IMMUNE BOOSTING GUIDE

IMMUNE BOOSTING

Never has it been so important to give your immune system a boost!

While there are no magic pills, or silver bullets that will provide you with immunity to the Coronavirus or COVID-19, there are a number of ways you can make sure you body is in top shape. This will aid your immune system if you do come in contact with any virus.

I hope you find this immune-boosting guide helpful, especially if you have to self-isolate.

REMEMBER: Social distancing and good hygiene are crucial – stay safe.

About the Immune System

We live in a world of natural poisons and man-made pollutants. These environmental pollutants, along with a poor diet and other harmful habits such as smoking and lack of rest, can reduce the body's ability to protect itself from harmful bacteria, viruses, chemicals and other factors that can lead to health problems.
The immune system works in partnership with other protective body systems. For example, the skin forms a physical barrier against foreign materials, while the respiratory system uses coughing to rid the body of inhaled microbes and pollutants. When foreign materials overcome the body's other protective mechanisms, the immune (defence) system begins operating. Zinc contributes to normal cognitive function, normal vision and function of the immune system.

IMMUNE BOOSTING BASICS!

If you really want to give your immune system a boost in the wake of the Coronavirus pandemic, the first think you should think about doing is cutting out the following:

- Smoking
- Excessive alcohol consumption
- Sugar
- Obesity

Now we know what not to do, lets start with the to do list!

When it comes to immune-system health, there are a number of genetic factors you have no control over but there are plenty of environmental and behavioural factors where you can make significant changes by tweaking. These include:

- Hygiene
- Exercise
- Sleep
- Hydration
- Diet
- Stress

Hygiene really helps

You may feel like the world has gone hygiene crazy and never want to hear 'Happy Birthday' again but good hygiene will really help your immune system.

There is the everyday, obvious advice:

- Wash your hands regularly for 30 seconds plus, remembering your wrists, as well as between fingers, backs of hands and thumbs.

- Refrain from touching your eyes, mouth or nose – which is easier said than done.

- Do not touch public surfaces.

There are also the things most of us have never done before this outbreak but it may be wise to start:

- Disinfecting keys, purses, mobile phones

- Thoroughly cleaning the inside of our cars

IMMUNE BOOSTING BASICS!

- Washing hands after handling deliveries
- Cleaning keyboards

We all know that over-the-top cleaning can cause a range of health implications too – the ‘too clean’ allergy-related illness – however, at a time such as now it is worthwhile to clean every surface and everyday objects more regularly than usual.

NO EXCUSES FOR NOT EXERCISING

Maintaining a good fitness level is good for your immune health, as well as your mental and physical health (which will also impact your immune health).

While gyms appear to be out of action as a result of the Coronavirus, there is no excuse not to exercise.

Most gym and health studio owners, including myself, have gone digital to help our clients keep their fitness training up during this difficult time. While exercising in your living room with your cat for company won't compete with the motivational atmosphere we have in our classes, it is a great way to keep fit while isolating.

Try to include three or four short sessions in your day – here are my top tips how:

1. Early morning online class – get those early endorphins pumping with a class the moment you step out of bed. In fact, set your alarm 15 minutes earlier and see it as a treat you would never normally be able to squish in if you needed to do it at the gym!

2. Convert your commute into a class – if you are now working remotely or self-isolating, why not turn your commute time into a fitness class and use the normal hours wasted in the train or on the road in a productive way!

3. Go hard when you get home – I know a lot of you call in at a gym on the way home, so make sure you don't lose this resolve. Say no to the temptation of crumpling down in front of the TV and instead do an online class the moment you step through the door.

4. Night time wind down – If you don't meditate before bed, why not? It is something we should all get into the practice of doing. For some people this can be a religious or solitary experience, for others being part of a Tai Chi or Pilates/Yoga class can provide meditative space. Whatever

NO EXCUSES FOR NOT EXERCISING

your take, get some you-time before bed.

Exercising regularly will help you maintain a healthy weight. This is a real issue with people self isolating near their fridge! Especially if your work has you on your feet all day, make sure you consciously decide to keep exercise as part of your social-distancing routine.

It should be noted that extreme fitness training can compromise your immune system.

Super-sleep

It is time to face up to facts, sleep is pretty much the cure for everything – or at least the foundation block without which not much else counts.

Sleep is when our bodies and minds reboot and repair. It is a time for giving back to our bodies and processing our thoughts. It is essential and something most of us take for granted and do not get enough of.

If you want to do one thing to increase your immune health – **SLEEP MORE**

Make sure you are getting your 7-9 hours sleep and try to ensure this is ‘quality sleep’ - where you have wound down before going to bed so your sleep is less disturbed.

HYDRATION, HYDRATION, HYDRATION

Water is vital for life and for every cellular function in your body.

Dehydration impacts on every bodily process, from your mental processing powers to your immune system function. So keep sipping that water.

While it may not have the Coronavirus-busting effects some people are touting, it will ensure you are in the best physical condition to beat any infection.

We should be drinking at least 2 litres of water a day, which should be consumed across the day. Personally I like to drink more: between 2.5 and 3 litres depending on how much I have exercised. I also opt for water above all else, especially sweet drinks that are packed full of sugar.

EATING THE RAINBOW

Diet is key in keeping your immune function in top shape!

Science has shown that people in poverty who do not have access to a good balanced diet or those who are malnourished for other reasons, will experience a high rate of infections in general. The reason is that they simply do not have the balanced diet needed for them to get all the vitamins, minerals and micro-nutrients their bodies require.

I just want to take a moment to discuss micro-nutrients, as while most of us are aware of vitamins and minerals, fewer people are familiar with micro-nutrients. They are the trace elements found in our food, like iron, folate (folic acid), selenuim and zinc that are just as essential to bodily processes as vitamins and minerals are. Older people, due to lesser appetites and more restricted diets, are more likely to have micro-nutrient deficiency and the science suggests that this could add to their weakened immune response.

One of the easiest ways to ensure you get all your dietary requirements is to make sure every plate of food you eat is jam packed with colour, as often different coloured foods bring with them different vitamins, minerals and micro-nutrients – so try ‘eating the rainbow’.

EATING THE RAINBOW

Vitamins and micro nutrients essential for a healthy immune system

Before we go into each vitamin and micro-nutrient in detail, let's address the contentious issue of diet vs supplement.
My feeling is that both have a role and are important.

Diet is first prize; if you can get all your recommended daily amounts of every vitamin and micro-nutrient through your diet that is amazing. There is no debate that taken in this way, vitamins and micro-nutrients are more easily absorbed and are therefore more available.

However, for many of us this is easier said than done.

Dietary restrictions and even fussy eating mean that many of us simply do not get the daily amounts our bodies need and this is where supplements can be really helpful. Remember – it is always best to try and get it through your diet first.

The immune-boosting eight:

Vitamin A

A fat-soluble vitamin, Vitamin A is important for skin, eye and bone health as well as having antioxidant properties and fighting cell damage. It also has a role in cell division and growth and for normal formation and maintenance of heart, lung, kidneys and other vital organs.

Vitamin A is found in both animal products (preformed version called retinol) as well as in plant- based food as pro-vitamin A). Great sources include:

- Cantaloupe melon
- Pink grapefruit
- Apricots
- Pumpkin
- Carrots
- Dark green leafy vegetables
- Broccoli
- Milk, eggs, cheese and cream
- Liver and kidneys

EATING THE RAINBOW

Vitamin B6

Like all B vitamins, B6 helps the body turn food into energy but it is also important in aiding the biochemical reactions required within the immune system. They are water soluble so are not stored in our body to any major extent and are a vitamin we can easily run low on.
Vitamin B6:

- Beans
- Chicken
- Fish
- Fortified cereals
- Dark leafy greens
- Papayas
- Orange
- Cantaloupe melon
- Bananas

Vitamin C

Also known as ascorbic acid, vitamin C is important for many bodily functions – including the repair and growth of tissue. It is also a popular remedy for the common cold, although researchers are still at odds as to whether there is any real merit.
Vitamin C deficiency has been linked to smoking so smokers should really think about upping their intake.
Symptoms of a deficiency include bruising, bleeding gums, dry and splitting hair, dry scaly skin and a decreased wound-healing rate. Scarily, it is estimated that around 40% of men and women do not get enough vitamin C as a result of not eating enough fruit and vegetables.
Great sources include:

- Cantaloupe melon
- Citrus fruit
- Kiwi
- Mangos
- Pineapple
- Berries
- Red and green pepper
- Spinach
- Cabbage
- Cauliflower
- Leafy greens
- Tomato
- Broccoli

EATING THE RAINBOW

Vitamin E

Another fat-soluble nutrient and vital nutrient for good health, which fortunately is found in a variety of foods making deficiency rare.
It should also be noted that overdosing on Vitamin E by using supplements is a real concern and more than 250 medications are known to interact with vitamin E so be careful if you are taking medicines.

Vitamin E provides cellular protection and is vital for immune-system function and fighting off infection. It is found in eight different forms and great sources include:

- Nuts (peanuts, hazelnuts, almonds)
- Vegetable oil (sunflower, corn, soya, wheat germ)
- Sunflower seeds
- Green leafy vegetables
- Broccoli

Folic Acid

A synthetic form of folate, water-soluble vitamin, also known as B9. It is an important supplement to take during pregnancy for the formation of the baby's neural tubes. It has also been linked to protection against certain cancers.

Furthermore, it has been linked to immune response, although more research is required.

Folic acid does not occur naturally in food but is frequently added to refined grains such as bread and cereal. The natural form, folate, does and can be found in a number of great sources including:

- Liver
- Lentils and beans
- Asparagus
- Spinach
- Broccoli
- Artichokes

EATING THE RAINBOW

Iron

Iron is a mineral that is vital to the proper function of haemoglobin, a protein needed to transport oxygen in the blood. It is known to improve energy and focus as well as boost the immune system.
Iron has a low bioavailability, meaning the small intestine does not readily absorb large amounts. Gastrointestinal health is a major factor in iron absorption. Great sources include:

- Animal products – meat and seafood – iron is present in the form of heme-iron which is more easily absorbed.

- Plant-based sources have iron in the form of non-heme iron which the body takes multiple steps to absorb. Consuming vitamin C rich-foods alongside these can dramatically increase iron absorption. Great plant-based sources include:
  - Beans
  - Nuts
  - Fortified grains

Selenium

Selenium is an essential trace mineral that is important for many bodily processes including cognitive function and a healthy immune system.

It contributes to thyroid hormone metabolism and DNA synthesis and helps against oxidative damage.

Selenium can be toxic and while overdose is rare when intake is dietary, with supplements this can be a risk. Make sure you stay within daily recommended intake levels.

Great sources include:
- Whole grains – brown rice and bread
- Brazil nuts
- Tuna
- Eggs

EATING THE RAINBOW

Zinc

Is an important trace mineral that people need to stay healthy.

It is found through the body and is needed for the body's immune system to work correctly – according to the European Journal of Immunology the human body needs zinc to activate T lymphocytes which control and regulate immune response. It also enhances the actions of insulin.

Studies have shown that when taken for at least five months, it may reduce your risk of becoming sick with a common cold and taken within 24 hours of cold symptoms beginning, it may reduce the length of time these symptoms last and their severity.

Zinc can be found in a number of great sources including:

- Beans, including baked beans
- Grains
- Beef and pork
- Wild rice
- Peas
- Yoghurt
- Pecan and peanuts

RECIPIES YOUR IMMUNE SYSTEM WILL LOVE

I am no chef but there are plenty of great ones out there who are sharing their recipes. Here are some of my favourite recipes for incorporating all the vitamins, minerals and micro-nutrients into my diet!

I have steered away from the obvious but if you take a mix of the ingredients discussed above and experiment, go through a cook book or Chef Google it... you will quickly find many great and tasty recipes that will help bolster your immune system.

Vitamin A

- Pumpkin soup - https://www.recipetineats.com/classic-pumpkin-soup/
- Roast carrots - https://cookieandkate.com/perfect-roasted-carrots-recipe/
- Apricot and spinach salad - https://www.soscuisine.com/recipe/spinach-salad-apricots

Vitamin B6

- Spicy chicken and bean stew - https://www.bbcgoodfood.com/recipes/spicy-chicken-bean-stew
- Healthy banana bread - https://kristineskitchenblog.com/healthy-banana-bread-recipe/
- Kale salad with grilled salmon - https://irenamacri.com/recipes/fish-salad-with-cajun-salmon-kale

Vitamin C

- Citrus salad - https://www.justataste.com/citrus-salad-honey-dressing-recipe/
- 5 ingredient mango salsa - https://www.gimmesomeoven.com/5-ingredient-mango-salsa-recipe/
- Cantaloup melon sorbet (also great for vitamins B and A) https://www.asweetpeachef.com/cantaloupe-sorbet/

RECIPIES YOUR IMMUNE SYSTEM WILL LOVE

Vitamin E

- Broccoli, sunflower seed and cranberry salad - https://www.alaskafromscratch.com/2012/07/16/broccoli-salad-with-sunflower-seeds-cranberries/
- Roasted broccoli with lemon and pine nuts - https://www.foodandwine.com/recipes/roasted-broccoli-lemon-and-pine-nuts
- Broccoli and kale soup - https://www.parsnipsandpastries.com/vegan-broccoli-kale-soup-crispy-chickpeas/

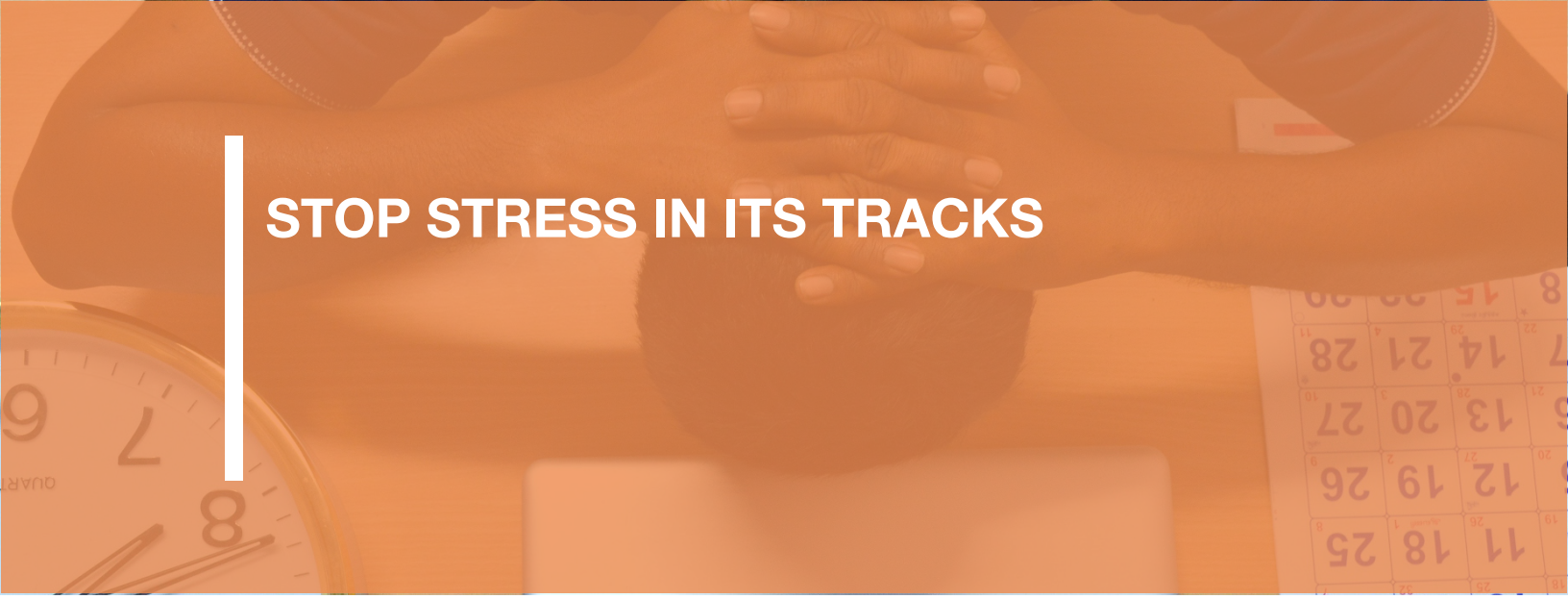
Selerium

Make sure you use brown rice.

- Breakfast egg fried rice - https://mykoreankitchen.com/breakfast-egg-fried-rice/
- Tuna and rice salad - https://www.bbcgoodfood.com/recipes/help-yourself-tuna-rice-salad
- Tuna and rice bake - https://www.food24.com/Recipes-and-Menus/One-Pot-Pan-Recipes/easy-tuna-and-rice-bake-20180205-2

Iron, Zinc and Folate

- One pot bean and lentil curry – https://minimalistbaker.com/1-pot-red-lentil-chili/
- Healthy Eating's great bean and lentil recipes – https://www.foodnetwork.ca/healthy-eating/photos/healthy-bean-and-lentil-recipes/
- Black bean and lentil salad with red bell pepper – https://kalynskitchen.com/black-bean-and-lentil-salad-recipe-with/



STOP STRESS IN ITS TRACKS

You would not be human if the Corona pandemic had not challenged your mental wellbeing, whether it is worrying about loved ones or having to deal with the negative effects of social isolation (loneliness, boredom, resentment, etc.)

Our mental well-being will impact on our immune response, which is why taking care of your mental health during this time is key.

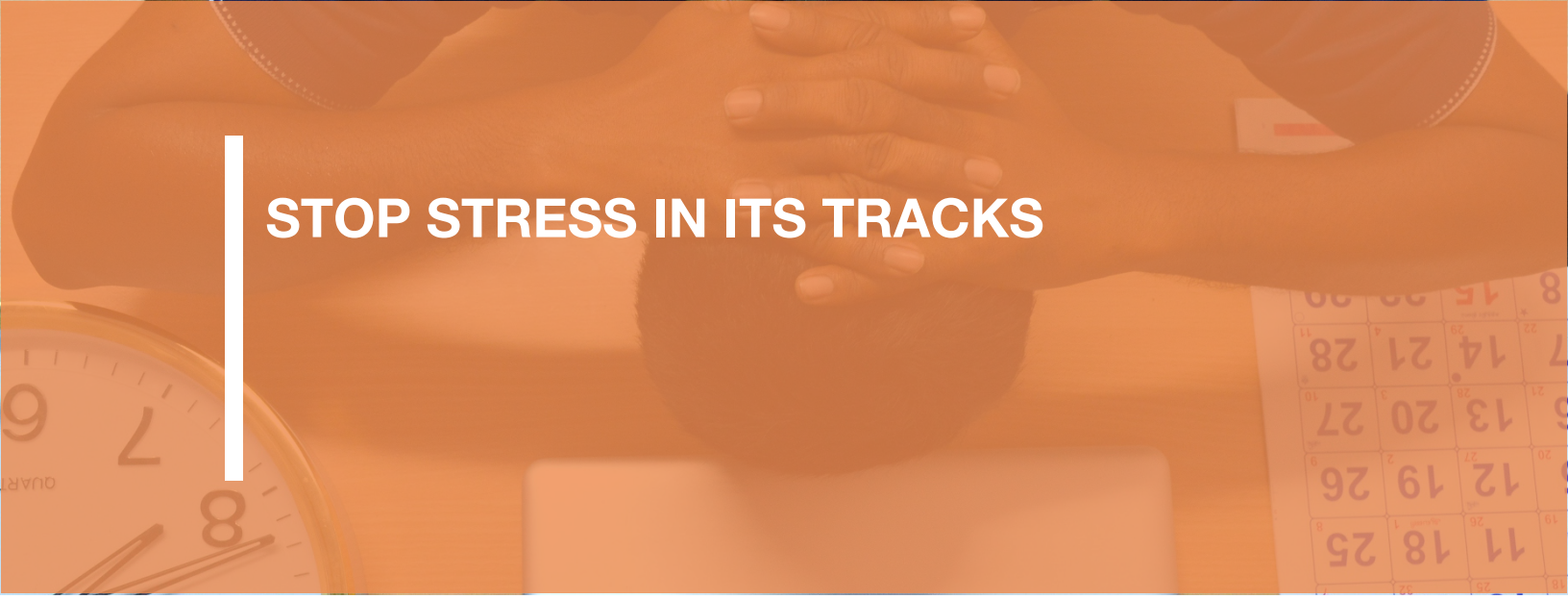
Make sure you factor in time to practise the following:

- Gratitude – it is easy to see all the negative impacts the Coronavirus is having Try journaling some of the positive ways it is impacting on your life - even if it is simply saving money by not being able to go out!

- Meditation – we have said it above, but this is worth reiterating.... meditation really works. If you have never tried it before get one of the free apps.

- Time for you – Make time to do a few things that you love to do, whether it be reading, gaining a new skill, or taking a long bath. As adults, life is often rushed. Make sure you carve out some time for you in all the chaos.

- Stress release – find your release and use it. It may be howling at the moon (I kid you not, I know a few people who swear by this). Or do some HIIT training. It may be baking, dancing, singing or Tai Chi – make sure you get your stress vented in a positive fashion.



STOP STRESS IN ITS TRACKS

But what ever you do.... don't...

There has been a lot of fake news regarding what you should and shouldn't do – a lot of it is FAKE and can be dangerous. What's more, people subscribing to these often overlook the important things like hygiene!

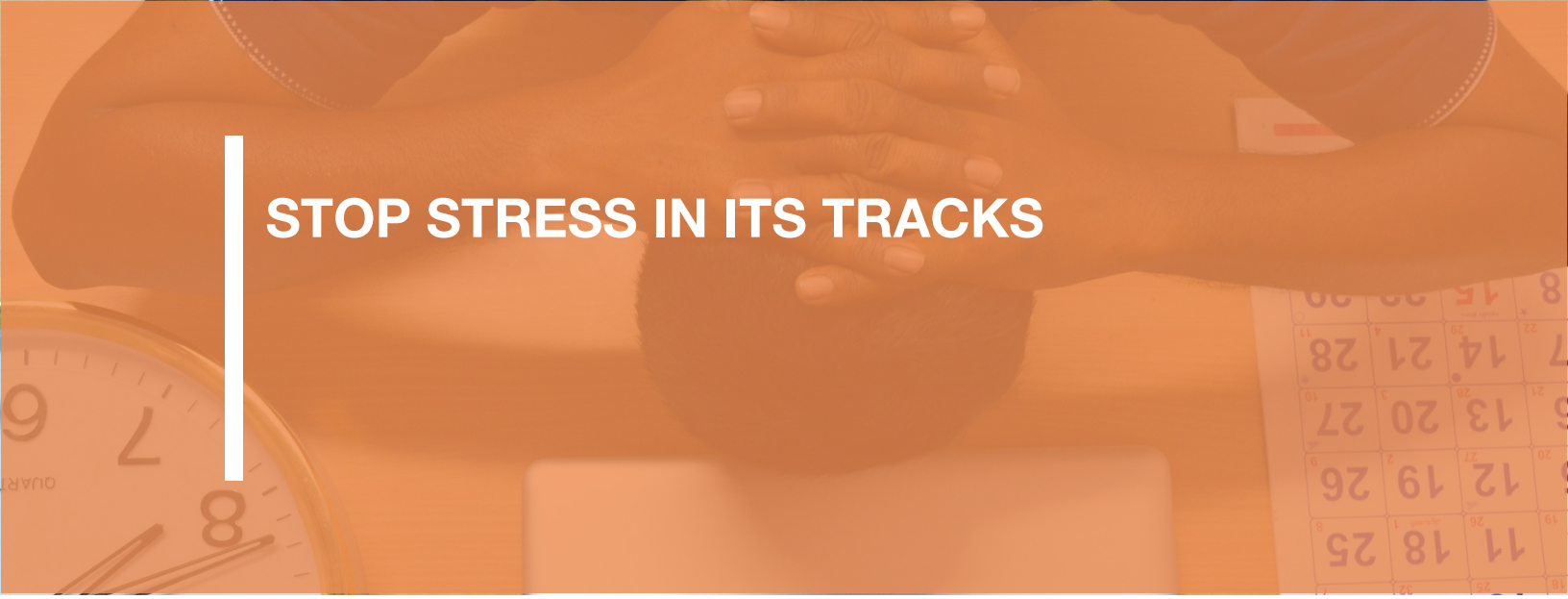
Here is a run-down on some of the Coronavirus myths that organisations like the World Health Organisation and BBC are trying to quash:

1. **Garlic overload** – A woman in China has found out at her cost that too much garlic can be a really bad thing. Medical reports state she consumed 1.5kg of raw garlic believing it would make her immune to the virus. All it did was cause her to be hospitalised due to an inflamed throat. Yes, garlic has antimicrobial properties and yes in small quantities it adds to a healthy diet – BUT there is NO medical evidence that it will help stave off the Coronavirus.

2. **Miracle minerals** – Sold by health gurus, this is in fact chlorine dioxide, a bleaching agent, that the FDA (America's food and drug standards organisation) has been warning about in relation to the potential health dangers.
It used to be touted as a cure for cancer, now it is Corona. There are no silver bullets yet so stay away from the miracle cures, especially dangerous ones.

3. **Drinkable silver** – talking about silver bullets, or in this case colloidal silver. Another miracle cure, this time touted by an American Evangelist and the medical freedom front (who are generally against mainstream medicine). There is no medical evidence that supports this as a cure. However, there are serious concerns about the side effects, including seizures, kidney damage and argyria (blue skin).

4. **Home made hand sanitizer recipes** – When the shops ran out, the bloggers started posting. The problem



STOP STRESS IN ITS TRACKS

is, 40% alcohol-substitutes like vodka wont cut it; you need something around the 80% range. Secondly, a lot contain cleaning products never intended for the skin and which could lead to skin irritation and damage if used regularly. All in all, stick with soap – carry a bar and some water around if needs be.

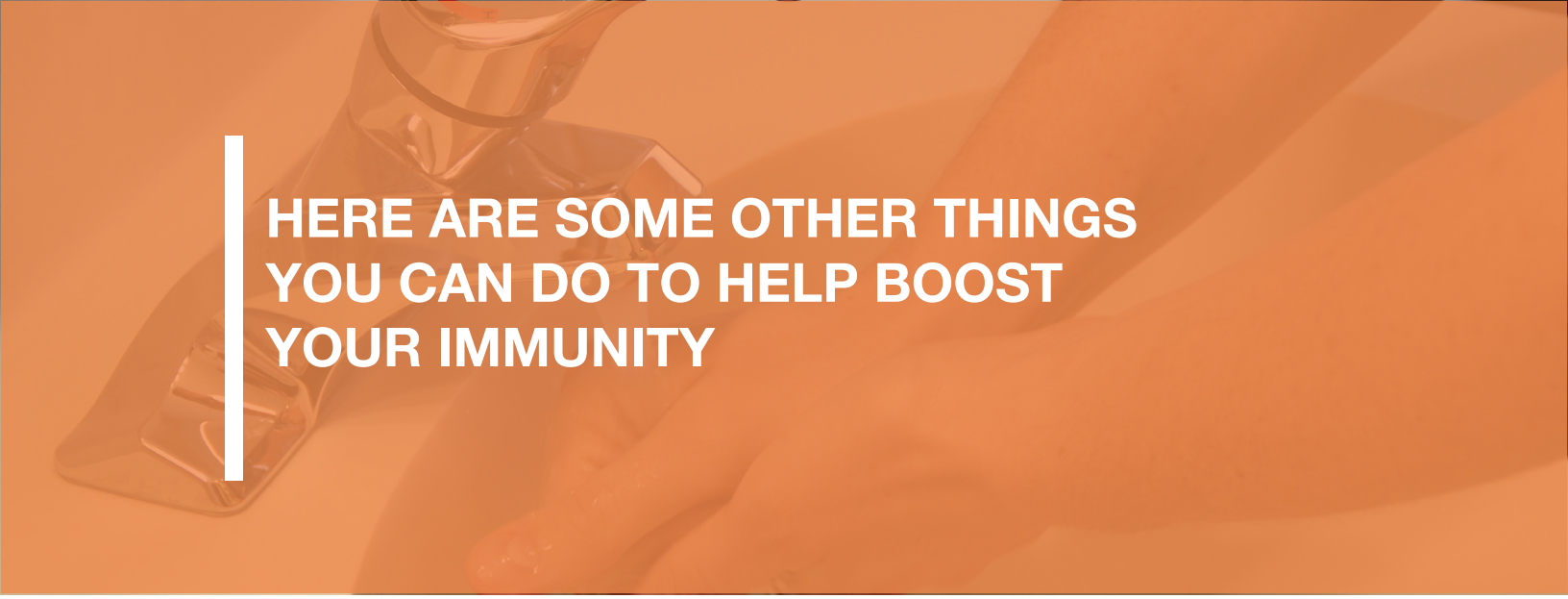
5. **Ice baths and scolding baths** – it is your internal body temperature, not external temperature that matters when fighting an infection. Scolding baths are more likely to burn your skin than raise your temperature enough to kill a respiratory virus and ice baths are also unlikely to work too.

6. **UV lamps to sanitise hands** – there is no scientific evidence saying UV lights will kill the virus on our skin, but there is plenty of studies that show regular use can lead to skin irritation and skin damage.

7. **Alcohol and chlorine body sprays** – Again, these are unlikely to kill the virus before they give you skin irritations and damage the sensitive mucous membranes of the eyes, nose and mouth. You should NEVER use any cleaning products directly on the skin – common sense people!

HERE ARE HEALTHY SUGGESTIONS TO HELP CONTROL AND PREVENT CATCHING VIRUSES OR OTHER ILLNESSES

- Train yourself not to touch your eyes, nose, and mouth. This is a toughie, but it's a habit that will serve you the rest of your life, helping you avoid Coronavirus, colds, flu, and other viruses!
- Wash your hands often with soap and water for at LEAST 20 seconds. If you don't have soap or water available, use an alcohol-based hand sanitiser that contains at least 60% alcohol.
- Avoid touching common public surfaces that other people touch – like door panels, door handles, etc.
- Clean and frequently disinfect surfaces and objects (like your mobile phone!) that are frequently touched. You can use a regular household cleaner or wipes for this.
- Avoid close contact with people who are sick.
- If you are sick, stay home.
- If you cough or sneeze, cover your mouth and nose with a tissue, and then throw the tissue directly in the bin.



HERE ARE SOME OTHER THINGS YOU CAN DO TO HELP BOOST YOUR IMMUNITY

- Get Enough Sleep - This can help improve your body's natural immune function.

- Reduce Stress - Chronic stress appears to wear down your immune system and make you more vulnerable to illness.

- Eat a Healthy & Balanced Diet (low in sugar). A balanced diet rich in antioxidants (found in vegetables and fruits) and healthy fats can help support your immune system.

- Stay Hydrated. Drinking water helps your cells operate optimally, plus it helps your body more easily process food & eliminate waste.

- Exercise. Moderate to intense workouts lasting under an hour help boost your immune system both immediately and in the long run.