the ovum. The sperm matures about 70 days and it is certain that in alcoholics, the spermiogenesis is endangered and that sooner or later there will be lack of healthy sperms able of fertilization, but the drunkenness in the moment of intercourse plays no significant role in the conception quality.

Also the date of intercourse in relation to the selected sex of the offspring plays no role. Sometimes there are superstitions about the influence of food, being proteins put in connection with more frequent occurrence of male sex, while carbohydrate conception leads to conception of a female. These statements refer to higher occurrence of male offspring in British aristocracy, while their servants give birth to more girls. But careful monitoring does not confirm this statement. Also separation of X and Y sperms with the help of other mechanisms, as acidity or alkalinity of the vagina environment, must be condemned to the realm of myths and superstitions.

Literature:

Uzel, R. (2004). Mýty a pověry o sexu. Praha: Nakladatelství xyz.
www.planovanirodiny.cz

Contact to author:

MUDr. Radim Uzel, CSc.

Společnost pro plánování rodiny a sexuální výchovu (Czech Family Planning Association)

Senovážná 2, POB 399, 111 21 Praha 1

phone.: +420 224 231 524, e-mail: planrod@centrobox.cz

Influence of nutrition on reproduction

Petr Sák, gynaecologist

Nutrition influences reproduction from two points of view. From aesthetic and from health point of view. The natural partner selection is influenced by the partner's physical beauty to considerable level. In men, the ideals do not differ too much from antiquity to present, and there are no distinct differences between Myro's Discobolus and the Olympics winner Šebrle. When the man did not meet the physical ideals, he could substitute them by power and wealth in the reproduction competition. In women, the beauty ideals differed in individual periods. From the motherly mighty Venus of Věstonice over the ancient perfect beauty. Lean gothic and renaissance women were shortly substituted by buxom baroque forms, which are replaced by women classically beautiful from present point of view in subsequent centuries. In the 20th century, quick changes of ideals are enforced by continuously stronger pressure of the media. This media pressure has recently markedly influenced the wish of young girls to come the nearest possible to the presented ideal of models and actresses. But in spite of these partial deviations, it can be simplifiedly stated that marked deviations from the required standards handicapped the women located on the edge of the required ideals. Both in the sense of marked overweight and of extreme undernourishment. There are naturally exceptions here as well, when women become attractive through their power, wealth and fame. Simplifiedly said, reproduction chances of very obese and very thin women were markedly reduced by this natural selection.

At present, the alimentary disorders are the focus of extraordinary interest because of a literally epidemiologic growth of their incidence and because of new findings of deviations in the sphere of hormonal regulation. Alimentary disorders are related to historical, socio-economic and ethnic phenomena and they can increase morbidity and mortality of the affected persons. Reproduction health is significantly influenced by mental anorexia, which is characterized by marked psychically conditioned abnormalities in food intake.

Mental anorexia is probably the longest known psychosomatic illness with extraordinarily striking clinical manifestations. The picture of mental anorexia has been known already since antiquity. Berkman brought definitive specification in 1930. Mental anorexia has exceptional position from the point of view of sexual prevalence, women constituting 95% of patients. Different studies differ strongly in total prevalence, depending on whether they include also lighter subclinical forms. Most studies based on economically advanced countries state a prevalence between 0,2-10%. For example in the USA, 27% of adolescent girls with normal weight try to reduce it.

The signs of mental anorexia include, under the precondition of absence of somatic organic impact:

- loss of body weight of at least 25%, or drop of more than 15% in comparison with normal weight
- intense fear from weight increase or obesity even in case of undernourishment
- inability to keep at least the lower limit of usual weight
- deformation of perception of own somatic picture
- permanent and exaggerated concentration on body appearance
- rejection of health risks
- amenorrhoea (menstruation drop out) for at least 3 subsequent cycles

Mental anorexia includes other symptoms as well:

- obstipation (constipation)
- dry skin
- intolerance of cold
- acrocyanosis (violet colour)
- weakness
- hair loss
- growth disorders
- tendency to bruises
- low blood pressure
- irregular heart activity

- patients with anorexia suffer from typical behaviour: isolation from environment, frequent visits to bathroom or WC – especially after meals, bizarre practices in hiding food or vomits

Complications:

- osteoporosis of backbone and periphery skeleton. Even osteopenia represents whole-life risk including in case of successful realimentation (nutritive) therapy.
- EEG abnormalities and atrophy (reduction) of brain tissue with chamber enlargement were found
- damage to heart muscle and to transfer system contributes to increased sickness rate and sudden deaths
- weakening of diaphragm function and ventilation capacity brings risk of lungs inflammation
- drastic induction of vomiting leads to dramatic complications of digestive tract (bleeding, damage to digestive pipe, inhalation)

Endocrine response to mental anorexia:

- in about a half of the patients with beginning mental anorexia, secondary amenorrhoea (secondary menstruation drop out) develops, preceding clinical manifestation of the illness at about a fifth of them In the second half, amenorrhoea develops only in marked weight reduction.
- primary deviation is reduction of frequency and amplitude of pulses of GhRH (hormones), the reduction of pulsatile issue of LH (hormones) has a profile of prepubertal form, low values without rhythm
- drop of secretion of prolactine, estradiol and testosterone (hormones of hypophysis and ovary)
- increased concentration of corticoliberines (hormone) is found in cerebrospinal fluid, having anorectic central effect and inhibiting gonadotrophic axis (hypothalamus, hypophysis)

Therapy:

- realimentation (nutrition), initial, sufficient growth is 4-6 kg during 14-day hospitalization
- psychiatric
- psychological
- pharmacology

Exceeding physical load can lead to similar changes in function of hypothalamus (a part of brain) as weight loss, although the weight can be maintained. Secondary amenorrhoea occurs in 2-20% of athletes and in 30-50% of dancers according to performance class. It is adaptation response of the organism to high energetic demands. Immediate cause of amenorrhoea is drop of pulse secretion of gonadoliberine (hormone), after which drop of LH and estradiol follows.

Studies dealing with prevalence and trends of development of overweight and obesity in different countries of the world document marked growth of obesity prevalence in last 20 years particularly in economically developed countries. Americans publish that 51% of women are affected by BMI overweight of more than 25 in the USA at present. The share of obese women with BMI over 30 has grown to 23% in recent years. Data from other countries including the Czech Republic show similar situation. Economic costs related to this development are estimated at 4-10% from the total amount expended to health care in economically developed countries at present. Obesity becomes so one of the main health problems in these countries. There is lack of knowledge of neurohural regulation of food intake, the influences of external environment, consumerist way of life and other psycho-social moments are not sufficiently identified. The hypothalamus has key role in central regulation of food intake. Peripheral regulation of food intake includes a cascade of gradually released gastrointestinal hormones that influence function and mobility. They include cholecystokinin, somatostatin, glucagon, insulin and others.

In women, belly form of obesity is related to increased quantity of male sexual hormones in blood, put in connection with lack of female sexual hormones. These lead to increased storage of fat on the buttock and thighs. In obese girls, the menarche is shifted towards younger age, according to the hypotheses that menstruation appears after reaching certain body weight (48 kg). Obesity influences

regulation of reproduction functions in adulthood as well. Obese patients have very often irregular menstruation cycle and higher frequency of other menstruation abnormalities. Ovaries have pathologic appearance. The level of SHBG (a protein on which hormones bind in blood) is usually markedly reduced, with subsequent increase of the level of free testosterone. We can often see increased ratio of LH/FSH in obese women, which leads, together with increased quantity of insulin and the above mentioned SHBG drop, to development of increased quantity of male sexual hormone in blood, manifested by hirsutism, acne among other things. Obesity that manifests in adolescence is relatively often related to the syndrome of polycystic ovaries. This syndrome is one of the most frequent disorders of ovaries in women in fertile age. The syndrome is characterized by anovulation cycle disorders, fertility disorders, hirsutism. The therapy of hyperandrogenic conditions and syndrome of polycystic ovaries should start by weight reduction.

It follows clearly from the above mentioned cases that significant deviations from women average weight influence markedly their reproduction possibilities and have a significant share at their general health condition. So it can be affirmed that keeping average weight is the best prevention from the above mentioned pathologic conditions, avoiding the necessity of subsequent treatment.

Literature:

At author's

Contact to the author:

Prim. MUDr. Petr Sák, PhD.

Gynekologicko-porodnické oddělení, Nemocnice České Budějovice, B. Němcové 54, 370 01 České Budějovice
Zdravotně sociální fakulta Jihočeské univerzity (Faculty of Health and Social Sciences, University of South
Bohemia) České Budějovice

e-mail: zenske@nemcb.cz

Bodybuilding, anabolic steroids and reproduction health

Vladimír Kubíček, andrologist

Physical activity, both physical work and exercise, is generally beneficial to human health. However, excessive or incorrectly directed load can damage human health. A lot of people of current Euro-Atlantic civilization have lack of exercise, they suffer from civilization illnesses and obesity. At the same time, they have little time and are overflowed with information supporting commercially profitable way of exercise. When they are interested in recreation and conditioning exercise, there are generally not serious problem imminent. The most problematic is the sphere of bodybuilding, especially its "hard" variant. This concerns fortunately a relatively narrow circle of people who can easily obtain information of the risks of this sport.

Often it is more about prestige and social image, and then there is a broad range of commercial "factories of physical beauty". Going to fitness centres is also a social issue, exercising in groups brings elements of competition with it, particularly in men (who stands more, who will sooner have bigger muscles). A lot of trainers offer individual problems how to improve physical condition and besides to accentuate male attributes – muscle strength and masculine body proportions. The concept of "perfection" of male physical proportions is created artificially, similarly as the concept of woman beauty in Miss competitions. The condition approaching to the supposed ideal supports self-confidence and also the readiness to pass more time (and spend more money) in caring about one's body.

"Bodybuilding" can be understood similarly as building a sporting hall. The body tissues have their physiological limits (similarly as the ceilings of sporting halls). When not considering these limits, the result can be good until a factor emerges which the "builder" has not expected.

The emphasis put on harmony of body and mind, known from the antique, changes into the emphasis on achieving the biggest effect possible within the shortest time possible.

The physical side of human being has developed since millions of years, he has physical preconditions for walking, running, swimming and physical load he executed in the given time. The load is deduced from the way of support, which was typical of him in last thousands of years, i.e. field work, grazing animals; stronger physical dispositions allowed men to hunt animals or to fight enemies. All that with simple tools and weapons they were able to made of natural materials.

So the physical conditions of the present human being do not differ from our ancestors from the period of mammoth hunt, we go on being the same species - Homo sapiens sapiens. The present way of life and the possibilities of medicine lead to distinct prolongation of average life length, but at the same time to distinct reduction of average physical condition of human being. "Natural selection" (selection of the resistant and the strong) finds application only through economic relations in the society, it has nothing to do with physical strength, mainly in our, the so called civilized society.

But back to bodybuilding. Pointed straining of muscle groups that are well visible, i.e. muscles of shoulders, arms, thighs, chest and abdomen is particularly desirable. Salient muscles in these body parts correspond to the present ideal of masculine beauty. Nobody supposes that the muscles of a bodybuilder or a muscle-man on the beach have originated during plowing, woodcutting or hard physical work. They are muscles intended for beauty, or possibly for victory in a competition, they are not useful muscles.

Men who must carry out hard and persistent physical work have their muscles developed otherwise, far less markedly. Similarly "invisible" are also muscles of persons who systematically engage in exercise, the basis of which originated in historical context of philosophical sciences of ancient Eastern civilizations. These men have substantially less frequently problems derived from physical load than persons who exercise for physical beauty.

From practical point of view: when examining a man who comes to the consulting room it can be told very easily whether his general condition, the state of musculature and motoric apparatus have originated as a consequence of short-term or long-term bodybuilding, as a consequence of training of top athlete, as a consequence of long-term work load in the nature, work at construction or in armed forces. It is interesting to observe the differences in physical build of a professional hockey player, competitive cyclist, swimmer, farmer, woodcutter, stonecutter, miner, truck driver, long-term horse breeder, historian, physician, lawyer, financier, hunter, soldier, judoka etc.

The combination of inborn physical preconditions of the given man and his physical loads create a body "record" that can be read very well.

There is nothing bad in exercising for body beauty, provided that it respects natural physical and psychical preconditions of the human organism, strives for their harmony and does not create a subculture leading to astray similarly as anorexia in models.

The wear of joints, the flabbiness of muscles, which do not have the possibility to be maintained in condition by normal activity after being "built" with the help of excessive protein, carnitine, vitamin and often even hormonal supply, is not physiological.

Excessive load particularly on abdomen musculature can lead to disorders of blood circulation in the pelvic region, and this combined with anabolics leads to problems with infertility. Anabolic steroids dampening the own hormonal activity of the testicles are added into freely sold protein and carnitine supporting food supplements for sportsmen even secretly, how the checks of their composition have shown in case of positive doping tests of sportsmen.

Anabolic steroids are synthetic derivates of testosterone that is normally produced in the testicles in a man. The male reproductive cells – sperms - are produced in the testicles as well. The production of testosterone and sperms is inseparable, sperms cannot be produced without testosterone.

The main male sexual hormone testosterone supports markedly the construction of protein tissue components too. This concerns the bone tissue, the production of proteins in the liver (immunoglobulines), the production of red blood cells, the reproductive cells in the testicles (sperms) and the muscle cells.

When the testosterone consumption is linked with physical exertion, with exercise, it supports muscle

growth. These properties are called **anabolic effect**. As early as in the fifties and the sixties of the 20th century there were experiments intended to separate this anabolic effect from its main **androgenic** - male - properties. In that way the so called **anabolic steroids** emerged.

Nevertheless, the effort to separate completely the positive effects of testosterone on muscle metabolism, production of red and white blood cells and bone build and to limit the masculinizing effects (particularly in women and children) never succeeded fully. It is true that marked muscle load reduces in the short term the testosterone levels in the serum, but it does not require substitution of testosterone by consuming a synthetic hormone. When consuming the synthetic hormone, obvious increase of the volume of muscle mass can be seen, but at the same time, the autoregulatory hormonal processes in the body are provably and markedly influenced in the negative sense. The doses used (or rather misused) in sports are much higher than therapeutic doses (e.g. after loss of both testicles because of an accident). The levels of male sexual hormones in blood have great significance as important information for brain centres – between brain and hypophysis. The artificially provoked excess of male sexual hormones in blood provokes slump of these centres that stop producing regulatory (tropic) hormones, which control the production of own male sexual hormones in the testicles.

It could seem that it does not mind, when artificial hormones are provided from outside. But the level of the own testosterone in the testicle tissue is under normal conditions 50x to 100x higher than in blood, and this testosterone stops being produced when consuming hormones from outside. Ironically, the own testosterone stops being produced in the testicles, the level sinks markedly under the values necessary for sperm production, and spermiogenesis disorder and infertility emerges in a lot of such men. Azoospermia – i.e. absolute absence of sperms in the ejaculate – was described even 1 year after having stopped using these preparations. At the same time acne, growing breast in men occur, and water retention connected with swelling can occur as well. In women, irreversible changes of voice, enlarged clitoris and virilization (male appearance of a number of sportswomen) can occur.

The preparations used formerly often damaged the liver; even today, the risk of accelerated development of liver tumour is stated.

In young individuals with not concluded bone growth, the anabolics can cause cessation of growth. Many years ago, scientific associations and organizations expressed themselves in favour of prohibition of use of these preparations in athletics and of disqualification of sportsmen using them. In spite of that, an epidemic of misuse of such medicines is reported particularly in the USA and in the post-socialist countries. They are really originally **medicines**, because they are intended to stimulate bone metabolism in osteoporosis (bone tissue thinning), to stimulate production of proteins in case of exhausting illnesses, for convalescents after serious infections, operations and burns, for patients with advanced malign tumours, anemia, with poorly healing wounds and after treatment of tumours with cytostatics and radiation.

Prescribing anabolics cannot be confused with substitution of missing natural androgens in some illnesses and at higher age. Similarly as during menopause in women, where the hormonal activity is reduced simultaneously with the well known unpleasant and negative impacts on the female organism, the hormonal relations change at higher age in men as well.

In case of lack of male sexual hormones, osteoporosis with increased bone fragility occurs as well as reduction of blood cell and liver proteins, reduction of immunity against tumours and infections and decrease of sexual functions, particularly libido and penis erectivity. Besides, decrease of abilities of the nervous system – particularly of brain cells -, their ability to learn, keep information and create new connections among them have been proved. These reduced cognitive functions of the brain cause acceleration of biological aging. In case of proved lack of male sexual hormones, the substitution of lacking male hormones is completely OK after the adequate full expert examination and exclusion of prostate illness. The substitution is possible in form of pills, injections, in subcutaneous implants, which create a depot - reserve for longer time. Hormonal plasters (similar as in women after menopause) are available as well, being glued on the back, arms or scrotum skin, substituting very gently the insufficient functions of own testicles.

The disorders of hormonal conditions emerge in younger and younger age groups of men, together

with the sinking quality of the sperms and the increasing percentage of infertile couples.

The decision of prescription of any hormones must be entrusted to a specialized physician. Health, and particularly reproduction and sexual health, is a fragile and sensitive value that must be handled with maximal care, otherwise the decrease of inhabitants of Euro-Atlantic civilization will go on.

Literature:

Kubíček, V. (2006). Penis - rádce nejen pro muže. Praha: Smart Press.

www.sexmed.cz

www.ne-plodnost.cz

www.sexproblemnet.cz

www.neplodnost.cz

www.ordinace.cz

Contact to the author:

MUDr. Vladimír Kubíček, CSc.

Centrum andrologické péče (Centre of andrologic care)

U Tří lvů 4, 370 01 České Budějovice, Phone: +420 386 358 413

e-mail: kubicekmudr@iol.cz

Success rate of assisted reproduction

Tonko Mardešić, gynaecologist

After Lousie Brown's birth in 1978, the extracorporeal insemination (in vitro fertilization) – originally intended as treatment of sterility in women with removed or irreparably damaged Fallopian tubes – became the most efficient infertility treatment regardless of the inducing cause. In the Czech Republic, about 900 cycles of extracorporeal insemination on 1 million of inhabitants is carried out according to available data, which is comparable with the approach to this indication in the Netherlands or in France, but by about one half less in comparison with Skandinavian countries. The success rate of assisted reproduction in the Czech Republic is comparable with other economically developed countries, but some specific aspects can be noticed (age structure, number of embryos transferred, multiple pregnancies). Actually, more than 3% of all children born are born after extracorporeal insemination, and it can be really supposed that the number of the couples treated will go on growing with the increasing age of primiparas, with the reduced fertility of men and because of other civilization factors.

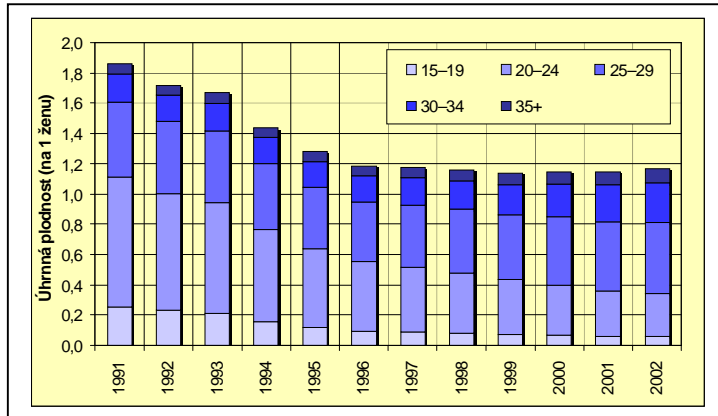
The way of demonstration of the results and evaluation of efficiency of assisted reproduction is subject to permanent discussion because of heterogeneity, as the following factors can be evaluated:

- results after transfer of only fresh embryos, particularly the success rate of transfer of fresh and defrosted embryos or total success rate cumulatively
- all positive pregnancy tests, only clinical pregnancies, pregnancies concluded by birth or pregnancies concluded by birth of healthy foetus (baby-take home rate)
- results related to the couple (cumulative success rate), success rate on the cycle started, on the cycle with oocyte take or on cycle with embryo (embryos) transfer
- results cumulatively or in individual age groups

The results demonstrated correspond to the selected evaluation method. Therefore there are efforts to find new methods of evaluation of success rate and quality of the care provided: one of the proposals is to evaluate as treatment success only onefold pregnancies concluded on the set term by birth of healthy foetus. A precondition of high success rate in elimination of multiple pregnancies is the transfer of a single embryo (eSET-elective single embryo transfer) after a strict selection allowing the selection of the embryo with the highest implantation potential.

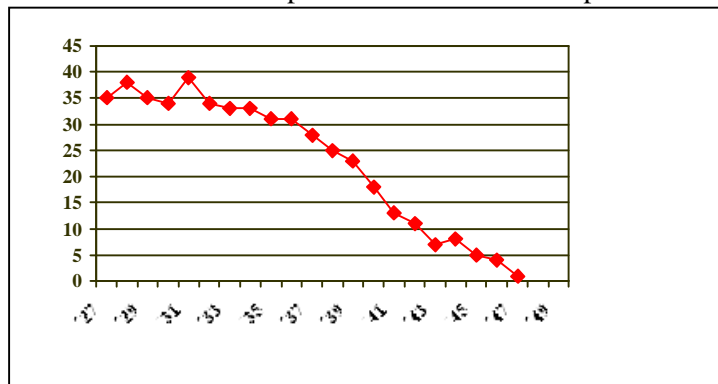
Other possible parameters can be the following: the percentage of successfully implanted embryos, the percentage of births on an embryo transferred, successful implantation on an oocyte, birth of a healthy foetus on an oocyte. The discussion goes on and no consensus has been achieved yet.

The development of total fertility and its structure by age in the Czech Republic 1991-2002



(Úhrnná plodnost (na 1 ženu) = Total fertility (on 1 woman))

Success rate of extracorporeal insemination in dependence on woman's age



Number of IVF cycles / 1 million of inhabitants in European countries

Země	1997	1998	1999	2000
Dánsko	1448	1608	1659	1830
Finsko	1538	1528	1407	1446
Island	1422	1540	1383	1300
Francie	780	795	882	961
Nizozemsko	897	889	915	946
Švédsko	952	947	973	1038
ČR	778	791	852	-
Celkem*	765	781	943	856

(Země = Country: Denmark, Finland, Iceland, France, Netherlands, Sweden, Czech Republic, Total*)

Accessibility of IVF (payment from general health insurance) in surrounding countries

Country	Payment
Czech Republic	3 cycles until 39 years of age
Slovakia	3 cycles until 38 years of age

Hungary	5 cycles
Slovenia	4 cycles; other 4 cycles after birth
Poland	not paid

With regard to the fact that no central register of assisted reproduction exists till now, it was possible to base the statements only on the analysis of the own set. The cumulative success rate of infertility treatment by the method of in vitro fertilization (IVF) can be documented by the following numbers: from all couples who started treatment with the help of IVF and in which at least one collection of female gametes (ovula) for extracorporeal insemination was carried out, 58,8% got pregnant and 51,4% gave birth. From the couples who passed the whole number of cycles paid from general health insurance (i.e. three IVF cycles), full 85% got pregnant and gave birth.

The extracorporeal fertilization represents a real hope for getting pregnant and giving birth to a healthy foetus for absolute majority of couples with fertility disorder regardless from the cause.

Literature:

At author's

Contact to the author:

Doc. MUDr. Tonko Mardešić, CSc.

Institut postgraduálního vzdělávání ve zdravotnictví, Reprodukční medicína – subkatedra (Institute of postgraduate education in health care, Reproduction medicine – subdepartment)

Na dlouhé mezi 4/12, 147 00 Praha 4, phone: +420 261 082 287

e-mail: pronatal@pronatal.cz

Socio-economic support to parenthood in the Czech Republic

Lucie Kozlová, economist, Co-author: Hana Francová

Introduction

The measures of family policy should follow, among other things, the compatibility of family function and job, e.g. through working time flexibility, financial support to families and other tools of personnel policy. This report presents a complex survey of basic financial contributions for support to parents caring for children and points out some deficiencies in the current model of Czech social policy.

Direct support to families

The financial benefits concerning pregnancy and motherhood from Law No. 88/1968 Coll. of extended maternity leave, of benefits in motherhood and of child benefits from health insurance include the compensating contribution in pregnancy and motherhood and financial help in motherhood. It is provided to an employee who carried out a work that is prohibited to pregnant women or that, according to medical opinion, endangers her pregnancy, and therefore she is transferred temporarily to another work during pregnancy, obtaining lower creditable income than at the former work without her fault. The same provision applies adequately for mothers until the end of the ninth month after birth. The compensating contribution is determined as the difference of the employee's daily basis of assessment, ascertained by the day of her transfer to another work, and the average of her creditable incomes falling on one calendar day in individual calendar months after such transfer.

The financial help in motherhood is provided during the maternity leave. In connection with birth and care for the born child, the employee has the right of maternity leave of 28 weeks (in case she has given birth to two or more children at the same time or in case she is a single mother, she has the right

of maternity leave of 37 weeks). The employee starts her maternity leave usually from the beginning of the sixth week before the expected birth date, but from the beginning of the eighth week before this day at the soonest. The financial help in motherhood belongs also to an employee who has taken a child, commended to her by a decision of the competent authority, into her permanent care substituting mother care. The amount of the financial help in motherhood in a calendar day amounts to 69% of the daily basis of assessment, being the daily basis of assessment ascertained by the day of start of maternity leave. The daily basis of assessment is ascertained when dividing the basis of assessment ascertained from the decisive period by the number of calendar days falling on the decisive period. The decisive period is the period of 12 calendar months before the calendar month in which the claim to financial help in motherhood originated. The financial help in motherhood belongs to the employee in case she was participant of health insurance at least 270 days in the last two years before the birth.

The changes prepared, which should apply from 1.1.2007, concern the amount of financial help in motherhood that should increase to 70% (now 69%) of the daily basis of assessment, and principally, also the child's father could receive this financial help from the 7th week of the child's age.

Birth grant, parent contribution and child benefits are benefits drawn from the system of state social support to cover the costs for sustenance and other basic needs of children and families. A woman who has given birth to a child has the claim to *birth grant*. The amount of birth grant is 17 500 CZK at the birth of one child, 2 x 26 250 CZK at the birth of twins and 3 x 26 250 CZK in case of triplets. The claim to the benefit originates only in case of the birth of a child, not in case of abortion or miscarriage. The claim to this benefit belongs also to a person who has taken a child under one year into permanent care substituting parent care. The birth grant is included among benefits provided regardless of the income level of the person entitled. But a condition is that the mother must have permanent residence on the territory of the Czech Republic.

After concluding the maternity leave, the woman has claim to further excused vacation without the claim to salary compensation – further maternity leave – in connection with the care for the child in almost all European countries. In Europe, this institute begins to be called “parent leave” because not only the mother, but also the father of the child can draw it in accordance with the valid legal regulations of a number of countries. During the parent leave, the parent has the claim to a benefit from state social support – *parent benefit*. The parent benefit is a benefit that should make it possible for the parent to go in for the care for the child. Therefore the basic precondition for the claim to this benefit in the relevant calendar month is a duly, whole day and personal care for a child under 4 years or up to 7 years of age in case of a child with long-term health handicap or with long-term serious health handicap. This fact results also in certain limitations defined by law, concerning nursery, kindergarten attendance or attendance of other similar child care institution. The parent obtaining the parent benefit can place a child under 3 years of age in a nursery or other similar institution for 5 calendar days in a month at the most. Children under 3 years have the possibility to attend such institutions in an extent of 4 hours a day.

The amount of the parent benefit is 3 696 CZK monthly since January 1st, 2006. When the parent is a dependant child from 15 to 26 years of age, the parent benefit amounts to 3 897 CZK a month. The amount of the parent benefit should increase to 7600 - 7900 CZK monthly from January 1st, 2007. The parent obtaining this benefit can earn some extra money unlimitedly, without losing the claim to its payment. The period for which the parent benefit can be provided is longer than the period of maternity leave when the employer is obliged to excuse the absence from work according to § 127 of the Labour Code. But the longer period of provision of parent benefit does not constitute the claim of the parent against the employer to vacation in the time after the child has reached the age of three years. When the parent wants to obtain the parent benefit also after the child has reached the age of three years, during the continuation of his or her employment, he has the possibility to ask his or her employer to provide further vacation because of care for the child; the employer can provide him or her the vacation, but is not obliged to it.

The child benefit is the basic benefit for families with dependent children, contributing to cover the costs related to upbringing and supporting the child. Since January 1st, 1999, the child benefit belongs to the family under the condition that the family income does not exceed the triple of subsistence

minimum of the family in the decisive period. The claim to the child benefit depends on the child's age, the family income and also on the amounts of subsistence minimum. Therefore, a change in any of these facts leads to change the claim to the benefit. The child benefit is a claim of the child, therefore when the child is major, it is paid to him or her.

Indirect support to families

The state support to families is implemented also in form of the system of deductible items from income of physical persons in the Czech Republic. But this system can be used only by taxpayers. In connection with the social status of the taxpayer, they allow reducing the tax basis, and by it the amount of financial means paid to the state.

The first is the deduction on each child supported living in the household with the taxpayer. Only one of the parents applies the deduction. The second deduction supporting the family is the non-taxable amount on the spouse living in the household with the taxpayer, in case he or she has no own incomes exceeding 38 040 CZK for the tax period (this amount applied for the year 2004). When applying the indirect financial support by tax system, it is possible to use the principle of the so called full family taxation, in which the taxation of families or households is carried out as if everybody had the same income.

Working conditions of pregnant women and mothers

The provisions of the Labour Code are the following: When a pregnant woman working at night asks to be transferred to daily work, the employer is obliged to meet her requirement; pregnant women and women caring for children under eight years may be sent to business trips outside the district of the town of their workplace only with their consent and they can be transferred to another workplace only at their own request. The same applies also for a single woman caring for a child, until the child reaches 15 years of age; the employer is obliged to consider also the needs of women caring for children when placing the employees in shifts; when a woman caring for a child under 15 years or a pregnant woman asks for shorter working time or for another appropriate modification of the determined weekly working time, the employer is obliged to meet her requirement, when no serious operation reasons obviate it; the employer may not employ pregnant women and women caring for a child under one year in overtime work; the employer can terminate employment by notice with a pregnant employee or with an employee caring permanently for a child under three years only in absolute exceptional cases (i.e. when the employer or its part is dissolved, or when the employer or its part is relocated).

Position of women at parent leave in Czech society

In connection with the increase of working possibilities of women, the problem called combining of family and working life is getting more and more significance. The working environment in our country is not helpful towards the family and it supports the gender stereotypes in role division among men and women. Even in families with liberal approach to roles, the couple, when deciding which of the partners will take over bigger share of responsibility for care for children, often decides for the woman because it corresponds to the conditions of the job market. Usually, the woman at maternity leave depends economically on the partner or the state. But a more serious thing is that leaving her job gets her into a very unfavourable position from the point of view of further employment. Techniques being introduced in companies and organizations abroad, as e.g. work from home, on-line work, teleworking, adapted working hours, care for children at workplace etc., have not found broader application in our country yet. The results of the project Women and Work Network show that shorter workload or otherwise adapted working hours would suit more to women (Maříková, 2004). In the Czech Republic, 8,3% of women are employed at shorter workload, being this number in EU a quarter in average (Zavadilová, 2005). All international institutions have been calling the Czech Republic to support such workloads. The interest of the employer in employing women caring for dependent persons, but also people in general, is reduced by the inflexible Labour Code.

Literature

MAŘÍKOVÁ, H. Ženy na trhu práce: Jak na nezaměstnanost a diskriminaci. Praha: Evropská kontaktní skupina v ČR, 2004.

ZAVADILOVÁ, T. České zákony a problémy matek v zaměstnání.

Dostupné z <http://www.zpravodajství.ecn.cz/index.stm?apc=zzvx1-310755>

Law No. 65/1965 Sb., Labour Code, as amended.

Law No. 88/1968 Sb., of extended maternity leave, of benefits in motherhood and of child benefits from health insurance, as amended.

Law No. 117/1995 , of state social support, as amended.

Contact to authors:

Doc. Ing. Lucie Kozlová, Ph.D., Mgr. Hana Francová

Zdravotně sociální fakulta Jihočeské univerzity (Faculty of Health and Social Sciences, University of South Bohemia), Staroměstská 16, 370 04 České Budějovice, phone: +420 387 007 210

Email: lkozlova@zsf.jcu.cz; francova@zsf.jcu.cz

Adoption and foster care (substitutive family care)

Blažena Papáčková, psychologist

1. Significance of substitutive family care

In our country, as well as in similarly developed countries, about 1% of total child population (about 20 000) children must grow up outside their own family. It means factually that the children are placed in baby institutions, children or crisis centres, children homes, lately also in newly founded non-governmental establishments, but also in different social care institutions. The biologic parents do not want, are not able or cannot care for their children. The obstacles hindering duly care for children are very varied and have long-term, but also short-term character. Almost 1/2 of children return to their original families, 26% of children are consigned to adoptive parents, 8% to another form of substitutive family care from institutions belonging to the health care branch (i.e. for children from 0 to 3 years of age).

In 1963, the book by the psychologist Josef Langmeier and Zdeněk Matějček, *Psychic Deprivation in Childhood* was published in our country. These authors bring discoveries and evidences of critical significance of the educational environment for the development of the individual on the base of numerous studies and researches (they are first worldwide). So that the child's development is optimal, it is not sufficient to satisfy his physiological needs, but also his psychical needs must be satisfied. When the child's needs are not saturated, his development suffers different specific consequences (mental, emotional and social retardation, different behaviour disturbances, relational disturbances on the base of loss of confidence in himself and in the world...). The most appropriate and most natural environment for healthy development of a child is a stable complete family. When biologic parents fail to care for the child, the family of kinship can provide such care, and when it is not available either, the situation is usually solved by substitutive family care (SFC).

2. Forms of substitutive family care

There are several forms of SFC, which differ in a number of aspects; the most marked difference lies in legal aspects. The SFC is always decided about by the court according to valid legal regulations. The most important is the Law of Family No. 94/1963 Coll., as amended, and the Law of Social and Legal Protection of Children No. 359/1999 Coll., as amended. The first law deals among other things with questions of parent responsibility (formerly "parent rights") and of adoption (§63-§77). The second law is quite new, it concerns protection of children in general, it lists the subjects involved, the extent of their activities and tasks, including definition of rules in mediating SFC and assessing the SFC applicants. Currently, an amendment to this law is prepared, which will probably become effective this year. The Convention on the Right of the Child, which became effective in our country on 6.2.1991, has substantial significance as well.

Adoption. "By adoption, a relation as between parents and children originates between the adoptive parent and the adoptive child, and a relation of kinship between the adoptive child and the relatives of

the adoptive parent. The adoptive parents have parent responsibility when upbringing the children.” Mutual rights and obligations between the adoptive child and his original family cease to exist by adoption. The child gets the surname of his new parents by adoption. It is only possible to adopt a minor child. The law distinguishes between “simple, revocable, 1st degree” adoption – always under 1 year of age of the child (but also from other reasons) and the “irrevocable” adoption, when the adoptive parents are registered in the birth certificate instead of the biological parents. The court is obliged to examine (in the scope of protection of the minor) the benefits of adoption for the adoptive child (e.g. the requirement of “adequate age difference” between the adoptive parent and child is set; in practice, the difference of 35, exceptionally up to 40 years is observed in intermediation, always in dependence of the specific case). Only a “legally free child can be adopted”.

Mostly childless parents are applicants for adoption. The anonymity in relation to the biological family is typical for adoption, being highly evaluated by the adoptive parents (they do not want to experience the fear that someone from the original family will acknowledge the child and disturb the intimacy of the newly created family). In this connection, we will mention also the “adoption of the child in relation to specific adoptive parents”, which is called “direct adoption” in practice. It means that the biological mother commends the child to adults soon after birth, and they ask the adoption directly at court. The disadvantage and risk of this procedure is, on one hand, the fact that the mother can withdraw her consent until legitimate court decision, and on the other hand, the absence of anonymity.

International adoption – adoption of children from abroad and to abroad. It is a possible solution of situation of children for which any family can be found in their country of origin. It is regulated by the Convention on the Protection of the Child and cooperation at international adoption; it concerns countries that signed the so called Hague Convention, which became effective on 1.6.2000 in the Czech Republic. The Bureau for International Legal Protection of Children in Brno has the function of mediator of international adoptions.

Foster care. Foster care (FC) is a “form of SFC guaranteed by the state, ensuring sufficient material security of the child and adequate reward for those who have taken it in. The foster parent has the right to represent the child and to administrate his affairs only in common things; to perform extraordinary affairs, he asks the consent the child’s legal representative.” The FC is an institute very beneficial for the child – it provides him with the possibility to live in a family, with a chance that his individual needs are respected and that he will be better prepared to manage the tasks of adult life in comparison with institutional care. In our country, it has predominantly long-term character. Children who cannot go to an adoptive family or for whom any tolerant adoptive parents cannot be found for some reason (most frequently there are legal reasons, but also higher age of the child, a physical or psychological handicap, other ethnic group, sibling group...) are commended in FC. In “classical” FC, the biological parents are participants of the FC proceedings, having the right to be in touch with their child (but it often does not occur in practice).

3. Substitutive family care in practice

The state authorities are charged with finding an adequate substitutive family for a specific child (cooperation of municipalities of villages with enlarged sphere of activity, county councils, Ministry of Work and Social Affairs) - the procedure is called "SFC mediation". Children who need substitutive family are reported to a centre of the county council by social workers from city councils, and the optimum family is found there for them from the register of recommended adult applicants. So the principle applies that parents are chosen for the child and not vice versa, although the ideas of the adults with regard to the child are, of course, respect as well. How should proceed people who are motivated to adopt somebody else’s child? They apply for SFC at the city council according to their permanent address. They enclose the statement of the general practitioner about their health condition, the evaluation from their job including income confirmation, and they fill in the questionnaire concerning the “demands on the child”. The social worker asks for criminal record extracts, the evaluation from the place of residence and carries out social investigation. The record of the applicants (a married couple, but also an individual) is passed to the county council where expert evaluation is carried out (assessment of health eligibility, psychological examination focused on personality characteristics, SFC motivation, stability of environment, ideas of the child and upbringing

preconditions). A decision is issued on the base of the expert assessment. The couple recommended is included into the registry of future substitutive parents and subsequently they go through a course of preparation for child reception. (It has two basic focuses. It contains topics for better understanding of the child, his specific needs and demands on care and topics for deeper knowledge of themselves, their weaker and stronger points and their upbringing preconditions. Also the topic how to communicate the truth of their origin to the adoptive children is dealt with).

Social legal protection of the child is dealt with also by numerous non-governmental organizations, quasi-public associations, citizen associations (e.g. Centre of substitutive family care, Fund of endangered children, Association of foster families, Trialogue...).

Each region has its registry of children and registry of adequate applicants (locally competent). There is flexible cooperation among individual regions – when it is not possible to find an appropriate family for a specific child in one region, parents are looked for in other regions. The period when the couple will be chosen for a child is different in individual regions. The duration of waiting always depends on the ideas and demands on the child (the more typical the wish /“small, white, healthy child”/, the longer the waiting; the duration of waiting is shorter in case of more tolerant attitudes). The survey made in the region of South Bohemia shows an optimistic finding for future adoptive parents that the most frequently represented age group of children commended to adoption is baby age (in 2003, there were 65% of such children; they were legally free in 59% on the base of the consent of biological parents; but in almost 60%, the father was not stated in the birth certificate). Long-term results show that the number of adopted children prevails univocally over the number of children in FC (the children mediated by us to FC constitute about 1/4 to 1/3 from the total number). As for national data – the yearly number of children consigned to adoptive parents oscillates about 500, the number of children consigned to foster parents about 850 (but this figure includes also children in foster care of relatives, not intermediated by county councils). In 2002, for example, there were 2369 applicants for adoption and 752 applicants for foster care.

Literature:

Kovařík, J. et al.: Náhradní rodinná péče v praxi, 2004

Matějček, Z. et al.: Osvojení a pěstounská péče, 2002

Matějček, Z. et al.: : Náhradní rodinná péče, 1999

www.adopce.com

www.rodina.cz

Contact to the author:

PhDr. Blažena Papáčková

Krajský úřad Jihočeského kraje (County Council of Region of South Bohemia), Centre of substitutive family care, U Zimního stadionu 1952/2; 370 76 České Budějovice, Phone: +420 386 720 644

e-mail: papackova@kraj-jihocesky.cz

Development of gonadotropins for infertility treatment

Tomáš Mařík, biochemist

History of research, development and production of gonadotropin preparations for infertility treatment penetrates the whole 20th century. Already in its first decade, the connection between growth and maturing of germ cells and their influence by special agents (hormones), which were created in endocrine glands situated in the brain area, was proved. In the subsequent period, the activity of the so-called hypothalamo-pituitary axis was investigated on animal models. In the period between the two world wars, incidence and effects of these agents were studied in humans, and besides their effect on sexual glands, their incidence in the urine of pregnant and postmenopausal women (after menopause) was described. The first pregnancy test dates from that time, being based on increased

concentration of the so called chorionic gonadotropin in urine. On the contrary, increasing concentration of two similar, but chemically different compounds was described in the urine of postmenopausal women, being these compounds called follicle-stimulating and luteinizing hormones (FSH and LH) according to their different effects.

In that period, a number of companies were active, basing their activity on extraction of different compounds from biological tissues and fluids. They included the Holland Organon, which brings the first commercially available chorionic gonadotropin in 1932, being this gonadotropin used for induction of ovulation until the present(!) We have a box of Pregnyl in Czech language from the year 1941 in our archive: this evidences that gonadotropins had no long way to go to our market. In that time, tissues were the main sources: the placenta and the hypophysis (pituitary gland). Particularly the hypophysis was taken from animals at the beginning, which together with imperfect extraction procedures and naturally limited possibilities of safety control lead to low efficiency of these preparations with big health risks.

At the beginning of the 2nd half of the 20th century, the transfer to human hypophyses occurs on the way to higher safety at administering biological extracts, but their lack brakes both the research and the use in common practice. Nevertheless, first pregnancies were described after their administration in that period already. An alternative source of gonadotropins for commercial use was discovered in urine at the end of the fifties of last century. But this meant that a network of collection points had to be built in the places of concentration of bigger quantities of women with given parameters, being this certainly most complicated for postmenopausal than to pregnancy urine. Especially women convents contributed significantly to the fact that at the end of the fifties, conditions for rentable commercial production of menopausal gonadotropin (hMG) – i.e. of a mixture of about the same quantities of follicle-stimulating and luteinizing hormones – were created.

In subsequent more than 20 years, the preparations of menopausal and chorionic gonadotropin allow therapy of anovulation sterility, i.e. of cases when the woman's reproduction system is in normal, except maturation and release of the oocyte from the follicle. But they do not help in the situation when the Fallopian tubes are obstructed in spite of regular ovulation cycles. This mechanical problem is overcome by English physicians Edwards and Steptoe in 1978, making the pregnancy possible without effect of gonadotropins, by connecting the gametes "in the test tube", transferring the resulting embryo to the uterus; Louisa Brown, the first IVF child of the world is born after a successful normal pregnancy. However, the work with one oocyte naturally matured in a normal menstruation cycle limits considerably the success rate of the new method. And here, the urine gonadotropins enter the scene again: by administering them in a certain protocol, it is possible to achieve maturing of higher number of oocytes, which provide more embryos after fertilization by washed sperms "in vitro" (in the laboratory), and the success rate of this procedure can be considerably increased by their common transfer to the uterus. The period of the multidisciplinary discipline, which we today call reproduction medicine, begins.

In the eighties of last century, monitoring of the success rate of procedures of assisted reproduction showed that the FSH hormone plays dominant role in the process of the follicle maturation, and even that the LH hormone can have negative effect on the quality of the oocytes obtained for the IVF (in-vitro fertilization). The first gonadotropins based only on the FSH emerge on the global market, although the contents of ballast inefficient proteins goes on prevailing in them. But the more and more successful technology of assisted reproduction allows to higher and higher number of infertile couples to accomplish the dream difficultly realizable until then – to give birth to a biologically own offspring. It starts to be clear that the capacity of urine collection will not cover to the increasing demand for infertility treatment medicines in the future.

Besides capacity problems, another big problem emerges: slow viruses causing mysterious deaths of the patients treated are detected in the biological extracts. A well known example is the Creutzfeld-Jacob disease, from which several patients treated by the extract growth hormone from hypophysis of death persons died. The demands on the safety of medicines of extraction character start to increase. Old women take more and more medicines against their ailments, and their metabolites penetrate

naturally into urine. The demands on purification of the resulting medicines increase, the detection techniques of biologically active foreign substances in extracts are elaborated as well.

Fortunately, at the same time biotechnology originates from the scientific progress in biological sciences and the possibilities of influencing protein creation by change of genetic information in the core of the production cell lead to development of the culture of gametes of the Chinese hamster, which synthesizes an exact copy of the molecule of the follicle-stimulating hormone according to a template incorporated artificially into the core DNA. The so called recombinant FSH comes into clinical practice at the beginning of the last decade of the last century, after many years of clinical tests. Just in time: at that time, the capacity of collection of menopausal urine amounts to 200 millions of liters worldwide, and it cannot be practically increased without reduction of demands on the control of safety of the sources. By the way, in that time the collection of urine is minimal in civilized Europe, being the main burden overtook by continents not related with modern pharmaceutical industry: Asia and South America. The recombinant biotechnologies allow safe production of completely pure gonadotropin preparations that are more efficient, safer, more consistent from batch to batch, and more comfortable for syringe application in comparison with the generation of urine gonadotropins. Today, Organon is related with ten-years history of infertility treatment by recombinant FSH.

We can boldly declare that our country has always kept up with the development of reproduction medicine. The first IVF child was born in Brno already in 1982 and a global selection of urine and later of recombinant gonadotropins has been available. After being launched in 1989, Organon has become our most widely gonadotropin after mere four years in the market, and it goes on keeping this position. In spite of the fact that infertile couples must pay a surcharge for it, unlike most urine gonadotropines which stay in the regime of full payment by health insurance companies.

The development of recombinant gonadotropins seemingly closes the possibility of further progress. At present, we rather see improvement of application forms, and the injection pen, well tested in diabetology, appears as the most comfortable. The possibility of efficient manipulation with growth dynamics and follicle maturing in order to obtain the highest safe quantity of oocytes for the methods of assisted reproduction is achieved by combination of gonadotropines with analogues of gonadotropin-releasing hormone. The individual protocols that can be used are customized in this way to individual needs of the patients.

The research effort shifts to the possibility to prolong the biological half-life of gonadotropin effect, with the aim to limit the number of the necessary injections, and the development of orally administered drug can probably be a more distant aim. But this is a dream of all researchers in this field so far.

Reproduction medicine develops as one of the most dynamic multidisciplinary branches of today's medicine. It is given also by the needs of the countries of the so called Western world, in which the number of involuntarily childless couples increases as consequence of postponing parenthood to the years after career building and higher and higher life standard. Besides, human fertility decreases as a consequence of a lot of civilization influences (contamination of environment, stress), and the unfavourable demographic situation in most countries including the Czech Republic indicates social and economic problems brought by this development.

Contact to the author:

RNDr. Tomáš Mařík
Organon, s.r.o., IBC - Pobřežní 620/3, 186 00 Praha 8
e-mail: marikt@organon.cz

Reproduction health 2006
Editor – Hana Konečná

Publisher: University of South Bohemia, České Budějovice
Faculty of Health and Social Studies

Cover and graphic layout:

Magdalena Říčná

Print preparation: Metoda spol. s r.o.

Print: Vlastimil Johanus Printing Works, B. Smetany 25
České Budějovice, 370 01

1st edition

Printing: 2000 copies

ISBN 80-7040-855-3