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Anxiety and Input Control: The Basics

(This article is complementary material for all tutorials)

You'll often see it mentioned here that anxiety is the biggest enemy of intelligence (and not incidentally, of neurohackers). This article explains why anxiety is such a big issue and why awareness of it is vital for successful neurohacking.

Beginners (and often, adepts!) make three major mistakes about anxiety:

1.

They don't really know what it is, but think they do.

Often anxiety is thought of as "stress", because it is presented like that in the popular media. Medically "stress" and "anxiety" are particular clinical states with clear physiological differences. It is important to learn the clinical difference between stress and anxiety right away, because one is vital for your intelligence and the other is deadly to it.

Stress + Relaxation = beneficial, Anxiety = harmful.

Stress and relaxation are both healthy physical responses; we exercise a muscle by stressing and relaxing it repeatedly, and we stress and relax intelligence by learning new things and understanding them and by doing new things and mastering them. This affects the brain's plasticity and we build new brain cell connections. Chronic stress though (where there is no physiological & hormonal relaxation) is anxiety, and anxiety prevents plasticity and is a killer, of both body and mind. Medically, anxiety pushes the body into a state of endocrine (hormonal) shock, causing immune deficiency, rapid aging, exhaustion and mental confusion.

Currently, 95% of people have raised levels of anxiety hormones that are harmful to their immunity, are risk factors in mental and physical health, and accelerate the process of aging. If you are not among them, you're very unusual (or probably neurohacking already). For the rest of us, once we recognize anxiety for what it really is and start to control it, we will progress much faster. The tutorials will help you put the information in this article into context with techniques in NH.

1.

People underestimate the dark side of the force.

It's easy to think that chronic anxiety doesn't matter, or simply forget about it, especially if most of it is unconscious and we don't feel consciously nervous. We just assume we haven't got it (or rather, it hasn't got us).

The effects of unconscious anxiety affect all of us; not just nervous people.

Once you realize how much anxiety affects intelligence you'll realize how much even unconsciously it can hold you back (and how much smarter you can be without it!) and you'll also see how much it is affecting other people. Even if you never feel insecure, sail through life serenely and refuse to worry about a thing, other people's anxiety (and consequently their judgements and decisions) are going to affect your life and health bigtime.

Particularly, people underestimate the power of anxiety to control them via anxious thoughts and memories, and to shut down their access to executive functions in the brain. If at any point in your life you find yourself feeling anger, guilt, shame, embarrassment, fear, aggression, jealousy or any other such sentiments, be aware that anxiety has you and is making you fear the unknown, turning you into an immature little wimp whether you like it or not. Under its influence you are not in possession of all your mental faculties and cannot make sensible decisions. It can be undetectable to the conscious mind, until you know how to recognize it. It can be as difficult to recognize, when you've got it, as heatstroke or hypothermia. (See the article: Anxiety: The Nature of the Beast , in the Basics section of the library.)

1.

The third mistake occurs when people know about anxiety but they don't really know what to do about it, and so do nothing.

Methods of dealing with anxiety are varied, but they can seem like a waste of time or a chore until you start to see the results, especially if consciously you feel fine. If you have complex repair or improvement work to do, you may not see clear results for many months. You will see improvements in conscious areas first, and anxiety-reduction practices may seem like they're not contributing much. In fact, they are underlying all the progress you make, although it's not at first easy to see that.

How You can Avoid these Mistakes:

We'll now explain why it is so important to make anxiety control a first step in neurohacking. Everything that you read here is based on recent scientific research. (You can read the source papers on anxiety, cortisol and health in the library.)

WARNING – ANXIETY CAUSES HEART DISEASE, DIABETES, STROKES, OBESITY AND CANCERS

Anxiety makes you release hormones in your body and brain that cause many nasty problems before they kill you, among them raised blood pressure, osteoporosis, skin damage, slowed physical growth/repair, metabolic syndrome and suppression of the immune system. Exacerbating any symptoms you already have, especially heart disease or cancer, it will also cloud your capacity for reason, shorten your life, and help lead you to an untimely death. If you don't know how to initiate the relaxation response, you can't turn these hormones off (and you can't develop or improve your intelligence). Cortisol levels are almost always the first thing most people have to hack when they start NH.

WARNING - ANXIETY RELEASES TOXINS INTO YOUR BLOODSTREAM CAUSING PERMANENT DAMAGE

Here's some information about cortisol: It's a hormone you overproduce when you're anxious (consciously or unconsciously.) It's a very useful hormone because it enables learning and memory, it initiates the 'fight-flight response in times of extreme danger and it can save your life, but in anything other than very small, very short doses, cortisol and other parts of its cascade [other chemicals it triggers the release of] are horribly toxic.

Cortisol in healthy amounts is an important hormone in the body, involved in the following functions and more:

- Proper glucose metabolism
- Regulation of blood pressure
- Insulin release for blood sugar maintenance

- Immune function
- Inflammatory response

Normally, it's present in the body at higher levels in the morning, and at its lowest at night. Cortisol has been termed "the stress hormone" by the popular press because it's also released during the body's 'fight or flight' response to danger, and is responsible for several stress-related changes in the body. Small increases of cortisol have some positive effects:

- A quick burst of energy for survival reasons
- Short term heightened memory and learning functions and increased plasticity
- A short burst of increased immunity
- Temporarily lowers sensitivity to pain if injured
- Helps maintain homeostasis in the body

While cortisol is an important and helpful part of the body's response to excitement and stress, it's important that the body's relaxation response –the other half of the 'learning cycle'- is activated so the body's functions can return to normal. Unfortunately, in our current high-anxiety society, the body's stress response is activated so often that it doesn't have a chance to return to normal levels, producing chronic anxiety.

Higher and more prolonged levels of cortisol in the bloodstream (like those associated with chronic anxiety) have been shown to have negative effects, such as:

- Impaired cognitive performance
- Suppressed thyroid function
- Blood sugar imbalances & diabetes
- Decreased bone density
- Decrease in muscle tissue
- Higher blood pressure
- Lowered immunity and higher inflammatory responses in the body

- Increased abdominal fat, which is associated with a greater amount of health problems than fat stored in other areas of the body.

You can look up more about the effects of cortisol in plenty of library articles, so we won't go into the neurochemistry here. All that's important to remember is that this stuff if fucking bad news dudes! Effectively lots of people are slow-poisoning themselves with a toxin that makes us dumb as well as unhealthy.

WARNING – ANXIETY CAN DAMAGE YOUR BRAIN AND MIND

Excess cortisol will damage your intelligence, producing escalating anxiety and neurochemical imbalance, assisting you to achieve chronic depression, immune deficiency, and of course confusion, as vital neurotransmitter production either drops below safety levels or zooms above them. The production of free radicals (that destroy healthy cells) in your body is exacerbated as is the associated aging. I don't want that level of toxicity in my body and mind, and I suspect you don't, either.

Anxiety reduces blood flow to the frontal lobes of the brain and increases it to the rear lobes and to the muscles and skeletal system. Physically it is preparing your body for a "fight & flight" response, but the actual fighting or fleeing never occurs because the (wrongly perceived) "danger" never actually manifests. With this permanently altered blood flow and bias in judgement, it is harder for us to access the intellectual, strategic, decisive and creative processes of the mind. This includes, unfortunately, self-awareness (and that is why in chronic anxiety we may go about our business unaware on the surface that our underlying physiology is constantly convinced there is about to be an emergency.)

WARNING - ANXIETY IS ADDICTIVE; DON'T START

When the natural stress/relaxation cycle of learning fails to occur, we get stress that cannot be resolved by relaxation, and we get exhaustion which cannot be roused by inspiration. People either feel they don't care about anything (apathy & depression) or take everything far too seriously (pomposity & paranoia) or fluctuate between the two. Many remain stuck in this repetitive cycle of mood swings for the rest of their lives, afraid to break out of it for fear of feeling nothing. Change becomes something to fear in itself, people feel they can't cope and can't make any sense out of life. Worrying and complaining become the only things that are normal, and cannot be stopped. This is addiction to anxiety. If there is nothing to worry about today, such people worry about what happened in the past or what might happen in the future. Every scene is scanned ahead of time for possible dangers, and paranoia becomes 'normal'.

WARNING – ANXIETY SERIOUSLY HARMS YOU AND OTHERS AROUND YOU

So we'll warn you here about its causes. What causes anxiety is poor-quality brain wiring and the associated lack of processing function. This may be exacerbated by many factors including genetics and epigenetics via lifestyle, nutrition, sleep patterns and social activities, and it can be changed by adjusting them once it is recognized. What makes us express behaviour associated with anxiety is any perceived irrational and possibly dangerous action/reaction. (A combination of something we don't understand or that doesn't make sense, and an indication or feeling that it may be harmful). This includes examples of anxiety itself.

The trouble is, an anxious person sees all things through warped perception, and ALL appear to be irrational and possibly dangerous. Anxiety is not caused in the healthy by disagreement or rational argument between intelligent persons. Anxiety can be triggered in the unhealthy by examples of (other people's) stupid behaviour -sulks, tantrums and flaming rows, irrational personal attacks, threats, misunderstandings, prejudice and assertions of error without proof- but anxiety is only triggered in people who cannot handle stress because they can't trigger the relaxation response (due to already being too anxious!)

Anxiety is caused by our not being able to process information properly, it's hard to tell you've got it, and it behaves like a virus. It's catching; if you are surrounded by it, or behaviour caused by it, your brain will tend to copy it and the behaviour it causes. A part if 'input control' is not paying attention to others' discourse or behavior (including on TV) if it contains obvious examples of anxiety, because it is not sensible to allow anxious people to spike us with deadly hormones without our full knowledge and consent. Once we have learned the relaxation response, we can be immune. At that point we reduce input control, because once we have control we can work with our neurochemistry to protect ourselves and help others (by our own example).

WARNING – ANXIETY PROMOTES AGING, SENILITY AND ALZHEIMERS

Cortisol secretion varies among individuals because its control is partly due to gene transcription, so at starting levels (before neurohacking) one person may secrete higher levels of cortisol than another in the same situation. It also builds up in the bloodstream over time, so the longer you have been anxious the more cortisol you may have to get rid of.

Anxiety has to go, because it twats intelligence. A very part of the reason for memory failure in old age is our being subjected to unresolved chronic stress for most of our lives. Excess cortisol is a time bomb; it builds up over the years in the bloodstream as we age. Middle-aged people have a far higher concentration of Cortisol in their blood than do young people. Elderly people have as much as three times the level in their bloodstream than your average twenty year old. This is not meant to happen in a healthy human and this high concentration of cortisol literally prevents any new neuronal tissue from being formed. It certainly contributes to senility and neurological disorders. Humans do have the capacity to grow new neurons and improve intelligence throughout life, it is just so rarely seen because the process is usually blocked by anxiety hormones.

WARNING – ANXIETY CAN LEAD TO DEPRESSION, PARANOIA, SCHIZOPHRENIA AND SUICIDE

Anxiety will cause brain cell death throughout your life; leading to learning problems and memory loss. Serious mental illness is too often the long-term legacy of anxiety.

Anxiety creates its own kind of pain, emotional pain, and we don't yet have so many painkillers for that kind. The unfortunate thing is, emotional pain activates some of the same brain regions as physical pain. Hormonally, the brain responds to emotional distress just as if it were a fork stuck in the leg. To add insult to injury, anxiety uses sentiment, and it can make people feel nauseated, afraid, pessimistic, shy, worried, guilty, unloved, depressed, arrogant, jealous, abandoned, irritated, ashamed, angry, paranoid, short tempered or violent, but they're minor side effects of the real damage. The real damage is healthy emotion circuits are being eroded and it will become harder to feel genuine emotions like love, friendliness, excitement, pride and contentment. Life and experience become 'shallow' and there is never any real passion or thrill. This is 'anhedonia', an inability to experience emotion -although on the outside the sufferer may seem melodramatic and emotionally incontinent, overemphasizing every little thing in an effort to wring some meaning out of life. Depression and/or senility usually follow.

WARNING - ANXIETY KILLS

...And this is is terribly sad because it's not necessary. We CAN take control of our minds and brains and take care of ourselves and stop this damage from ever happening. We can even repair any damage that may have been done, so the news doesn't get much better than that! But our ability to do this depends largely on our understanding of what anxiety is and how to keep our own brain chemistry healthily balanced.

PROTECT YOUNG CHILDREN – DON'T MAKE THEM COPY YOUR ANXIETY

Science has proved that we partly learn how to respond to many things including stress by copying the example behaviors of others, as we are designed to adapt to our cultures and emulate our allies. This is why neurohacking is not for wimps. With the power to control your mind comes self-responsibility. If you can keep your head when all around are losing theirs, you'll be a good example as a parent. If you can't, or you have anxious reactions all the time, what behaviour are you teaching others? Conversely, what are you currently copying (what and who are you surrounded by?) If you are anxious or surrounded by anxiety for input your intelligence cannot grow.

Free Your Mind

Mental problems, and especially depression and attention disorders, are epidemic in current society. If you are in any way fond of your mind and your health, and have understood any of the above, you'll want to start working on anxiety and cortisol levels right away. You won't get very far in improving your mind or treating disorders otherwise (and you can even slow yourself down if you start other practices before this basic).

The best habits for anxiety control are: Input Control (prevention), techniques that reduce anxiety hormones (treatment), and techniques that initiate the Relaxation Response (cure). Doing all three at once is absolutely fine and is the fastest way to progress. Here is some info about each:

Input Control

Input control is the method of exchanging things in your life that are slowing your intelligence down for more beneficial things that will help it improve. It is usually used as an initial measure, when we control our environment and behavior to some extent in order to avoid anxiety triggers while we achieve neurochemical balance and learn control. Later it is useful as an NH tool for

achieving different moods and states of mind.

The art of good input control is removing things that trigger anxiety from your life and replacing them with things that trigger healthy states of mind, optimism and inspiration. In short, begin to collect things that cheer you up and inspire you, and throw out things that bore you or depress you and avoid things that remind you of depressing things or times (such as the TV news and popular media). This is not denial; it is a specific short-term exercise to get you used to being in control of your own thoughts and your own surroundings.

If you ignore something, pay no attention to it, and no energy is put into it, it tends to atrophy and rot away. This is true of anxiety, old bad habits and old ways of thinking when we practise input control and avoid anxiety triggers so that we can get used to thinking without it. We don't avoid anxiety triggers in some deluded belief that this makes problems go away, we avoid them because it makes the problem IN US go away so that we can see the real problems with clear perception and more functional intelligence.

When you practise NH, you are often reminded that YOU are the Captain. You're the expert on your own mind, and your own life, and you're in charge. You know more about your mind than any specialist ever can. (This can be difficult to grasp if you're used to the ordinary anxiety-based view that we are all helpless sheep who rely on authorities and professionals to tell us what to do, but whatever mental state you are beginning in, you can probably see that we cannot improve our minds or lives AT ALL by sitting about helplessly bleating.)

Input control helps you get used to being in charge. It's best done when starting NH because that way the brain realises that a change is beginning and you get into the right state of mind for learning; the mildly exciting, light-hearted interest that prepares the brain for beneficial gene transcription. Input control uses epigenetics; aspects of your surroundings and the internal chemistry surrounding your cells that can change what those cells are doing inside the brain (for example to help you to grow new connections to speed learning or improve memory). With epigenetic control you can reduce the factors in your input that are slowing you down, and give your brain a boost at the same time.

Input control can be done on any level, but is most effective done on many or all levels. Here are some examples of epigenetic factors you can change:

- Physical, material (You can change your appearance, your diet, what you choose to do when alone, the objects and things you like to surround yourself with, products you use. -Also there's a good opportunity here for throwing out any junk, such as your collection of old pizza cartons?)
- Spatial (you can change your exercise habits, how you decorate the space where you live, the choice of where you spend your time, the amount of exploring you do.)
- Imaginative (you can change what movies you watch, what music you listen to, what books you read and how you spend your leisure time, what you watch on TV, not watching TV, exploring stuff you have never watched before, and so on.)
- Procedural (you can change the things you do and the people you hang out with, try out different ways of expressing creativity and working with tech.)
- Declarative (you can change your ideas and knowledge, choose what subjects you are and are not interested in or that you want to pay more attention to and think about. You can change what you think about yourself too).
- Strategic (you can change your planning methods and review your needs, make new decisions and consider new ways of thinking about things.)

Most newcomers are really surprised at how powerful an effect epigenetics can have and how fast it works. Effectively you are none-intrusively hacking the genome, causing it to express genes that promote higher intelligence and healthier bodily metabolism (which is why it is reduces the tendency to obesity, metabolic syndrome, diabetes and associated diseases, and prevents the effects of aging.)

The trick of good input control is never to remove a bad habit, or give up anything, without replacing it with something better. (If you can't find anything better, you're stuck with the habit for now and should move on to the next thing you CAN improve. Always keep looking for more beneficial options). Being honest about what you enjoy, understanding why you enjoy it, and being aware of and able to sensibly justify why your body and mind behave as they do right here and now are all helpful in input control (and will increase self esteem). If you are doing the tutorials
they will help you with this.

Reducing Anxiety Hormones

Here are some your choices of methods:

- Physical & spatial methods: exercise, yoga, nutrition, massage, breathing exercises, chanting, dancing, retreats.
- Chemical & supplementary methods: Drugs, medication, dietary supplements, herbs. (For more info see the Drugs & Chemicals section in the library.)
- Tech: "mind machines": EEG Bio- or Neurofeedback, light & sound, GSR (Galvanic Skin Response biofeedback), NMS (Neuro-Magnetic Stimulation), TMS (Transcranial Magnetic Stimulation), CES (Cranial Electrical Stimulation) REST & flotation tanks and many other devices. (For more info see the Methods & Technology section of the library).

- Scientific, cognitive & psychological methods: CBT (cognitive behavioural therapy), FA (Functional Analysis or Assessment), NLP (Neuro Linguistic Programming), DA (Discourse Analysis), IA (Interactional Analysis) (For more info see the Methods & Technology section in the library).

- Physiological, spiritual & imaginative methods: Meditation, self-hypnosis, visualization, martial arts, acupressure/puncture, lucid dreaming, modeling. (For more information see the Methods & Technology section in the library.)

All these methods can be affective against anxiety and can help balance brain chemistry. As soon as you find one that works for you start using it regularly, but do keep exploring other methods because you may find a better, even more effective one, or a method with fewer side effects. You may like to alternate between methods. That is what NH is often about; finding exactly the right techniques for you personally to use to achieve optimal mental health and strong intelligence.

Learning the Relaxation Response

The "relaxation response" is the 'fulfilment' half of the brain's pleasure system. It occurs when your brain chemistry changes in response to assimilation, success, satisfaction, fulfilment or understanding. During this response, heart rate and blood pressure slow, and cortisol production is turned off. Natural opioids and serotonin are released in the brain, making us feel very comfortable and satisfied, yet still ready to interact. During natural learning, this response occurs naturally. When there is too much cortisol present in the bloodstream, it can't. Effectively the response is turned off. We have to hack in there, and turn it back on, because it reduces cortisol levels faster than anything else.

To keep cortisol levels healthy and under control, the body's relaxation response should always be activated after the stress response occurs. You can learn the relaxation response with various techniques (see below), and you can learn control in order to keep your mind from habitually reacting with anxiety in the first place. Something else you can do is remove unhealthy sources of more cortisol production so that you can reduce it quickly and train up the brain safely and well. This is how you build up your "immunity to hassle"; by first removing the excess hormone, then learning how to block against its overproduction.

The Relaxation Response is something some people find very easy and, unfairly, others may find really difficult. A lot will depend on where you're starting from and what sort of methods you feel attracted to. The relaxation response is something that has to be experienced to be properly understood, and is often only understood in retrospect, (much like your first orgasm.) Once you can make the response happen on purpose you will become more conscious of the change of mood and understand what it is doing to your body and mind.

Here is one Simple Method:

Lie down somewhere comfortable and relax. Turn off the phone, radio and/or TV.

Close your eyes. Pay attention to any areas of your body that are tense. Breathe calmly and as you breathe naturally out, deliberately relax the tense areas, beginning at your feet and progressing up to your face.

Go over them all again and keep them relaxed.

Breathe through your nose if you can, unless it is blocked. Become aware of and listen to your breathing. Each time you breathe out, it may help you focus if you silently say the word, "ONE" to yourself.

Breathe easily and naturally.

Continue for 10 to 20 minutes. You may open your eyes to check the time, but do not use an alarm. Do not worry about whether you are successful in achieving a deep level of relaxation. Maintain a passive attitude and permit relaxation to occur at its own pace.

When distracting thoughts occur, try to ignore them by not dwelling upon them and return to repeating "ONE" silently to yourself.

When you finish, sit quietly for several minutes, at first with your eyes closed and later with your eyes opened. Do not stand up for a few minutes.

Sometimes the relaxation response takes a while to get control of because when many people first start neurohacking, their nervous system is fatigued and they may find exercises like the one above just send them to sleep. This is good; it also happens when we are recovering from illness or trauma, and is a sign of the healing process taking advantage of your relaxed state. Let yourself sleep; give yourself time and space to sleep, eat foods supportive of healthy brain growth and functioning and this 'sleepy' phase will pass.

A final thing you should be aware of is 'snapback'. Sometimes, especially if you are suddenly subjected to difficult events, the mind can panic and try to 'snap back' into old bad habits of thought using badly wired (but old familiar) networks. This can bring a spate of disillusionment or depression when we think we have 'failed' to make any difference. This too will pass. The fastest way out of snapback is to make immediate progress with the good habits and teach the brain "it's okay; we're smarter than we used to be and this is the way we do things now". Consciously help yourself to think in non-anxious ways, and you will see a great deal more of what is going on in every situation. A healthy, non-anxious brain deals with mistakes and problems confidently, using them as resources and opportunities for improvement.