HGH in Women’s sports

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It is important to be fully aware of the specificities of the woman's body in order to optimize the sport and maximize the results in terms of performance, appearance and aesthetics. Female hormones that fluctuate during different phases of the cycle also affect metabolism and cardiovascular function. Estradiol, the predominant estrogen during the first phase of the cycle, the follicular phase (day 1 to day 13), is associated with better glucose utilization (ie sugar, muscle fuel, brain and all organs) and improved sensitivity to insulin. The body has less need to secrete this hormone which is rather positive because insulin is a hormone "storage" fats (Bidlingmaier, et.al. 2003).

On the other hand, during the luteal phase (days 14 to 28), estradiol levels decrease and progesterone rises rapidly. During this phase, the body uses fat much better while it tolerates sugars less well. These hormonal considerations are important when it comes to making food choices during the cycle. Another peculiarity of the cycle, the secretion of growth hormone is more important in the second part of the cycle following cardio exercises and intense muscle building. This hormone is often called the longevity hormone because of its anabolic effects (growth and tissue repair). It stimulates the regeneration of bones, nerves, muscles, skin and organs. But we do not yet know all of his actions on the body. It also promotes lipolysis that is to say, it promotes the release and use of fat reserves (Tanaka, 2019).

The inhibition of genital function in sportswomen is a well-known phenomenon but the mechanisms are still obscure. Is it related to endorphins? Is it the secretion of cortisol, melatoninor prolactin during the effort that would inhibit the secretion of sex hormones? Is it linked to a diet that does not provide enough calories? It is certain that several factors can disrupt the genital function such as young age, stress, the intensity of sports, endurance sports or even the obsession with the sporting objective. The secretion of estrogen and progesterone decreases which results in a delay in the onset of menstruation in the girl, or a scarcity or even disappearance of menstruation in the pubescent woman. Decreased estrogen secretion may also have an impact on bone mass with early osteoporosis. It is a hormone produced naturally by humans, and in particular to develop the cells of muscle tissue. Unfortunately, with age, the body produces less and less. This explains why HGH is used legally as part of medical therapy to treat certain diseases.

Breasts are extremely sensitive areas and therefore should be given special attention during sports activities so as to avoid the breaking of elastic fibers to maintain the gland by repeated microtrauma, especially if breast is of normal size or important .The bra should limit the range of motion of the breast in a vertical plane to 2 cm. It must be the right size, no hook, clip, frame, seamless nipple and made of "breathable" material. The straps must be unstretchable. The irritation of the nipple following the practice of certain sports such as running can be avoided by petrolatum lubrication. Milk flow may occur because of this irritation or sometimes a significant secretion of prolactin. Many brands in sports stores offer different models of brassieres adapted to the sport.

Pregnancy is an important step in a woman's life. In the first quarter you can do just about anything. After, be a little more careful. If you have never played sports, this is certainly not the time to start intensively with the illusory aim of keeping a silhouette as harmonious as possible. Useless and dangerous!

The recommended sports activities are walking and swimming. Walking because it can be practiced, even by the less athletic, throughout the pregnancy. Swimming because it is very relaxing, maintains cardiac capabilities and spares joints. Pregnant women's classes are often offered in municipal pools and you may be advised to swim on the back.

The so-called "soft" gymnastics is also possible and can be combined with a preparation for childbirth. If you want to do some "gym", however, prefer sessions of about twenty minutes two to three times a week rather than a one-hour class. Bodybuilding is still possible until 6 month of pregnancy, provided you do short sessions (between 20 and 40 minutes) 3 times a week. Some women also like to do yoga or cycling, but the "big belly" can interfere with pedaling at the end of pregnancy. In contrast, other sports are to be avoided after the fourth month (Gülfirat, 2019). Either because they can lead to falls (horse riding, skiing, etc.), a risk that is all the more real since moving the body's center of gravity favors loss of balance in pregnant women. Either because they can expose you to shocks or trauma in the abdomen: collective ball sports, judo, karate ...Tennis and jogging are also not recommended, as they cause strong shaking and sprains. Finally, we would have suspected, mountaineering is strongly discouraged and diving prohibited, apnea is dangerous for the fetus.

We talked a lot about hormones and their roles on the female body and during sports. It is impossible not to address the issue of menopause and the period before it, the pre-menopause, as the physiological changes at this time are important. Sport and optimal nutrition will allow women to live this phase of their lives much more serenely (Mazzeo, et,al. 2018). Menopause is, before anything else, the end of the rules. It often occurs gradually. In addition to the end of menstruation and the impossibility of procreation, menopause is often accompanied by a procession of inconvenience.

The one that is most frequently mentioned is weight gain. The woman often thickens in the arms, belly and hips. These few pounds are usually difficult to lose. Hot flashes are also very poorly experienced. Insomnia is often reported as well. The hormonal changes added to all these upheavals can easily lead to more or less serious depressive states.

The solution of medicine is based on hormone replacement treatments. But the increased risk of breast cancer associated with these treatments encourages some women to find alternative methods to better live these delicate years. Sport, nutrition and herbal medicine are interesting alternatives.

Many women suffer from urinary incontinence after childbirth (which makes postnatal gymnastics essential), during or after menopause or even after rapid and very significant weight gain. After the age of 50, they often think of it as an uncomfortable subject and do not talk about it. It is even more important when you practice sports with impact on the ground (running, tennis, fitness in room). This urinary incontinence is due on the one hand to a loosening of the pelvic floor musculature and on the other hand to an estrogen deficiency. The pelvic floor is a muscular plateau which constitutes the lower closure of the pelvis and on which the organs rest. Although this muscle can be contracted in a conscious manner, almost a third of women are only able to do it. This is explained by a kind of muscular amnesia, the muscle-brain connection can no longer be established.

In reality, these uses of growth hormones are relatively rare compared to the use that is made by athletes. And even if it is not legal. Indeed, HGH can be diverted and used as an anabolic steroid that will help to gain strength and in muscle mass. It is mainly researchers who are interested in anti-aging methods that have shed light on these "parallel" properties of growth hormones. Since its rate decreases with age, supplementing with HGH would avoid the physical damage associated with aging. However, these anti-aging injections, or as part of a sporting practice, are not allowed by law.

The problem is that the claims of these researchers, but also companies that market HGH in capsules or spray form, are not supported by the facts. No scientific evidence has indeed been brought regarding the rejuvenating powers, burning fat or immune growth hormones. In addition, if the legal treatments are given by injection, the HGH in pill form would not be effective. For the simple reason is that it is digested by the stomach before reaching your cells.

Many health professionals, however, continue to promote the benefits of growth hormone. They consider that the side effects attributed to it are amplified and remain minimal. According to them, the risks of water retention or diabetes are relatively rare and only for athletes taking too high doses of HGH (a bit like creating monohydrate) (Davies, 2018)..

Growth hormone can boost metabolism and speed up protein synthesis. It is also ideal for burning fat and building bone mass. A series of very beneficial effects for athletes, to which must be added the stimulation of the secretion of IGF, which will allow to bind testosterone and proteins to the muscle cells. This will concretely result in better recovery and muscle retention.

Improving physical performance

By strengthening your muscle mass, HGH increases the intensity of training and the amplitude of repetitions. By lifting higher loads and with larger sessions, athletes are progressing faster. It is also advisable to change his sport routine (in terms of reps, loads and series) to better work his muscles and progress faster.

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