



# HAPPINESS CHEMICALS

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*Freddy Carrick*

## HAPPINESS CHEMICALS

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Our magnificent bodies can create many chemicals which each have a purpose, but in this piece, I want to talk to you about the four special chemicals which can keep us in a beautiful emotional state all the time when we produce them. I can show you a few tricks that will keep these fabulous friends flowing all the time.

For example, everyone's heard of a runner's 'high', the overwhelming feeling of ecstasy when you run, dance, or exercise really hard for a sustained period of time. This type of exercise produces endorphins and these, along with serotonin, dopamine and oxytocin are amongst your best friends in life. You can't take supplements to provide these little beauties but by learning some new habits of behaviour, you can produce more of each of them anytime you want. When these chemical systems are working normally, they regulate biological processes such as sleep, appetite, energy, sex drive, mood and emotions.

Let me explain with a little more science; these four chemical messengers of your brain are among the group of happy mood producers and are joined by another two called cortisol and adrenaline. These last two are called the 'stress' hormones because they are responsible for the autonomic reaction within our bodies called the 'fight or flight response', meaning that when a stress situation happens, they are secreted into our body and we will either stand and fight or argue, or, if the danger is life threatening then we will run away from the problem.

Given that those processes are important in our lives if we are to have physical and emotional fulfilment, let's dive a little deeper and understand how more of all of them can be produced.

### **Endorphins**

The reason why sustained hard exercise causes a flood of endorphins is because your body is trying to help you by numbing the pain. This is why we can work late after children are in bed or after everyone else has left the office, and why we can endure childbirth, or even transform the pain of wearing shoes that are too high or tight because they look so beautiful. So here are a few habits you can develop to produce more endorphins whenever you want without giving birth or running 5 miles.

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- Fragrance will change your mood quickly; vanilla and lavender are excellent when you need to reduce anxiety. It's been found that pre-surgical patients who have a bowl of lavender water at bedside need less pre-surgery medication, and a recent survey found that women who sniffed lavender oil before IUD insertion felt less anxious. I've been wearing the same two perfumes for around 30 years, one is my winter or evening fragrance and the other is lighter and greener; both of them suit me really well and still make me happy and excited when I wear them
- Make a list of anything you know will make you happy; these are from my list - cooking, baking, wearing favourite fragrance, taking a cold shower, walking in nature with my dogs, gardening, dancing either with dogs in the kitchen or at my salsa class, or on stage at a Tony Robbins event in front of thousands of attendees, listen to or play music, ride a horse. Whenever you feel your mood dropping, look at the list and take action, keep the list on your phone, in a notebook, in your purse, keep it handy
- Have sex, with or without a partner, reaching orgasm will change your mood fairly quickly.
- Eat a little good quality chocolate because I'm delighted to tell you that cocoa contains the mood-boosting compounds theobromine and phenethylamine. This doesn't work with a bar of milk chocolate which will do nothing except make you want more of it, whereas just two squares of a good quality dark chocolate leaves most people feeling very satisfied.
- Laugh until you hurt, this kind of laughter releases endorphins to cover the pain caused by that deep breathing and muscle contraction which massages your diaphragm. Billy Connolly does it for me, and have you noticed that you laugh more when in company than alone, even if you're all just watching TV.
- Do anything with a group of others, even if you don't know them or have a friend amongst the group, simply being in a group is good for you and if it's a dance class, a singing group or exercise class, your body will produce even more endorphins.
- Eating and drinking your favourites also enhances mood, just limit foods like cake or pasta with creamy sauces to no more than a couple of times a week. Be careful with alcohol too because although it makes you feel better, we all know the downside is empty calories, bloat, guilt, hangover and weight gain which causes a down spiral of mood.

### Oxytocin

This chemical is very helpful in reducing the results of stress within your body; it is a subtle moderator of our thought processes, and helps us to respond with kindness rather than aggression. Oxytocin helps to promote positive interaction between ourselves and others, whether we know them or not; for example, simply smiling at a stranger will create more oxytocin in your brain and their brain, and has a wonderful effect on the stranger too. Hopefully, that smile will behave like a yawn and be passed on to others, increasing everyone's levels and feelings of being cared for. This chemical is sometimes called the 'love molecule' just because it is triggered by loving/kind gestures and words which are regularly seen between friends and families, and should be seen more often in workplaces. It helps people to feel safe and it builds feelings of trust and intimacy.

Here is a list of things you can do to raise levels of oxytocin in your brain and help yourself and others to feel kinder and more loving, challenge yourself to think of others:

- Smile at strangers, see above.
- Human touch is important to producing high levels of oxytocin and if you hug friends and family instead of kissing or shaking hands, then our production will spike high.
- Notice when you have unkind thoughts about situations, yourself or others, and deliberately change those thoughts to more compassionate ones.
- Try to be nice to others even though they may do or say things that annoy, anger or stress you. You will fail at this a lot of the time, but even just catching yourself going to the negative side and changing your response will raise oxytocin.
- Be kind and loving to yourself more often, long baths, long walks, long lunches with friends, long sessions of reading a good book or catching up on TV. So long as you don't feel guilty about it which creates stress, or maybe schedule it in when the children are out or when your partner is busy doing their own thing.
- Dogs and cats are hugely successful at species survival because we love them and they love us right back, stroking a pet is fabulous and I encourage all to do it, even if it isn't your pet. If you don't have one you could visit a friend who does and allow it to snuggle in to you, see how that feels.

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- Share - anything done in a communal way, whether it's with one other person or many, is good for you. Sharing a meal, a movie, a glass of wine, laughter, an experience. This is why discussing last night's TV shows around the office makes us feel involved with and therefore part of a team that cares, not always great for getting the work done though.
- Do something that frightens you and your oxytocin levels rise very quickly, if you do it with someone else the experience will give you something in common which helps create a bond. So if you're hoping to meet a new partner or to improve a current relationship, doing something together as a new experience creates instant bonding and later conversation; for example, taking an early 'date' to a climbing wall then for a pizza is relaxed and easy unless one of you has a fear of heights, in which case if the wall is climbed then the level of trust between you will go through the roof.

## Dopamine

This chemical helps us to do or achieve more because the reward is a dopamine 'hit'; for example, ticking things off a to-do list, finish a report, organise Christmas, play longer on a computer game to achieve a next level, live in the tidiest home, pass more exams for promotion. Dopamine rewards us by recognising that we have achieved a goal and it is released by the brain into our bloodstream and immediately makes us feel 'good' and it is highly addictive. Which is why the current trend of playing games on our smartphones can take the player completely out of their rational head and cause them to walk into roads, ignore their children, fall off pavements, miss their stop on the train.... When we eat food that makes us feel good or satisfied, that's a release of dopamine caused by the action of eating (or drinking) something you really like, and why a glass of wine or beer after work, especially with friends, is so addictive. This shot of dopamine following eating or drinking is one of the reasons why people overeat or overindulge, because that lovely shot of dopamine is so satisfying and feels really good. If you are overweight give this some thought.

I don't think there's any need to list ways of creating more dopamine release, just think of a challenge, however small, and achieve it; even if it's clearing out your garden shed so it is tidier, then notice how good you feel after.

On a different note, dopamine enhancement can be helpful to people suffering from post-traumatic stress disorder. By playing games which encourage a hint of obsessive behaviour the dopamine produced can reduce the suffering of anyone with PTSD, whether it was caused by the warzone of a divorce or in a dysfunctional workplace, or even an actual military warzone, because the mind doesn't discriminate when it's in pain.

### **Serotonin**

Serotonin is the chemical of achievement and significance, self-esteem and pride. It's what causes us to do things to make parents or partners proud because when we achieve things our place within 'the group' is reinforced and we are seen as a respected and valued member of the community.

It is vital to maintain a high level of serotonin within the brain because a reduced level can very quickly make you feel as though someone switched off your 'go juice' and your life force is ebbing away. The negative effects of low serotonin levels include not being able to make decisions, not being able to focus on a task, not being able to concentrate, overwhelm and feeling rushed so that you have no time to finish a project. Prolonged low levels of serotonin can result in mild depression, so maintaining levels of personal self-esteem, and motivation to turn up every day for your life, is vital.

Maintaining and boosting levels of serotonin is quite simple when all is going well. However, the peri menopause and menopause create changes to other delicate levels of hormones which can quickly reduce your ability to stay positive. This is where you need support from partners, friends and loved ones to gently nudge you, just as you would for them, if they notice your mood is low for a period of time.

Simple ways to boost serotonin are:

- Getting outside every day for a period of time, hopefully in sunshine.
- Stop using blue screens such as smart phones, laptops, desktops and tablets for at least one hour before bed and don't have them in the bedroom overnight.
- Human touch is important for self esteem and if you live alone, try greeting your friends and workmates with a brief hug rather than a 'hello' so that you share the boost of serotonin.
- Body massage especially with fragrant oils.



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- Exercise of any kind, especially in company and to music.
- Make a scrapbook or memory board somewhere in your home, reminding you of happy events from your life. This has a double effect of improving serotonin levels via happy thoughts and reducing feelings of lack caused by negative or sad thoughts.

It's very easy to make all these lists but if you have a family member who suffers from low mood, or you do, you'll know how quickly this low mood can deepen into self-disgust and complete lack of interest in life. So, if you have a few remedies which can nip those negative feelings before they escalate then that's a good thing.

Here's a little more science; these four chemical messengers of your brain are among the group of happy mood producers and are joined by another two called cortisol and adrenaline. These last two are called the 'stress' hormones because they are responsible for the autonomic reaction within our bodies called the 'fight or flight response', meaning that when a stress situation appears, they are secreted into our body and we will either stand and fight or argue, or, if the danger is life threatening then we will run away from the problem.

This response is part of our ancient brain and is responsible for keeping the human race alive in the face of danger; it's also responsible for helping you to stay alert when trying to meet a deadline whether it's a report for your boss, a cake for the school bake sale or a fancy-dress costume for tomorrow's dress up day. Cortisol is produced by the adrenal glands along with adrenaline which raises the heart rate and our blood pressure, but cortisol releases extra sugar into the bloodstream to keep our brain alert and muscles ready for use (useful if being chased by a lion, not so much if watching TV) We actually have very little control over the production of cortisol except when we trigger the response ourselves even though there isn't a stress situation present. How do we do that?

Having uncontrolled, poor quality thoughts is how; when our minds remember situations and our reaction to them, or we project potential outcomes onto situations which might or might not ever happen, we can put ourselves into stress. Apparently, we are the only animal species on earth which can think a thought and become afraid or angry or worried or embarrassed. So, our minds can actually create a stress situation even though we might just be lying in bed waiting for sleep. Cortisol is always produced when the mind thinks about stress situations and you allow your body to go into its 'fight or flight reaction' which you'll recognise because you notice that your breathing is shallow and faster, and your heart rate speeds up.

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While a bit of occasional stress is good for you, too much is bad, especially if the stress is sustained over periods of time. Situations such as trying to manage the life of an elderly parent, or deal with a difficult divorce, or find a way through a redundancy programme at work can all lead to prolonged stress. Heck I dealt with all three of those at once, no surprise that depression has been an element of my life for twenty or so years, and I'll explain why depression can follow extreme stress later.

The worst part of stress is that it depletes the production of our natural 'happy chemicals' and that's a great pity, so the stress cycle can become a swift downward spiral if you don't know how to manage it. This is the part I can really help you with: try to create a habit out of doing several things from this list on a regular basis.

- Breathe more slowly and deeply, a rhythm known to reduce stress is breath in for a count of 4, hold breath for count of 16 and breath out for a count of 8. Practice anytime but do this several times every day, especially when you know that a period of stress is coming up.
- Exercise, any type is beneficial to reduce stress, with music and friends is optimal.
- Light a fragrant candle at home and relax with soft lighting instead of the overhead light.
- Reduce or remove caffeine from your diet, that is coffee, most types of black tea, all fizzy drinks and all energy drinks.
- Write down your fears and concerns, I found that writing as soon as I wake up when my thoughts are less conscious, was and still is, very helpful.
- Spend more time with people who like you and vice versa, you don't have to do anything special, just be in the room with them.
- Laugh, laugh and laugh some more, try laughing deliberately and laugh so hard that your mind takes over and you just keep laughing. If you doubt that laughing is contagious watch the video of a man on the tube who pretends to be watching something on his smartphone and laughs loudly which makes others in the carriage laugh until almost everyone is laughing, it genuinely is a beautiful thing and here it is: <https://youtu.be/1veWbLpGa78> and yes I know it's an advert for a fizzy drink.



### Depression

Depression will affect around 40% of the UK population at some time during their lifetime, it might be mild or moderate or full blown 'let me end my life now' kind of depression. At any time in the UK approx. 25% of the population is living with depression. It can develop over a period of time and it truly can creep up on you and sneakily take over your life. You think that life is going well and one day you just can't be bothered with anything and nothing seems to matter. You begin to think that no one cares about you and that you don't even matter, sleep becomes a problem, both getting to sleep and staying asleep. Appetite is reduced so that, if you live alone, you may not bother making a meal for yourself. When you think you don't matter, your self-esteem level drops and you begin to isolate yourself from friends, then family, and one day you can't remember cleaning your teeth or wanting to wash yourself. Anger isn't a part of depression because frankly you don't have the interest to be angry about anything. Work becomes a problem because concentration is progressively poor and focus drifts away. Energy levels drop and there might be a feeling that if you don't matter and no-one cares about you then why should you look after yourself and what's the point of living.

Depression often appears after a trauma or difficult life change, when you've managed your stress levels so that you function well enough to get by for a sustained period of time. Then one day you stop needing to manage yourself and the stress situation has resolved. However, the levels of 'happy chemicals' are low because the cortisol production you needed to get through the situation has reduced your ability to produce enough of them. This is the zone when low mood deepens into depression and it can happen to anyone, no matter how capable and well organized they are. This situation was seen all around the UK when there was a severe nation-wide outbreak of foot and mouth disease and thousands of healthy animals had to be slaughtered to stop it spreading. I know farmers who took huge pride in their breeding programmes in order to maintain the highest breed standards and gene pool; only to find their life's work, their most valuable cattle or sheep lying in a heap one day. Once the clean up was completed many of those farmers were diagnosed with depression because they simply couldn't see a way forward.

It's well proven and documented in published medical journals that the very best way to manage depression is with talk therapy of some kind, coupled with support. Sadly, many people find themselves leaving their doctor with a prescription for anti-depressant medication because there simply aren't enough professional therapists to deal with the numbers of people who need help.

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If you or someone you know is struggling with low mood or depression, then try to do as many of the activities mentioned above in this chapter to improve your/their 'happy', above all, talk to someone you trust who won't judge you as being unable to cope, and certainly don't trust your problem to anyone who isn't empathetic.

There is a teeny tiny problem that I need to discuss here. It is that for some people, being depressed is a good thing (shock and horror) because it gets them attention and people care more for them and people are careful around them. Don't misunderstand me, this usually isn't a conscious cry for help, but some people actually 'do depression' for the rewards they get when they are unhappy. So, when life gets tricky or challenging, slipping into low mood and shedding a few tears can actually get people to hug them (oxytocin release) people will make a fuss of them so they feel important (serotonin release) give them quality chocolate (endorphin release) until the person feels better (dopamine release). This isn't a problem unless it becomes a habit in which case it becomes an abuse of the empathy expected from family and co-workers. If you ever find yourself slipping into low mood because of your thoughts, you need to change your thoughts fast; after all, it takes as much effort to think happy as it does to think sad.

Just a note on happiness, it's something you can work on every day of your life and if you want to maintain enough of it to see you through the stress and challenge of everyday life, then you should work on it. See the positive in situations rather than challenge or negatives, and be nice to others. There's a professor called Rick Hanson who has written several books on this subject, all to order from your favourite bookshop, but a particularly helpful session was an interview by Marie Forleo at <https://youtu.be/ngu3Dcn9F9Y> which I hope will whet your appetite to read his books and learn more of how you can train your brain, therefore your mind, to be happier and more positive.

To close this chapter, while you're in a great mood and managing your life well, take the time to consider what makes you happy and then do these things:

- Write that list of activities and things that make you happy
- Create a scrapbook of your happy life and look at it often
- Create some really great habits like writing a gratitude journal and ending your day with thoughts of three things that made you happy went well during the day, however small. Share your feelings and find a type of exercise that makes you happy,

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you know what mine is, dancing. Challenge yourself regularly with learning new skills and try to always have something to look forward to, whether it's a new project or a coffee date with friends or joining a different dance or exercise class, learning is growth and if you're not growing then you're dying and that's a stone cold fact.

*Discover the answers to all your questions around menopause and beyond within my book Menopause Unzipped, how to emerge as a goddess at [www.menopauseunzipped.com](http://www.menopauseunzipped.com)*