THE SECRETS OF
BODY TRANSFORMATION

SLEEP & STRESS MANAGEMENT

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Precision Nutrition

THE SECRETS OF BODY TRANSFORMATION

LESSON #3 SLEEP & STRESS MANAGEMENT

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HACKING SLEEP:

Engineering a high quality, restful night.

By Brian St. Pierre

In case you haven't heard, sleep is absolutely crucial to your health. With a few simple strategies, you can get the high-quality, restful sleep your body and your mind deserves.

Sleep is just as important as nutrition and exercise when it comes to improving your health, performance, and body composition.

Good sleep helps our bodies and minds recover, keeping us lean, happy, mentally focused, and healthy.

But chronically bad sleep slathers on body fat, screws up our hormones, ages us faster, increases chronic illnesses, and drains our IQ and mojo.

Fortunately, research also shows that returning to adequate sleep can quickly reduce these risks.

So how do we go about getting that replenishing shut-eye?

Create a sleep routine

Just like you can't go from 0 to 100 first thing in the morning, you can't do the reverse at night — going from "on" to "off" in a few minutes. Your body needs transition time and environmental cues to wind down.

Thus, the first step to getting more and better sleep is to **create a nighttime routine that tells your body that you are preparing to go to sleep.** Over time, if you're consistent, your body will start the process of gearing down automatically.

Keep a regular schedule.

Our bodies like regularity. Try to go to bed and wake up at the same time every day and night. While it might be unrealistic to do this seven days a week — especially if you have young children, like I do — try to be as consistent as possible.

If you're consistent, your body will know when to release calming hormones before bed, and stimulating hormones to help you wake up. You'll feel sleepy when it's time for bed and wake up more refreshed, often without needing an alarm.

Keep alcohol and caffeine moderate.

Genuinely restful and restorative sleep comes from deep sleep.

Even though it seems like booze is relaxing, more than 1-2 drinks in the evening can interfere with deep sleep, as can too much caffeine.

So limit alcohol to the suggested amounts, and reduce caffeine after 2 pm.

Otherwise, although you may "sleep" for 7 hours, your sleep won't be high quality, and you won't get the recovery benefits.

Eat and drink appropriately.

Having a large meal immediately before bed can disrupt your ability to fall and stay asleep. Instead, **eat a regular-sized (or even smallish) meal a few hours before bedtime.**

A nice blend of protein, carbs and fats will help to keep you satiated, and might even improve your ability to fall asleep as your brain converts carbs to serotonin.

In addition, try to limit your fluids 2-3 hours before bedtime. Drinking too much liquid shortly before bed can result in frequent waking for bathroom breaks.

While total sleep time is important, uninterrupted sleep time is even better.

Do a brain dump.

We've all done it: Stared at the ceiling, long after lights-out, obsessing about all the things we're supposed to do tomorrow, tossing and turning and getting more and more stressed by the minute.

Try this instead: In the evening, take a few minutes to write out a list of whatever's bugging you: Emails you need to send or reply to, calls you have to make, project ideas, creative thoughts, that thing you should have said to so-and-so...

Whatever is in your brain, get it out and on paper.

Around here we call this a "brain dump." It clears your mind for genuine relaxation.

Turn off electronics.

Digital devices stimulate our brain with their light, noise, and mental demands.

Unplug from *all* screens — TVs, computers, phones, tablets — at least 30 minutes before bed.

(If you must read your tablet, switch the screen to the black or dimmer background. And if you're going to be on your computer, download a program like f.lux, which decreases your screen's color temperature at night.)

Our brain produces melatonin as light levels decrease. Melatonin ensures deep sleep, and may also help regulate our metabolism. If we have too much light at night, we don't get proper melatonin production.

Stretch / read / de-stress before bed.

What de-stresses you? Do that.

This could include:

- **Gentle movement** — such as stretching or yoga, or even a slow stroll around the block. Even 5-15 minutes can release tension and activate calm-down chemicals.

- **Reading before bed** — but make sure it's not too engaging — otherwise you'll be tempted to stay up with that thrilling detective novel until the wee hours.

- **Meditation, deep breathing, or other simple relaxation exercises**

Go to bed before midnight.

Interesting factoid: According to some sleep experts, because of the way our natural circadian rhythms work, every hour of sleep before midnight is worth two hours *after*.

(Whether that's true or not, or whether it's even measurable, I'm not sure. But I've heard it repeated so often by sleep experts it's probably worth consideration.)

According to these experts, we're meant to **go to sleep when it gets dark, and to wake when it gets light**. That old saying about early to bed and early to rise still stands the test of time.

Sleep at least seven hours.

Most people need 7-9 hours of sleep per night. 7 should be your baseline. If you know you have to wake at 5:15 to get ready for work, then you should be in bed by 9:30 and asleep by 10. Getting in bed at 10:15 doesn't count.

Also factor in transition time. Don't stop what you're doing at 9:29 and expect to be snoring by 9:30. Start moving in the direction of bed by 9:00.

Yes, we know. There's this whole movement, started by time-starved Silicon Valley executives, where folks try to "hack" their sleep and get away with much less.

And, sure, it can work for a while. But every piece of credible research demonstrates that you pay a big health (and productivity) price for consistently getting less than 7-9 hours.

Exercise regularly.

Exercising regularly helps normalize circadian rhythms, tone down the sympathetic nervous system, and regulate endocrine function.

However, save the intense exercise for during the day if possible — a weights or interval workout in the evening can rev us up and make it tougher to get to sleep.

Take a bath or shower.

While not everyone likes to shower or bathe at night, warm water before bed can help us relax and de-stress, which is key for falling asleep. If you go the warm water route, throw in some magnesium-based epsom salts as magnesium is known to help with sleep.

Some brave souls — including JB — swear by *cold* water in the evening. The logic is that cold water stimulates a strong parasympathetic nervous system response once the initial shock has passed. A short, very cold shower will do the trick.

Give it a try, and see which works better for you.

Optimizing your sleep environment

In addition to creating a nightly sleep routine, to help improve your sleep quality and duration, you should ensure that your sleeping environment is actually conducive to sleep.

A few small adjustments can make a big difference here.

Keep the room as dark as possible.

Melatonin is a hormone produced by your brain that signals to your body it is time for sleep. Making your room as dark as possible will maximize your melatonin production.

Meanwhile, light — particularly blue light, which most electronics produce — inhibits melatonin production and makes it harder to fall and stay asleep. (Sunsets produce red light.)

So how can you limit light exposure?

- **Dim lights at night.** Install low-wattage bulbs in your bedroom, and keep things as dim as possible in the hour before your planned bedtime.

- **Cover your windows well.** (Maybe time to upgrade from the cruddy IKEA Venetian blinds you've had since undergrad?)

- **Use a motion-sensitive or dim night light** if you need something to illuminate your midnight path to the bathroom.

- **Put your iPhone in another room or flip it face down.**

- **Cover or dim the alarm clock,** or look for one that illuminates only when touched.

- Again, if you have to use a computer late at night, **download the software f.lux,** which changes the brightness and tone of your screen in time with sunset and sunrise, reducing evening blue light.

Create a relaxing sleep area that is quiet and free of clutter.

Your bedroom should be relatively organized and peaceful.

The sight of clothes strewn all over the floor or furniture, boxes or books toppling over, and tangled cords can make you feel stressed and interfere with your ability to relax.

A messy room can also be dangerous if you have to get up at night to use the bathroom.

Set your room to an appropriate temperature.

Most people sleep better when it's cool (around 67 F); others sleep better at a neutral temperature.

Find what works best for you and do your best to regulate your bedroom to that temperature each night.

Use white noise if needed.

If you live in an urban environment and you tend to pop awake at the slightest sound, then a steady source of white noise could really help.

Using some nature sounds on your iPhone, or even just turning on a fan (or an old radio to static) can be enough to drown out other noises and lull you to sleep.

A HEPA filter can also work well for this purpose, serving double duty by keeping your air cleaner as well.

How to wake up

Think of sleep as something that begins the moment you wake up. In other words, what you do during the day will affect what happens that night. So let's look at how to wake up.

While a jarring alarm will certainly get us out of bed, it doesn't exactly start the day on an enjoyable note. Not only that, it jacks up our stress hormones immediately, starting our day in "fight or flight" mode.

Here are some more humane solutions.

Take advantage of natural rhythms.

Sleep occurs in multiple stages, alternating between deeper and lighter sleep. We sleep more and more lightly as the night goes on.

If we wake up at just the right moment in our lighter sleep stages, we'll feel reasonably good and snap into alertness quickly.

But if we're forced to wake up while in a deep sleep phase, we'll feel groggy, disoriented, and sleepy — suffering from *sleep inertia*.

There are many gadgets and apps that will sense your sleep cycles and wake you up when you're sleeping your lightest.

For example, the iPhone SleepCycle app or SleepBot will wake you up within a pre-specified time window when it senses your wakefulness.

You can also track your sleep with gadgets and apps like Zeo or the Fitbit, which will help you gauge where to improve your sleep and wake routines.

Wake up to light.

The human body is designed to get sleepy when it's dark and to wake when it is light.

However, it is not always feasible to wake up with the sun, and this is especially true if you use light blocking shades to keep your room as dark as possible.

Solution: Use a dawn-simulating alarm clock.

Research shows that when people are slowly roused by gradually increasing light levels, they feel much more alert and relaxed than when they're woken up by a sudden, blaring alarm.

I personally use and love my Biobrite, as it slowly lights up my room, reaching maximum brightness at my wake time.

Increasing light has also been shown to raise cortisol in the morning (which is an important signal to your body to wake up), and to improve sleep quality. It can even decrease depressive symptoms in seasonal affective disorders.

Wake up to soft, slowly building noise.

Some types of alarm clocks (such as the Progressive Alarm Clock app) will also gradually increase noise or music, so that you're slowly lifted out of sleep rather than being suddenly whacked in the ear with a loud morning DJ.

Get moving right away.

While I don't have any research to support this argument, I believe it helps to put your feet on the floor the minute you wake up. It's a recommendation I borrowed from Mike Boyle, a Godfather in the strength and conditioning world, and it's worked tremendously well for my clients and me.

When your alarm goes off, one of the worst things you can do is hit snooze. Snoozing seems to increase sleep inertia.

Instead, **once that alarm goes off, simply sit up and put your feet on the floor.** Start shambling towards the bathroom, or anywhere else that isn't your bed.

There is something magical about movement that seems to speed up the waking process.

Expose yourself to more light.

Whether you wake to a dawn-simulating alarm clock or not, continue to expose yourself to light as soon as possible after waking. This will stop melatonin production and increase your wakefulness.

Throughout the day, get as much light as you can. Most folks can sneak outside for 5-10 minutes. Run errands at lunch or eat outside. Do as much as you can to get that sunshine.

The more bright natural light you can get during your normal waking time, the more your body will know to gear down at your normal sleeping time.

(If getting natural light isn't an option, you could always go with a device like Litebook Elite.)

Conclusions

Good sleep is crucial for good health. There are no shortcuts, despite what the "sleep hackers" say.

Make good sleep a priority. Your physical, mental, and emotional wellbeing will thank you.

Think about good sleep as a 24-hour process. What you do during your waking period will affect your sleeping period, and vice versa.

Reinforce your natural circadian needs. When it's supposed to be dark and quiet, make things *really* dark and quiet. When it's supposed to be bright, noisy, and stimulating, get moving with some bright light.

Give your body and mind transition time. Allow at least 30 minutes (and preferably an hour) in the evening to slowly wind down and prepare for sleep.

Stick to a routine. Bodies love routines and consistency. If your body knows what to expect in your day, it'll help you wake up and doze off at the right time.

You can't control your actual sleep. But you *can* control your sleep *behaviors* and *environment*. Take charge of your actions and surroundings, be consistent, and enjoy the Zs.

THE POWER OF SLEEP. [INFOGRAPHIC]

Why sleep is so important, and how to get more of it.

By Brian St. Pierre

If your eating and exercise are on point, but you still don't feel or look the way you want, poor sleep may be to blame. Here's how to tap into the power of sleep and make rest a daily priority.

Struggling with your weight? Feeling bummed out? Sluggish during workouts? Or just sluggish in general? These are common complaints from new Precision Nutrition Coaching clients. And poor diet isn't always to blame.

Everything from lucid thinking, to good decision making, to proper digestion, to high performance is heavily dependent on getting good quality sleep.

Unfortunately, more than a third of adults get fewer than 7 hours of sleep each night, the minimum needed to keep your risk of health problems in check.

And that's not counting the millions of folks who likely overestimate how much sleep they're getting, or whose sleep quality is poor because of other, seemingly unrelated lifestyle factors.

In this infographic, we unpack early indicators that you're not getting enough rest. Then we share exactly how to prep for the best night sleep, starting with when you wake up.

THE POWER OF SLEEP

WHY IT'S SO IMPORTANT, AND HOW TO GET MORE OF IT

If your eating and exercise are on point but you still don't feel or look the way you want, poor sleep may be to blame. Here's how to make rest a daily priority.

5 SIGNS YOUR SLEEP HABITS AREN'T WORKING FOR YOU

YOUR MIND IS FOGGY

What we experience and learn gets cemented to memory while we sleep. Interference with this process causes:

- Reduced alertness and concentration
- Confusion
- Impaired judgement
- Forgetfulness

YOU'RE GETTING SICK A LOT

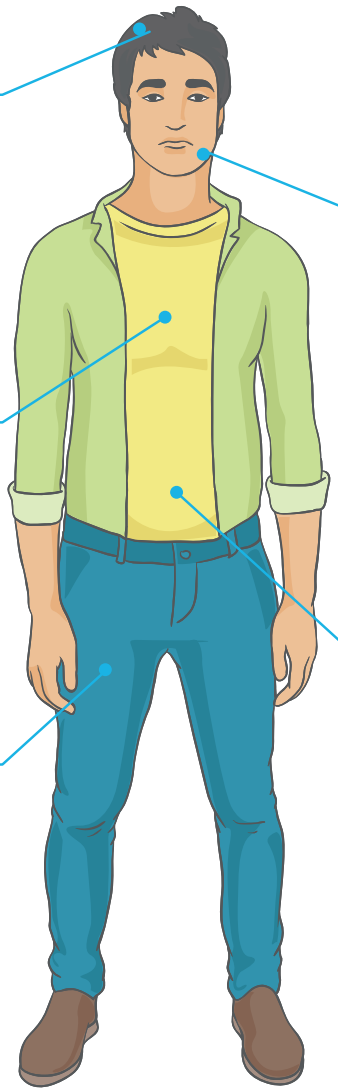
When we don't sleep enough, T-cells go down and inflammation goes up, resulting in:

- Increased vulnerability to viruses and bacteria
- Acute increase in risk of getting sick
- Increased risk of heart disease and other inflammation-related illnesses

YOUR WORKOUTS FEEL TOO HARD

Our body uses sleep as an opportunity to refresh neurotransmitter levels and remove energy-draining metabolites. Otherwise, we experience:

- Decreased central nervous system activity
- Slower reaction time
- Low energy and endurance capacity
- Depressed mood
- Reduced desire to exercise



YOU'RE UNHAPPY

While we sleep, we produce fresh neurotransmitters and regulate hormone production. Interference here causes:

- Impaired regulation of emotions
- Heightened stress
- Low mood
- Possible increase in risk of depression

YOU'RE STRUGGLING WITH YOUR WEIGHT

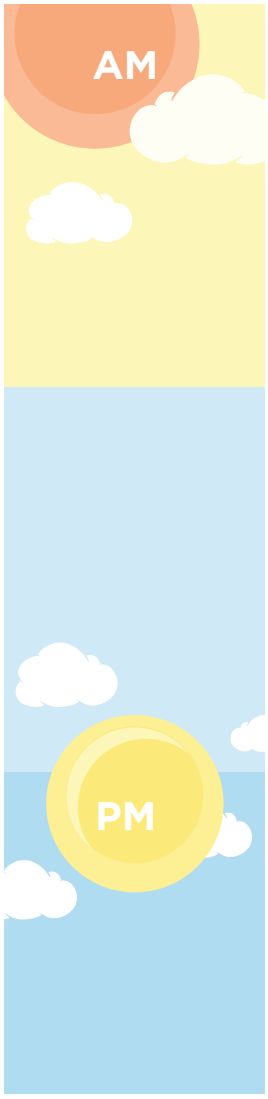
Poor sleep is linked to excess body fat, as it can:

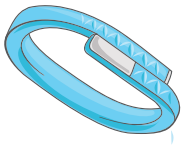
- Disrupt appetite regulation
- Cause you to feel hungrier
- Lead to increased calorie intake

Also, excess body fat can reduce sleep quality.

PREPARING FOR A GOOD NIGHT'S SLEEP

As odd as it sounds, your path to high-quality sleep starts in the morning.





WAKE AT THE RIGHT TIME

You'll feel better and more alert if you wake from a light sleep stage. If you feel groggy, consider a device or app that senses sleep cycles and rouses you at an optimal point.

BE AWAKENED BY LIGHT

This naturally raises cortisol, which is a good thing in the morning. The slow rise helps you feel alert and relaxed.

GET MOVING RIGHT AWAY

Movement seems to speed the waking process, whereas hitting snooze increases sleep inertia. When it's time to wake, sit up and put your feet on the floor.

FIND THE SUN (OR A LIGHT THERAPY BOX)

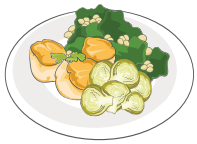
Light exposure sets your daily melatonin (a sleep hormone) rhythm. This increases wakefulness during the day and helps your body gear down at bedtime.

BE CAREFUL OF ALCOHOL AND CAFFEINE

Consuming caffeine after 2pm and/or having more than 1-2 drinks in the evening can interfere with deep sleep.

EXERCISE

Regular exercise helps normalize your body's 24-hour clock, regulate your fight-or-flight system, and optimize your hormone levels. However, be careful with very intense exercise later in the evening. It may make it harder to fall asleep.



EAT A SMALL TO MEDIUM DINNER

Too much food can make it harder to fall asleep. A blend of minimally processed proteins, carbs, and fats can help keep you satisfied until morning. Plus, having some slow-digesting carbs can make you feel sleepy.

LIMIT FLUIDS

Drinking too much liquid shortly before bed can result in frequent waking for bathroom breaks.

CLEAR YOUR MIND

Whatever thoughts are in your head, get them out and onto paper. This preps you for genuine relaxation.

GO THE $%#@ TO BED

Sticking to a reasonable bedtime teaches your body when to release calming hormones to help you fall asleep. Tip: Don't wait until midnight. Every hour of sleep before 12am is worth two hours after.

SLEEP AT LEAST SEVEN HOURS

Most people need 7-9 hours of sleep per night. If you're getting far less now, that's okay. Just work your way up slowly. Even adding 30 minutes can make a big difference.

MORE TIPS FOR BETTER SLEEP

TURN OFF ELECTRONICS

Remove your eyes from all devices at least 30 minutes before bed. Artificial light interferes with our production of melatonin, which ensures deep sleep and may help regulate metabolism.

DE-STRESS

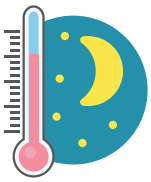
Reading, meditation, and gentle movement (stretching, yoga, walking, sex) can release tension and activate calm-down chemicals.

TAKE A BATH OR SHOWER

Warm water can help us relax and de-stress. Throw in some magnesium-based epsom salts, known to help with sleep.

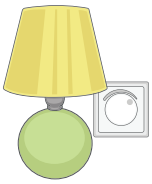
CREATE A RELAXING SLEEP AREA

Your bedroom should be quiet, peaceful, relatively organized, and free of anxiety-inducing clutter. If you live in an urban area, consider a white noise machine to drown out city sounds.



SET YOUR ROOM TO AN APPROPRIATE TEMPERATURE

Most people sleep better when it's cool (around 67 F); others sleep better at a neutral temperature. Find what works best for you.



MAKE THE ROOM AS DARK AS POSSIBLE

To maximize melatonin production, cover your windows and turn your phone face-down. Use a motion-sensitive or dim night light to illuminate mid-sleep bathroom trips.

There you have it: Why sleep is so important, how to tell if you're not getting enough, and how to engineer the perfect day for a great night's rest.

GOOD STRESS, BAD STRESS:

Here's how to find your sweet spot.

By Krista Scott-Dixon and Brian St. Pierre

Too much stress, or the wrong kind, can harm our health. Yet stress can also be a positive force in our lives, keeping us focused, alert, and at the top of our game. It all depends what kind of stress it is, how prepared we are to meet it — and how we view it.

People often think of stress as a dangerous and deadly thing.

Yet stress is simply a normal physiological response to events that make you feel threatened or upset your equilibrium in some way.

When you sense danger — physical, mental or emotional — your defenses kick into high gear in a rapid, automatic process known as the "fight or flight" response, aka the stress response.

The stress response is your body's way of protecting you.

When working properly, the stress response helps you stay focused, energetic and alert. In emergency situations, stress can save your life or that of others — giving you the extra strength to lift a car off your child, or spurring you to slam the brakes to avoid an accident.

The stress response also helps you rise to meet challenges. Stress keeps you sharp during a presentation at work, increases your concentration when you need it most, or drives you to study for an exam when you'd rather be out with your friends.

But beyond a certain point, stress *stops* helping and *starts* damaging your health, your mood, your productivity, your relationships, and your quality of life.

Stress and the allostatic load

Grab a piece of paper and write down all the things in your average day that could possibly be a stress on your body, mind, and emotions.

We'd guess your list probably looks something like this:

- Boss yelled at me

- Rushing around to see clients
- Worrying about money
- Commuting
- Crummy weather
- Kid woke me up early
- Girlfriend/boyfriend snarked at me this morning
- I think I might've eaten some bad shrimp salad

If you're like most people, you're a camel carrying a big load of straw with these combined life stresses.

Now imagine what could happen if you start piling on more straw with worrying about your body image, with physical stress from your workouts, or with restricting your food intake. Eventually... snap.

The pile of straw — the cumulative total of all the stuff in your life that causes physical, mental, and/or emotional stress — is known as your **allostatic load.**

Good stress, bad stress

Some stress is good stress (also called eustress). Good stress pushes you out of your comfort zone, but in a good way. Good stress helps you learn, grow, and get stronger.

For example, riding a roller coaster is fun and exciting. It lasts a short time, and you feel exhilarated afterwards. (That is, if you like roller coasters.)

Exercise can be another form of good stress. You feel a little uncomfortable but then you feel good, and after an hour or so, you're done.

Good stress:

- is short-lived
- is infrequent
- is over quickly (in a matter of minutes or hours)
- can be part of a positive life experience
- inspires you to action
- helps build you up — it leaves you better than you were before.

But let's say you ride that roller coaster constantly, or lift weights 4 hours a day, every day. Now it doesn't seem so fun, does it?

This is bad stress, or distress.

Bad stress:

- lasts a long time
- is chronic
- is ongoing
- is negative, depressing, and demoralizing
- de-motivates and paralyzes you
- breaks you down — it leaves you worse off than you were before.

One key feature that distinguishes good from bad stress is how well the stressor matches your ability to recover from it.

The stress "sweet spot"

Since stress affects the mind, body, and behavior in many ways, **everyone experiences stress differently**.

Each of us has a unique "recovery zone", whether that's physical or psychological, and our recovery zone depends on several factors.

Just as important as the stress itself is how you perceive and respond to it.

Some people go with the flow and can adapt well to what others would perceive as highly stressful events. Other people crumble at even the slightest challenge or frustration they encounter.

There are many things that affect our tolerance to stress, such as:

- **Our attitude and outlook** — People with optimistic, proactive and positive attitudes are more stress resistant. And people who view stressful events as a challenge, and realize that change is simply a part of life, have a far larger recovery zone and are far less vulnerable to stress.

- **Our life experience** — Past stress can build us up or break us down, depending on when the stress happened and how powerful it was. Moderate stress at a time when we can handle it generally makes us better and more resilient. However, stress at a time when we're already vulnerable (such as during childhood, or piled on top of other stressors) can actually leave us worse off.

- **Our genetic makeup and epigenetic expression** — Some of us are genetically more "stress susceptible" than others, especially if we meet environmental factors that then epigenetically "switch on" or "switch off" those crucial genes. For instance, one study found that older people carrying a certain gene polymorphism suffered major depression *only* if they had something bad happen to them in childhood. The folks with the genetic variant who had normal childhoods were fine.

- **Our perception of control** — Stress becomes most traumatic when we feel trapped. If we're able to successfully fight or flee, we tend to recover better. But if we feel unable to change the situation, we'll go to the next-stage stress response, the "freeze" response. This is when we feel helpless, hopeless, and paralyzed. We may also get more stressed if we're "control freaks" — constantly trying to grip, grab, and grasp everything tightly.

- **Our natural personality type** — If you have confidence in yourself and your ability to influence events and persevere through challenges, it's easier to take stressful events in stride. People who are more vulnerable to stress tend to feel like they have no ability to influence the events around them. They might also be highly empathetic and thus feel "pushed" and "pulled" by the needs and wants of others.

- **Our support network** — A strong network of supportive friends and family members (which can even include pets) is a powerful buffer against the stress of life. Conversely, loneliness and isolation worsens stress.

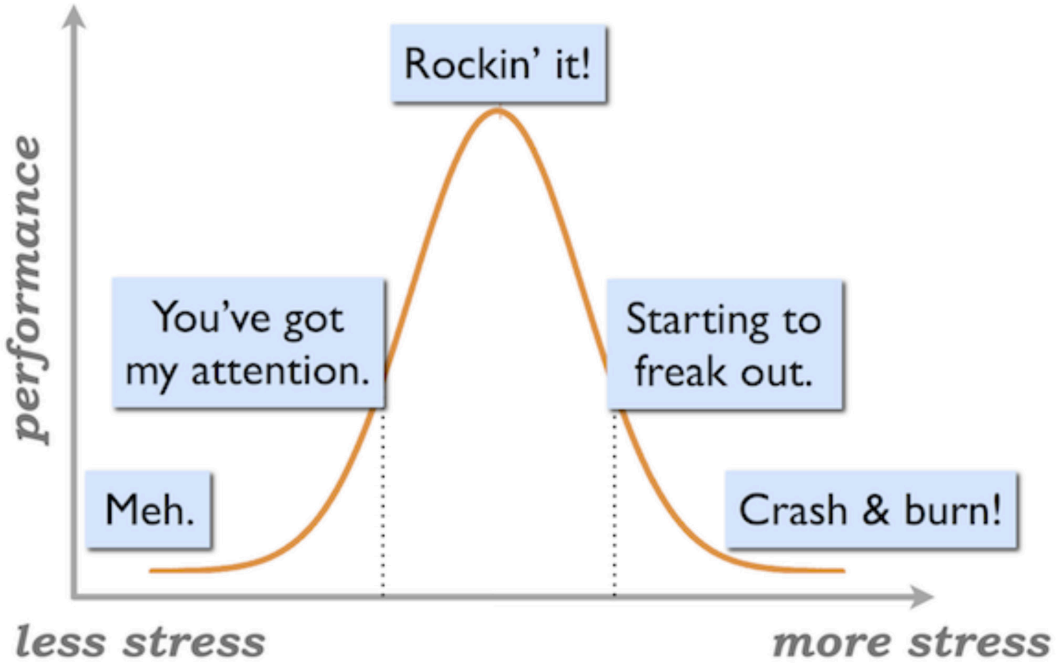
- **Our ability to deal with our emotions** — If you can't calm and soothe yourself when feeling stressed or overly emotional, you're more vulnerable to stress. The ability to level out your emotions will help you better handle adversity.

- **Our environment** — Natural environments (e.g. outdoors, spaces with lots of windows and natural lighting, etc.) calm us down, as do secure and safe environments (such as your comfy living room). Industrial environments full of stimuli (e.g. noises, machinery, artificial lights, threats coming at us quickly, etc.) amp us up and put us on edge. We also feel more relaxed in environments we think we can control, such as our homes;

we're more anxious in environments we think we can't control, such as large public spaces or most worksites.

- **Our allostatic load** — The larger the allostatic load (in other words, the more stuff we're dealing with at once), the more it wears down our resilience, and shrinks our recovery zone. How we respond to stress is critical, but the cumulative load of excess stress can wear down even the most resilient and positive person.

Generally, the "recovery zone" looks like this:



If the stressor is too low — not enough to cause a reaction — then nothing will happen. You'll go along the same as before, no better or worse.

If the stressor is too high — too strong, and/or lasts too long, outpacing your recovery ability — then you'll eventually break down.

If the stressor is within your recovery zone — neither too much nor too little, and doesn't last too long — then you'll recover from it and get better. What doesn't kill you makes you stronger!

Balance the demands

We want enough "good stress" to keep a fire under our butts, but not so much that we break down and burn out.

(This applies to our own exercise and nutrition as well as our family lives and overall workload.)

That optimum zone depends on *your* allostatic load, as well as how you perceive and respond to it. Remember, this is *your* individual stress zone — nobody else's.

And remember that the allostatic load is *everything*: mental, physical, emotional: that email from the boss... your hangnail... the weird paint smell in your office... your shockingly high phone bill... *everything* goes on to the "stress pile". So **consider this holistically.**

If your existing pile of straw is already heavy, then it'll take only a few more straws to break you. And if you view your pile of straw as being too large and heavy, regardless of its actual size, then again it will only take a few more straws to break you.

Thus to manage stress, we must do two things:

- learn to balance our life demands, workload, and exercise/nutrition responsibilities; and
- view these responsibilities as an achievable challenge or an interesting problem to solve, rather than some insurmountable obstacle.

Manage your allostatic load

To lead a healthy, productive, and fulfilling life, you must manage your allostatic load.

Here are some activities you can do immediately to boost your body's happy chemicals, activate your "rest and digest" nervous system, and start building your stress resilience.

- a relaxing walk (especially outside);
- being out in nature;
- getting moderate sunshine;
- listening to relaxing music;
- mindfulness practice and meditation;
- massage;
- deep breathing;
- laughing;
- snuggling a loved one or pet;
- yoga, gentle mobility, and/or slow stretching exercises;
- gentle swimming or water immersion (such as a hot tub);
- relaxing in a sauna;
- having sex (seriously);
- physical, non-competitive play;
- moderate, occasional drinking — 1-2 drinks for men, and 1 for women... enjoyed slowly and mindfully;
- drinking green tea.

In other words, **think of de-stressing as purposefully chasing relaxation.**

By the way, some recreational activities don't count, such as:

- watching TV or movies;
- playing video games; or
- surfing the internet.

Electronic stimulation, while fun, is still stimulation. So, anything involving a screen is out.

Let's dig a little deeper into a few of these.

Meditation

Meditation is one of the best stress-relievers.

Research on regular meditation shows how incredibly restorative it is, as it:

- lowers blood pressure;
- lowers heart rate;
- lowers stress hormones;
- lowers inflammation;
- boosts immune system;
- improves focus, mental clarity and attention, even when not meditating;
- improves mood; and
- improves sleep.

Being chronically over-stressed can negatively rewire your brain, increasing your risk for anxiety and depression.

Fortunately, meditation is like magic. When done regularly, it can rewire your brain in the opposite direction, to do all kinds of awesome stuff.

For example, meditation can contribute to:

- neurogenesis (growth of new neural connections and brain cells);
- emotional regulation (in other words, your ability to manage your feelings);
- memory and recall;
- development of the brain's gray matter (even after only a few weeks); and
- our ability to regulate our body clock.

So how do you actually go about doing it?

While people sometimes think of meditation as an arcane practice best suited to adherents of the Hare Krishna sect, it's actually pretty easy to do, and you don't have to look or act like an aging hippie to benefit from it.

1. Find a comfortable, quiet, private place.
2. Sit or lie down, whatever seems most convenient. The position doesn't matter, as long as you're relaxed.
3. Get a timer going. Set a timer for 5 minutes, and then forget about counting down how long it's been. That's your timer's job. It'll take care of you.
4. Close your eyes.
5. Start with a quick 30-second "body scan". As you scan down your body from head to toe, think about consciously relaxing

each muscle. Let everything sink downward. In particular, let your face droop.

6. Now, focus on your breathing. Breathe in through your diaphragm, pushing your belly in and out. Observe how the air moves in and out.
7. Count 10 breaths, observing each one.
8. Let thoughts drift in and out. Let them wander in, then shoo them away. They'll be back. You don't need to hold on to them.
9. Observe only. Don't judge. There is no "should". If you think of something, no worries. Don't fret. If you hear a noise, or have an itch, simply think, There's a noise or I have an itch. Make a note of it; then move on.
10. Keep coming back to your breathing. There's no rush; just keep wandering back to it. What's it doing now?
11. Repeat until your time is up.
12. Finish with 5 good belly breaths to "bookend" the session.
13. Open your eyes.

That's it. Pretty easy right?

Green tea

You already know that drinking green tea has tons of health benefits. At PN we have been singing its praises for years. And now you can add one more benefit to that list.

A large study in Japan found that regularly drinking green tea lowered the stress levels of those found to have high levels of psychological stress. This is thought to be due to L-theanine, a non-protein amino acid in green tea (and, to an extent, in other teas).

L-theanine is a proven stress reducer and calming agent. It inhibits cortisol, which our body releases in response to stress, and also lowers your blood pressure and heart rate as it chills out your sympathetic nervous system. And it causes all of these actions in as little as 30 to 40 minutes after consumption.

L-theanine may even change your brain function. During most of your waking hours, your brain is producing beta brain waves, which can affect concentration and focus. Green tea consumption will actually stimulate your brain to emit alpha brain waves instead, creating a state of deep relaxation and mental alertness, similar to what you can achieve through meditation. This may occur because L-theanine is involved in the formation of the inhibitory neurotransmitter gamma amino butyric acid (GABA). GABA influences the levels of two other neurotransmitters, dopamine and serotonin, producing the key relaxation effect.

Sipping a few cups of tea throughout the day can help to lower stress, increase focus (even more effectively than coffee), suppress appetite and improve your health. Not too bad.

Exercise

Regular exercise is a great tool to help you handle stress. Exercise often allows you to blow off steam, and exercising regularly can boost your stress-tolerance.
However, remember that all stress fits in one bucket — i.e. the allostatic load. If you have a super-stressed out life, training your ass off 6 times a week is only contributing to that, as training stress goes in the bucket too.

Instead, balance your exercise approach. It's not all about high-intensity, high-volume lifting combined with high-intensity intervals

all the time. Training intensely as your sole approach to exercise will continually jack up your sympathetic nervous system and compound your stress symptoms.

Instead, **do a mix of intense weight training, some intense conditioning, and plenty of restorative exercise — exercise that leaves you feeling more refreshed and invigorated after doing it, not drained and exhausted.** This would include activities like:

- walking outside in sunshine (BSP's favorite, especially with the dog);
- yoga;
- gentle mobility, and/or slow stretching exercises;
- gentle swimming or water immersion (such as a hot tub);
- a casual bike ride; or
- a casual hike.

This exercise is meant to stimulate some blood flow, get you outside if possible (because sunshine and nature are proven to improve mood and lower stress), burn a few calories, and stimulate your parasympathetic nervous system.

Your parasympathetic nervous system is known as the "rest and digest" system (as opposed to the "fight or flight" sympathetic nervous system). Engaging your parasympathetic nervous system is key to lowering your stress.

There's nothing wrong with kicking butt in the gym, but don't let your only form of exercise be balls-to-the-wall high intensity training, especially if you already lead a stressful lifestyle.

Allow yourself some quiet and gentle exercise: You'll lower stress, improve recovery, and — as a side benefit — you'll also improve your intense lifting.

Other tips for stress management

- **Establish a routine** and some order in your life. While scheduling yourself too strictly can be confining, too much reactive spontaneity can be stressful as well. Find a balance between the two that works for you.
- **Eat plenty of omega-3 fats**. Eat fish, pasture-raised animals, flax seeds and chia seeds, and take fish, krill or algae oil.
- **Know your limits**. Know how much stress you can handle. While you can increase your stress tolerance and lower your stress by following the preceding tips, simply knowing that you can't be everywhere at once, or everything to everyone, will also take some pressure off. Be reasonable about your individual capabilities and expectations. Remember that each person is different.
- **Single-task.** We often think that multitasking lets us do more work in less time. Research consistently shows the opposite: When we focus on multiple things at once, we do each of them less efficiently and effectively. Each time you interrupt one task, your brain takes about 15 minutes to get back to optimal processing speed and efficiency. Most of us don't do anything for 15 focused minutes, so our brain never has any time to settle in and get 'er done. Do one thing at a time, do it well, and then move on to the next.
- **Unplug from the digital world.** There's constant electronic stimulation in our lives. Unplug from it once in a while. Turn off your phone. Close your computer. Go read a book, play games, and get social with other humans.
- **Change your stress story.** Drop the negative self-talk and work towards a more positive attitude. Telling yourself, and other people, how busy you are and how much you have to do only makes

yourself feel busier, chaotic and more stressed. On the other hand, a positive attitude can actually lower stress levels. Simply telling yourself you can manage something can give you more confidence to manage it. This doesn't mean that you can never be frustrated or sad, it simply means you shouldn't wallow in it.

What this means for you

Don't get stressed out by trying to incorporate all these tips. (Ha, ha.) Just focus on two key points:

1. All stress — life, work, family, financial, training, good, bad — fits into one bucket, creating your unique allostatic load.

To stay healthy, lean, and fit, you must manage this load. Find the strategies that work best for you, and practice them on a regular basis. And keep in mind that what works best for you at this particular stage of your life may not work for you in other stages. Be willing to evolve your strategies as your life, and allostatic load, evolve.

2. Just as important as your stress load is how you respond to it.

View stress as a challenge or an interesting puzzle to solve. Roll with the punches and have a Plan B (or C, or D). Stay open, flexible, and creative. This attitude helps you handle your allostatic load better, and mitigate the potential harm it could cause you.

GOOD STRESS, BAD STRESS. [INFOGRAPHIC]

Using good stress to reach your goals.

By Krista Scott-Dixon and Brian St. Pierre

The same exact stressors — job pressure, kids, money, and, yes, an intense exercise and eating regimen — can energize and inspire you or sap your will and your mojo. Reaching your potential is about finding your stress sweet spot and using it to propel you to your goals. Here's how.

It's a well-known fact: Being stressed out can make it really hard to reach your health and fitness goals.

But did you know: Not having enough stress can slow your progress too?

See, stress isn't a "thing" that happens to you. Stress is your response to the challenges you face every day.

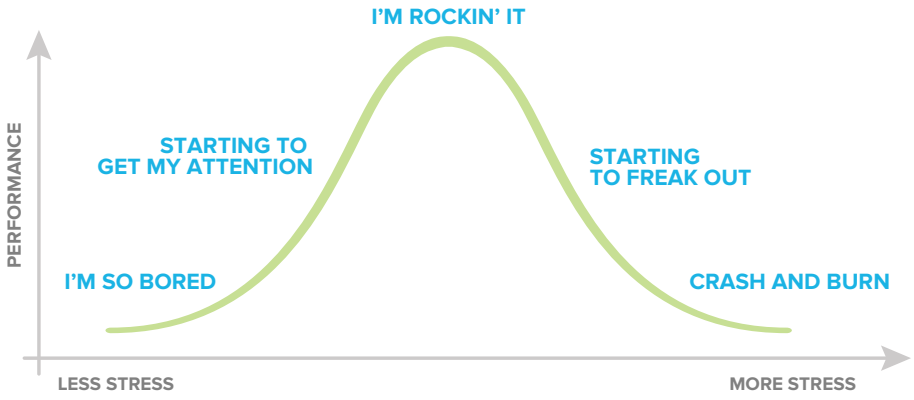
These stressors — like pressure at your job, raising kids, managing money, piles of dirty laundry, and, yes, nutrition and exercise — can make you either puff out your chest and get 'er done like Super(wo) man, or crumble and sink into your couch like a dry, bland sugar cookie.

The key is to find your "stress sweet spot" — just enough stress, but not too much — so you can reach your potential without crashing and burning.

In this infographic, we explain the importance of balancing your allostatic (stress) load, and exactly how to do it so you can feel and perform your best.

GOOD STRESS, BAD STRESS:
HERE'S HOW TO FIND YOUR SWEET SPOT.

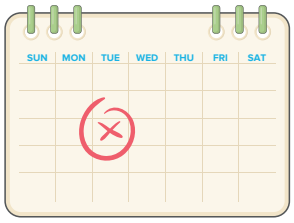
Too little stress keeps you from reaching your potential.
Too much stress can harm your health.



THE DIFFERENCE BETWEEN GOOD AND BAD STRESS

Stressors — from work deadlines to raising kids to workouts — aren't intrinsically good or bad. And your response is unique each time.

WORK DEADLINE



POSITIVE RESPONSE

- Inspired, energized, motivated
- Focused and alert
- Explore edges of comfort zone
- Balance stress, rest, recovery
- Learn, grow, get stronger

NEGATIVE RESPONSE

- Weak, worried, demoralized
- Distracted and scattered
- Don't challenge yourself
- Not enough rest/recovery
- Cortisol and adrenaline go up
- Possible muscle loss, fat gain
- Blood sugar, immunity, metabolic, sleep, sex hormones disrupted

HOW DO YOU HANDLE STRESS?

Some factors are intrinsic but most you have some control over.

	PERMANENT					CAN BE SHAPED/BUILT	
	GENETICS	HISTORY	CURRENT STRESS LOAD	ENVIRONMENT	SUPPORT NETWORK	COPING ABILITY	ATTITUDE
MORE STRESS TOLERANT	Stress-resistant	Practiced at handling appropriate levels of stress	Moderate	Often outdoors, in nature Spend time with loved ones	Strong	Calm yourself when emotional	Go with the flow, Optimistic, Proactive, Confident, Agile, View stress as a challenge to rise to
LESS STRESS TOLERANT	Stress-prone	Little practice with appropriate levels of stress	Very high or very low	Often in clinical, industrial spaces Little time with loved ones	Weak	Over-whelmed by emotions	Trouble adapting, Pessimistic, Reactionary, Not confident, Paralyzed, View stress as a problem to avoid

ARE YOU IN YOUR STRESS SWEET SPOT?

STRESS TOO LOW

Lethargic
Bored
Unfocused
Directionless
Purposeless

JUST RIGHT

Energized
Engaged and interested
Actively moving toward goals
Learning and growing

STRESS TOO HIGH

Anxious or obsessive
Depressed
Panicked and flailing
Stuck or numb

REACH YOUR POTENTIAL, WITHOUT CRASHING AND BURNING.

FOR INSPIRATION AND ENERGY

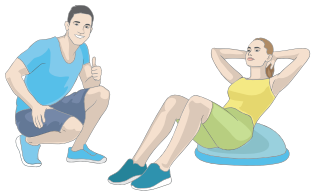
1. SET EFFECTIVE GOALS

Goals that motivate are:

- Specific and measurable
- Challenging but realistic
- Broken down into small actions
- Focused on process vs outcome
- Documented as a plan of daily, weekly, monthly behaviors

2. START WITH ONE ACTION EACH DAY

Commit to do it for the next 2 weeks. (Be sure it's something you're confident you can do every day.)



3. TRACK YOUR PROGRESS

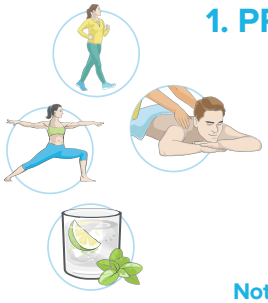
Document behaviors, processes, and outcomes.

How do you feel different?
How do you look different?
What have you learned?
What are you proud of?
What frustrations did you have?

4. SPEND TIME WITH A COACH OR MENTOR

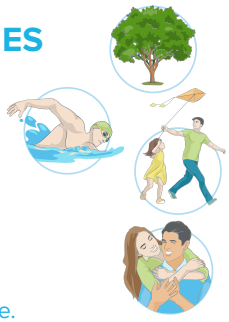
Getting help from someone you admire, and who will hold you accountable, makes the process of change and growth much easier.

FOR REST AND RECOVERY



1. PRACTICE PARASYMPATHETIC ACTIVITIES

Walking outside
Moderate sun exposure
Enjoying nature
Low-key music
Massage
Deep breathing
Laughing
Snuggling with loved one/pet
Yoga, Slow stretching
Easy swimming
Hot tub or sauna
Having sex
Non-competitive play
Mindfulness/meditation
Green tea



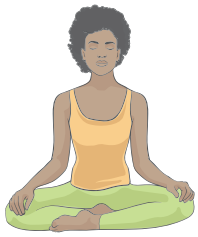
Note: Screen time is actually stimulating, so it doesn't help you here.

2. MEDITATION

Boosts the immune system

Improves sleep, mood, and emotional regulation, and circadian rhythm

Lowers blood pressure, heart rate, stress hormones, and inflammation



Supports the development of new brain cells, neural connections, and gray matter

Sharpens focus, mental clarity, attention, memory, and recall (even when not meditating)

3. GET OUTSIDE

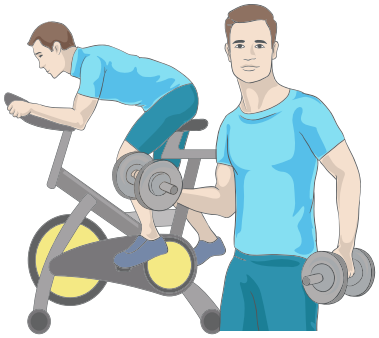
Being in nature lowers stress hormones and heart rate and improves mood and immunity, giving you motivation and energy to cope with your next challenge.

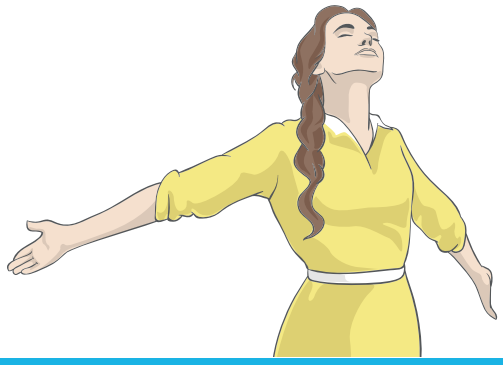
4. BALANCE YOUR EXERCISE ROUTINE

Exercise relieves stress by increasing blood flow, getting you outside, burning calories, and stimulating your parasympathetic nervous system.

Most effective: a mix of intense strength training, conditioning, cardio, and low intensity recovery.

When stressors are up, decrease intense exercise; when they're down, increase it.





5. PRACTICE SELF-COMPASSION

- Ask for help/support when needed
- Get coaching if you feel stuck
- Get counseling if you feel helpless
- Know your limits, honor them
- Unplug at least once a week

PrecisionNutrition

FITNESS PLANNING FOR STRESSFUL TIMES.

Lessons from our Precision Nutrition coaches.

By John Berardi, Ph.D.

When emergency strikes, fitness is often the first thing to go. Solution: Stay on track by letting go of “perfection.” The PN team shares their strategies for maintaining health and fitness during extra-stressful life transitions.

A case of the "what-ifs"

When I made up my mind to get in better shape, I started with all the usual worries and stewed in what-ifs.

What if I lost my resolve and ate too much, or too fast, or the wrong stuff? **What if** the guys at the gym laughed at me? **What if** I couldn't do the workouts? **What if** I couldn't follow through?

Worst of all: **What if** I failed?

We're all afraid of failure. Most of us manage to keep that fear in check as long as our lives are ticking along as per usual – even if our "normal" is pretty darned stressful.

But what happens when emergency strikes? How can we keep making progress with our goals when nothing in our world is going right?

Maybe you're reading this as someone who's suddenly been injured, or faced with a family disaster, or a new set of demands at work, and you're wondering how in the world you'll stay on track.

Or maybe you're currently enrolled in Precision Nutrition Coaching. If so, you might be wondering how you'll fare if trouble strikes. Will you manage to keep up with the scheduled habits and workouts?

In any case, you're probably wondering how to live a healthy and fit lifestyle when life goes off the rails.

If so, read on to learn how some of our PN team members – people just like you – have coped and even thrived when the poop hit the fan.

My imperfect day(s)

It happened to me.

My name is Susan Olding, and before I joined the PN team, I was a PN Coaching client. During that period, my dad got extremely sick and eventually died.

My parents lived several hundred kilometers away from me, so for the months that my dad was in the hospital, I did a lot of traveling back and forth.

Typically on these trips I stayed with my brother. The good news: He had a small gym in his condo. The bad news: The equipment was lousy; there was no proper barbell, and the single treadmill was often broken.

Not only that, but his kitchen was less than fully equipped for healthy eating. And that was putting it mildly. Most times, I'd arrive to find an expired carton of milk and a few cans of beer in the fridge, a jar of Nutella in the cupboard, and not a whole lot more.

Keeping a regular schedule was next to impossible during these visits. I needed to make myself available to help my disabled mother, and she's used to doing things at her own speed.

Meanwhile, my mind was always racing. Back at home, I had a ten-year-old daughter and four contract jobs plus a demanding volunteer position to juggle. I was constantly afraid of dropping the ball on something important.

And of course, I was always sad and worried about my father.

Ack!!!!

It seemed like the perfect set-up for fitness failure. Even if I'd wanted to, I couldn't do the assigned workouts. And let's face it – most days, I didn't want to. I mean I *really* didn't want to.

I'd been a couch potato for most of my life, and at that point, I hadn't even discovered a form of exercise that I enjoyed.

So what kept me going during those months? How did I maintain my commitment to health and fitness, during PN Coaching and ever since? The answer is simple – in theory. But difficult in practice.

I let go of perfection.

That's right. I stopped trying to be perfect.

And the minute I did that, the whole idea of maintaining some kind of focus on fitness became a whole lot easier.

Accepting imperfection

To begin with, I allowed myself to think in terms of **weeks** rather than **days**.

If I couldn't work out on the scheduled day because I was traveling, I'd work out the next day. Allowing myself to switch up my days meant I rarely missed a workout.

That's not to say my workouts always looked like the prescribed PN Coaching workouts. Again, the whole idea of perfection had to go.

So how did I manage things? Well, if I couldn't do the regular workout, I did a body weight workout, or intervals on the stairs, or I went for a

run or a swim. Sometimes I signed up for a spin class.

Each day, I asked myself: **If I can't do what was asked of me, what can I do? What can I manage (physically, emotionally, mentally) now?** Then I went and did it.

In all this, exerting myself was the goal.

Somewhere in the vast storehouse of information that is the PN site, founder John Berardi had said:

"The body only really knows hard work... not what was scheduled."

During my months of upheaval, those words hummed like a reassuring mantra in my mind.

If I felt as if I had worked really hard, I called it a workout and earned my check mark for the day. If I didn't feel as if I had worked really hard, I didn't give myself a check mark. It was a simple as that.

Meanwhile, I also tried to add spontaneous activity into my days. I paced the hospital halls, parked at a distance and walked to the hospital door. I went for evening walks. Anything to stay active.

And guess what? It worked.

The pounds kept coming off and I kept getting stronger and fitter – until I actually looked forward to my workouts as a way of helping me handle all the stress! I even looked forward to the challenge of coming up with something I could do in tricky circumstances.

What a change from when I began with PN Coaching.

Here's me now, getting some physical activity by hiking the mountains in Banff, Alberta.

But don't just take it from me. Here's some advice from our Precision Nutrition coaches.

Power walks plus

When working with clients who are on the road, Coach Eileen MacRae suggests power walks.

Mind you, these aren't just any power walks. These are **power walks with a difference**, incorporating squats, pushups, triceps dips, planks, and walking lunges. There's a lot you can do with nothing more than a bench and some grass or a relatively smooth path.

"This gets all the muscle groups and helps you feel like you did something of value, not just a casual little walk. Done right, this can be a kick ass workout! This is my personal 'on vacation' workout."

For clients who are a bit more advanced, she suggests interval runs between telephone poles. It's an easy way for people to pace themselves, and each client can pick the number of poles for his or her personal work/rest ratio.

Chunking and minimalist exercise

Coach Brian St. Pierre takes a slightly different approach. He uses two main strategies: **chunking** and **minimalist training.**

By chunking, he means breaking up his training over the course of the day.

"Spend 5-10 minutes foam rolling and stretching in the morning, take a 15 minute brisk walk at lunch, and do 20 minutes of training anywhere else in the day – maybe an actual lift, maybe just some bodyweight work of pushups, pull-ups, plank variations, squat and lunge variations."

It's hard sometimes to find a whole hour. But anybody can manage 10 minutes.

Brian's other solution is to "cut the fluff." He'll foam roll and warm up, hit a few big exercises with minimal rest and call it a day. Usually this takes 30 minutes, 45 at the absolute most.

"For example, I might do a bench press variation paired with a chin-up variation, followed by a pushup variation paired with a row variation and a core exercise. Three sets of the main movements, two or three sets of the accessory ones. Done."

That's Brian's minimalist approach, and it works.

Barter days

It's one thing to address our need for exercise. But when we're under stress, it's even more important to **acknowledge the mental, emotional, and spiritual dimensions of what we're undergoing.**

Here's an excellent strategy for that.

Create "barter" days, and trade out some (but not all) of your workout time for mental health time. For example, you might go to a 30-minute counseling session and then work out for half an hour, or meditate for ten minutes.

"I'll give myself that freedom, if I promise myself I'll bust my ass doing something, anything, for at least ten minutes afterward. Fun fact: it's hard to stop at ten minutes."

I've noticed that myself. When I really don't feel like working out, I tell myself I'll go and do just one set. The strange thing is that once I've managed a set, I usually want to keep going.

"More important fun fact: I would rather myself or a client address the mental stuff and get in a short amount of exercise than not look at the mental stuff, plan an exercise, not do it, feel bad about not doing it, repeat the process multiple times and eventually give up."

Addressing the mental component is key to long-term success.

No weights, no worries

And when you're stressed and stuck for time, creative problem solving (and a sense of humor) become key. No weights? No worries.

Coach Veronica Porterfield has her PN Coaching newbies who can't get to the gym use objects from around the house -- soup cans, resistance bands, and body weight.

Perfection never happens in real life. We're always going to be doing the best we can with what we have. And that's okay.

We can still make progress toward our goals and still improve our health and our fitness – whatever's going on in our lives.

Wrap-up

When life gets really crazy, try a few of these strategies to help stay active:

- Let go of perfection.
- Exert yourself in whatever way you can manage.
- Think in terms of workouts for the week; fulfill your weekly goal rather than stressing about a specific day.
- Build in daily activity.
- Try a power walk – walking with exercises built in.
- Workout with bodyweight.
- Use phone poles as markers for intervals.
- Sign up for a quick class – social interaction can help combat stress too.
- Choose whole body movements.
- Chunk your exercise into ten or twenty minute blocks.
- Take care of your mental and emotional health.

- Tell yourself you'll work out for ten minutes.
- Work out at home with the equipment you have at hand.
- Think of fitness as your "anchor" rather than an obligation – it might be the only thing keeping you sane during tough times.

And whatever you do, try to **make it fun**. Because when life gets super crazy, fun and laughter are healing.

Want help becoming the healthiest, fittest, strongest version of you?

Most people know that regular movement, eating well, sleep, and stress management are important for looking and feeling better.

Yet they need help applying that knowledge in the context of their busy, sometimes stressful lives.

That's why we work closely with Precision Nutrition Coaching clients to help them lose fat, get stronger, and improve their health... no matter what challenges they're dealing with.

It's also why we work with health and fitness professionals (through our Level 1 and Level 2 Certification programs) to teach them how to coach their own clients through the same challenges.

For more information on Precision Nutrition Coaching:
http://get.pn/coaching