
SOMETIMES THE KEY TO GETTING STRONGER IS TO DO NOTHING!

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It's practically imprinted in our DNA that the only way to get ahead is to work hard. In fact, according to a Pew report, Americans place an especially strong emphasis on the value of hard work – 73% think it is very important to work hard in order to get ahead in life. But as an athlete, sometimes the opposite is true. Sometimes, the way to get ahead, is to actually do nothing. Let's take a look at how and when doing nothing can actually work for us.

WHEN YOU ARE RECOVERING FROM ILLNESS OR INJURY



Well, duh, right? Of course you shouldn't do anything when you are sick or injured – we can all agree on that. Or can we? As athletes, we get so used to being sore that it can be difficult to determine when we are sufficiently healed – especially if we are using pain as our guide. And it takes tremendous patience to let the body completely heal before we resume our training. Stop the bleeding, sure – but if you've injured your leg, shouldn't you work on your biceps? Sort of. But let's create a reasonable timeline for responsible recovery.

STEP ONE: DON'T INTERFERE WITH THE HEALING PROCESS

Your body is amazing! No, really. When you become sick or injured, your body will work hard on its own to help you recover—even if you do little to help the process along. When you're injured, white blood cells called neutrophils rush to the site, to ward off infection. Other blood cells called monocytes transform themselves into scavengers (macrophages), to engulf and devour dead tissue and help to control inflammation. If you break a bone, bone cells called osteoblasts kick into action to knit the rough edges back together. And the same microscopic miracle workers repair cells that are damaged by illness—or by harsh therapies, in the case of cancer, hepatitis, and other disease.

It is now believed that chronic, low-level inflammation plays a major role in almost every chronic, Western disease. This includes heart disease, cancer, metabolic syndrome, Alzheimer's and various degenerative conditions ^(1,2,3). However, acute, short-term inflammation is incredibly important. It helps the body fight foreign invaders and also has a role in repairing damage. Without inflammation, pathogens like bacteria could easily take over our bodies and kill us. So, go easy on the NSAIDs, unless you are specifically prescribed them, and even then I'd get a second opinion!

STEP TWO: GIVE YOUR BODY THE TOOLS IT NEEDS TO GET THE JOB DONE

Even though these healing processes are involuntary and automatic, there are things smart athletes can do to improve their recovery. The best healing occurs when you optimize your immune system to avoid infections; encourage the healing of skin, bones, muscles, nerves, and tendons; and build strength and endurance.

For example, skin and bones need vitamin A for proper repair. Vitamin C is crucial to the formation of collagen, the main protein of our connective tissue. Bromelain, an enzyme found in fresh pineapple, reduces swelling, bruising, and pain, and it improves healing time following trauma or surgery. And additional protein (1-1.25 g of protein/pound of body weight) is absolutely essential for optimal healing.

We all know someone who seems to be able to eat what they want with no adverse affects. Skipping breakfast and using coffee as a pick-me-up might work for the young and 'healthy'. But if you are ill or injured, these nutritional shortcuts will actually delay your recovery.

To improve energy levels and avoid stressing the digestive system, skip the stimulants and divide the day's calories into five meals: three small- to medium-size meals and two nutritious snacks. This helps prevent severe drops in blood sugar levels that can leave you fatigued.

A daily intake of 1- 1.25 grams of high quality protein per pound of body weight results in optimal rates of protein synthesis during recovery from an injury. However, ingesting more than this results in *oxidation of the protein and urea formation* and is not beneficial. Plant-based proteins such as beans and nuts have some advantages over animal proteins, especially if you don't have much of an appetite. In addition to having cell-repairing properties, plant-based proteins provide phytochemicals (which can help with healing) and fiber.

Carbohydrates provide the body with energy and are crucial to healing. We are just now discovering the importance of phytochemicals found in plants (fruits, vegetables, grains and seeds), and these plants are mostly made up of carbohydrate. Simple carbohydrates, however, (white flour and simple sugar, as well as products made with white flour and sugar) can cause spikes in blood sugar, especially when the energy expenditure doesn't match the calorie input. These spikes in blood sugar can spark inflammation and lead to damage on a cellular level, and should be avoided while healing. A measure called the glycemic index indicates how fast the body converts a food into sugar. As much as possible, stick with complex carbohydrates and other foods that have a relatively low glycemic index (below 55). One reliable source of this information is www.glycemicindex.com.

It's very important to remember that energy needs increase during acute injury repair. In fact, basal metabolic rate (BMR) can increase by 15 to 50% based on the severity of the trauma. For example, sports injury and minor surgery may increase BMR by 15-20%, while major surgery and severe injury may lead to a 50% increase in BMR ^(4,5,6,7,8). If you use the first 3-5 days after surgery or while recovering from illness or injury doing nothing but resting and improving your nutrition, you are allowing your body to dedicate all of this nutritional therapy on healing!

STEP THREE: POWER EVERYTHING ELSE DOWN

There is tons of research suggesting that adults should be getting 7-8 hours of sleep per night. And if you are someone who works-out for 4 or more hours per week, you may need 8-9 hours of sleep per night, as this is when the body is repairing itself. Part of the process involved the pineal gland, which is a light-sensitive organ in the brain that produces melatonin during darkness. Humans begin producing melatonin as early as 3 months old, and the production of melatonin increases until about age 20 at which point melatonin production begins to decrease.



Melatonin affects sleep and helps regulate body temperature. It guards the nervous system against degeneration—such as Alzheimer’s disease and stroke. This hormone is also believed to boost your immune system and to help repair corrupted DNA. It may even play a role in preventing some forms of cancer. Below-normal levels of melatonin have been connected to depression, bone loss, fibromyalgia, insomnia, some seizure disorders and migraines. ^(9, 10, 11, 12)

Bodies are healthiest when they have about 9 – 10 hours of melatonin production per day. This means that the light going into your eyes – particularly blue light from TVs, phones and computers - needs to be low to none for 9 – 10 hours per day.

In addition, growth hormone is released during stage N3 of sleep – the deepest non-REM stage of your sleep cycle. In infants and children, a greater portion of their cycle is taken up by N3 sleep, than that of adults, whose N3 sleep declines with age.

If you are recovering from illness or injury/surgery (and especially if your injury involved head trauma!), you also have an increased need for sleep. And yet, cruel trick – you might have trouble sleeping because you are uncomfortable in all the places that are injured, you are having trouble breathing due to your illness, or you are on medication that is disrupting your sleep. If you are not able to get a solid 8 hours of sleep per day while you are recovering, you definitely don’t need to be exhausting your body further by resuming your training.

If sleep is difficult or impossible while recovering, allow yourself to ‘lie around and do nothing’. Being inactive frees up your energy for other tasks (say, recovering from illness), and lying in bed or on the couch with your eyes closed -- what some studies call "quiet wakefulness" -- can accomplish much the same thing as sleep. And remember not to use your computer or phone or watch TV while you are resting-- the blue-colored light from the screens tricks your body into thinking it's daytime and to stop releasing melatonin.

So yes, there definitely is a place for ‘being tough’ when it comes to competing in sport, but that’s usually when being smart isn’t an option. But being tough when you should be smart means you end up looking like [this guy](#).

The bottom line is, it may be a misnomer to say that you are “doing nothing” when you are recovering from illness or injury. Aiding your body in it’s own defense may be the smartest and most powerful work you’ll ever do.

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