

Oestrogen (oestradiol) levels

What's best and is it oestrogen really so bad? Many ask my advice on this subject and though I don't advise on specific drug protocols, I'm willing to do what I can to help.

Too high levels can result in gynaecomastia, the dreaded "bitch tits". This will come as no surprise and occurs at around 200 pmol/L, though some individuals are more prone than others. In bodybuilding circles it's caused by excess testosterone aromatising to oestradiol. This is a natural pathway and levels will rise when high levels of testosterone are pumped in. Aromatase is an enzyme whose job is to change testosterone into oestrogen. As far as conjuring tricks go, this one's pretty magical. Not everyone's impressed however, hence the advent of aromatase inhibitors (AI). Arimidex (anastrozole) is an example of an AI. There is an important distinction between them and other anti-oestrogens, for example Tamoxifen (AKA Nolvadex).

An enzyme increases the rate of chemical reactions. They're a catalyst so are not used up in the process. Consider them as bellows fanning a fire. They're not used as fuel, just speed things along. An aromatase inhibitor attaches itself to the aromatase enzyme to prevent it from working. An anti-oestrogen, by contrast, will not. Their mission is to occupy the oestrogen receptor to stop oestrogen imparting its desired effect. Think of them as bouncers, denying oestrogen admission to their favourite places. That's why many anti-oestrogens, such as tamoxifen, are referred to as Selective Estrogen Receptor Modifiers or SERMs. Please excuse the American spelling of oestrogen required for this acronym.

Low levels of Oestrogen are arguably more problematic. It's an important hormone and essential for muscle growth and sexual function. When levels dip below 70 pmol/L erectile dysfunction can (and does) occur. I've known those who've scratched their head when on Masteron, a non-testosterone based steroid and Arimidex wondering where on earth their libido and ability to perform has gone. Now you know. It's in their boots along with their oestrogen level.

Based on literature and a review of the blood tests I've performed for clients, the ideal range appears to be between 100 - 120 pmol/L for men.

Oestrogen is essential and it does seem there is an optimal level. Better to have your levels checked with a blood test than mistakenly (and unnecessarily) swallow handfuls of aromatase inhibitors. This is becoming an increasingly common occurrence. It has a negative impact on your health and gains. In addition, oestrogen levels that are too suppressed impart further health consequences by effecting blood lipid profiles (such as both good and bad cholesterol) for the worse. This increases the risk for cardiovascular disease.

Anti-oestrogens are especially useful as part of a post cycle therapy (PCT) regimen because they act as security to the part of the brain (the hypothalamus) which monitors for raised oestrogen levels. This lump of brain tissue reads high oestrogen as a very compelling argument to downgrade testosterone production. Anti-oestrogens are the doormen preventing oestrogen spoiling the party. HCG also plays a pivotal role in PCT and I'd like to bring an important point to your attention.

Recently I've spoken with a worrying number of people (and of course read on forums...) stating that they freeze their HCG after reconstitution. "Like vodka, it doesn't actually freeze". To test this, I provided a client who was freezing reconstituted HCG with some pregnancy tests.

A bit of supporting information first; for up to 10 days following an injection of HCG, a pregnancy test may give a (false) positive pregnancy result. Ever wondered what HCG actually is? Human Chorionic Gonadotrophin is a preparation of a protein fragment secreted by the placenta and obtained from the urine of pregnant women. Delightful.

It is most commonly used by athletes to reinstate natural testosterone production after a cycle of anabolic steroids. HCG imparts the action of (or mimics) the pituitary luteinising hormone. This hormone regulates your testosterone supply by being a signalling hormone, instructing the testes to crack on with testosterone production.

As predicted, the frozen HCG came back with negative results. The gentleman should have been “pregnant”... it’s a weird and wonderful world.

HCG is a long delicate protein made up of a precise arrangement of amino acids (the building blocks of protein). Freezing, or more specifically the expansion of moisture within the protein chain, breaks the delicate structure apart. Now, instead of having a nice stable structure comprising 237 carefully arranged amino acids, you don’t anymore. It’s ruined. Imagine a completed 237 piece Lego construction that’s been shattered. It is no longer recognisable or functional.

In the patient information leaflet for HCG it states categorically “do not freeze”, and for good reason.

Peptides are basically amino acids (two or more) that are bonded together. Peptides over a certain size are called proteins, which I’m certain you’re all familiar with. A peptide will have a very specific size and shape in order to perform a very specific task. It’s like a key in a lock.

For better or worse, peptides now appear to be well established in the bodybuilding scene and perhaps here to stay. A lot of them are very recent additions and in many cases their safety and efficacy are simply not known at this stage. The same rules apply for all of them. If you insist on using them at all, once reconstituted do not freeze. And oestrogen is not your enemy.

Vitruvian Man

Squaring the circle of men’s health