

Natty Power

by Old Oak

1. Introduction

Simple, Effective and 100% Natural Way to Become Powerful, Strong, Fast, Agile, Muscular, Lean, Energized, Conditioned, Healthy, Self-Confident and Generally More Capable!



NATTY POWER

Natural Power to the Natural People

**Simple, Effective and 100% Natural Way to Become Powerful,
Strong, Fast, Agile, Muscular, Lean, Energized, Conditioned,
Healthy, Self-Confident and Generally More Capable**

Wake Up Your Natural Potentials and May the Natural Power Be With You

Word of Caution and Disclaimer

Please understand that any form of physical training brings at least some risk of injuries. I will do my best to teach you how to stay healthy and injury free, but you are personally responsible for safety of your own body. Be aware of your physical limits and take precautionary measures to minimize the possibility of injury.

You Train at Your Own Risk

I take no responsibility for use or misuse of information provided here. If you are an adult person, any eventual injury resulting from your attempt to perform exercises are in your sole responsibility. Minors should train only under supervision of their parents or a qualified instructor – never alone!

Visit Your Doctor First

Even if you feel good and healthy, you should go through medical examinations to be sure there are no overseen medical conditions that could be developing. Therefore, you must consult a professional doctor before starting any kind of training program, including this one too.

Something similar goes for dietary advises here. There is nothing drastic or dangerous in those eating regimens, but what if you have a hidden food allergy or digestive issues? You should never guess what exactly is causing problems: consumed food itself, eating or drinking habits, food intolerance or allergy, some digestive illness or something else. Therefore, if you plan to conduct any changes in your everyday diet, first visit a professional nutritionist or even better, a gastroenterologist. When you get approval from your doctor and nutritionist, then can come back and try tips and tricks presented here.

Freedom of Speech

Everything written here is in accordance with the First Amendment and freedom of speech. I am representing my own knowledge, my own experience, my own observations and my own conclusions. All opinions about exercises, training methods, diets, scientific researches, written articles, training equipment, training accessories, persons, companies and organizations, are my personal opinions. There is no intention for any positive or

negative promotion of anyone or anything. It is just me thinking out loud. I write what I think and you can read what I wrote, if you are interested. I use English language, but please keep in mind that I am not a native English speaker, so I apologize in advance for grammatical incorrectness throughout the text. I am not a novel writer either, so don't expect any high levels of literacy here.

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About me

You can call me Old Oak and that would be pretty much all about me, To be completely honest, I am not important at all, because you should learn to listen to what Nature is telling. My purpose is only to translate and explain the messages, if they are not so obvious. In simple words, I will just try to make things easier to understand, nothing else. Therefore, I think there is no need for knowing me. It would be much better to focus your attention on achieving natural power and the accompanying benefits it will bring along. That's all that really matters.

Knowledge

It happens to be that I have the highest academic titles, obtained in old, honest and very rigorous educational system, but who cares? The value of classical education in today's modern world has been degraded. Beside, my academic titles are not obtained in any of the sport related domains, but in the fields of fundamental science, so my academic titles and degrees are not of a great relevance for power training anyway.

Experience

I have over 4 decades of experience in different kinds of sports, but who cares about it either? Nowadays even teenagers seem to be experienced enough and capable of educating masses, as you can see all over the Internet. Since I did a lot of thinking, experimenting and technique testing in my life, it will be my pleasure to share my opinions with you, but you need to get your own experience and opinions. My analytical observations and logical reasoning, as well as open mind, lead me to some conclusions, which doesn't have necessarily to be the same as yours. I will present you my ideas and methods, but then you should try them by yourself to see if they work for you personally. Go on and get your own experience and conclusions, there will be nothing to loose, on contrary, you can only improve yourself.

Publicity

Honestly, I don't want any publicity. I don't want to be famous or have thousands of followers. I don't want to explain how and why I came to some conclusion. If you care about physiological mechanisms behind some method, please study biology or medicine.

What I really don't like is drama, although it is extremely popular on the Internet and television. Simply, arguing with other people is not my thing. Regardless of all potential money or glory that creating drama can bring, I will rather avoid it. So, my dear athletes, coaches, scientists, experts, youtubers, instagramers, tiktokers, influencers... I appreciate your understanding and hope you don't mind me being honest with you.

Me Being Alone

I am just one man, being all alone in all this and only presenting my points of view. I don't promote any company and I am not affiliated with anyone. I have nothing to sale, so you don't have to spend any money to achieve natural power. I am offering you my knowledge and experience for free.

Thanks for your attention and wish you a good luck in obtaining natural power!

Old Oak

Welcome to Natty Power

You are at the right place if you are looking for a simple, effective and 100% natural way to become powerful, strong, fast, agile, muscular, energized, conditioned, healthy and generally more capable!

First of all, let's clear up what the Natty Power is about:

- **NATTY** - a slang word for the term “natural”. It is very common and well known on the Internet and especially in the fitness circles.
- **POWER** - a little bit more mysterious term. The simplest explanation of power would be strength exerted quickly, at a high speed rate.

Therefore, here we will explore natural approaches for achieving natural physical power.

For all those who prefer:

- complicated and hard to follow training programs, designed for elite professional athletes and record breakers,
- awkward exercises targeting the smallest of the muscles and yielding questionable results,
- consuming performance enhancing drugs or any other sort of chemical substances,
- not being honest with the inner self and looking for “shortcuts”, “tricks” or “cheats”,

... well, it might be better to look elsewhere for advises.

However, if you are a **Natty Athlete**^[1] who plans to train the **Natty Way**^[2] to achieve the real **Natty Power**^[3], then you are more than welcome! Keep on reading and you will find lots of valuable, helpful and even eye opening information! The best of all, everything is free here!

Wake up your natural potentials and may the natural power be with you!

^[1] **Natty Athlete** - an amateur sportsman aspirant who refrains from use of steroids and/or any other drugs for that matter.

^[2] **Natty Way** - moving and training in accordance with Nature's laws, as well as the design and functionality of a human body.

^[3] **Natty Power** - intrinsic physical capabilities of humans, provided by Nature itself.

001. Introduction to Natty Power

So, you want power? Of course you do! Who wouldn't? Everyone and their grandma wants to be powerful. What about the superpowers? Well, unlike mind reading or invisibility, some superpowers are achievable indeed. Maybe you will never be able to compete with superheroes from comics, but real life superpowers, as product of superior strength and superior speed, are quite possible. And not just possible, becoming super powerful is very probable, if you are dedicated and persistent in following and applying Natty Power concept.

While achieving power will be your main goal, the path you choose will be of equal importance. Natural way is usually the best way and that is true for training methods and all other aspects of life. Therefore, this training method is named "Natty Power" because it refers to natural approach for achieving physical power.

Let's wake up your natural potentials with natural training methods – absolutely the most effective methods of all, hands down! Become powerful, strong, fast, agile, muscular, lean, energized, conditioned, healthy, self-confident and generally more capable for sports, work and ordinary everyday activities! Let's bring natural power to the natural people, men & women, young & old, short & tall, skinny & fat, weak & strong, healthy & recovering, beginners & advanced, juiced & natty... you are all welcome!

002. Reasons for Naming This Training Method as "Natty Power"

Primary reason for naming this training method as "Natty" or "Natural", lays in the fact that Nature designed our bodies in a certain way, which is universal and unchangeable. The form came from the necessity of functionality to perform essential movements and everyday tasks. We must respect natural geometry and natural kinematics of our body and comply with Nature's design to be able to get maximal benefit from the training process. Nature demands you to jump, to run, to lift heavy stuff, to carry objects, to push, to pull, to throw things up in the air, to slam them down on the ground, etc. These are big natural movements and should be practiced regularly. Power built in these movements can be easily transferred to any other sport specific movements or daily activities. On the other side, weird movements, unnatural limb angles and body positions can not be considered as natural and should be avoided in training.

Secondary reason for naming method as "Natty" is that acquired power needs to be naturally effective, functional, balanced and efficient. Nature has blessed human body with great capabilities for generation of dynamical forces and kinetic energy. We will work on improvement of these capabilities the way Nature intended us to do. If you jump, you should be able to jump high. If you run, you should be able to run fast. If you

lift, you should be able to lift heavy objects. If you can lift heavy objects, you should be able to carry them. If you can carry heavy objects, you should be able to cover some reasonable distance. Ideally, you would perform all these tasks equally well. What is not natural is: to become muscular, but not strong enough; to become exceptionally strong, but unable to effectively run or jump; to run fast, but unable to sustain the speed; to lift heavy all the time; to never lift heavy; to exhaust your body all the time; to never exhaust your body. Nature knows the best what is good for us.

Tertiary reason for naming method as “Natty” is because it is optimally suited for natty athletes, thus, athletes who are not on steroids. Using performance enhancing drugs is against the Nature and certainly not healthy. There is absolutely no need to consume any kind of chemicals, especially if you are not a professional competing athlete. The truth is that with steroids every athlete would get better results and would get them faster, but is it worth ending with a toxic body? What is more important than health? Rather stay natty and be persistent in following Natty Power method. Then expect to reach significant levels of power, strength and speed, even if you are a natty amateur athlete.

These are the 3 reasons for naming this training method as Natty Power. As you can see, it is all about being in tune with the Mother Nature. Choosing natural approach is always wise and safe, not just in training, but in life in general. For example, if you practice only natural movements and lifts within natural limits, you will probably stay injury free throughout your entire training career. On the other side, weird unnatural movements and unnaturally heavy weights could only bring you pain and eventually catastrophic injuries.

Many other benefits are possible when you comply with Nature’s laws and Nature’s standards. For example, if you train by Natty Power method and eat natural food, your body will not be just powerful and healthy, but also lean and muscular. Although body aesthetics will not be in our focus, handsome physique as a side effect is not a bad thing at all.

003. Reasons for Improving Power

Power is the top physical capability and the most beneficial one of all. Increased power results in other improvements as well:

- increased strength
- increased speed
- increased agility
- increased mobility
- enlarged muscle mass
- enlarged energy capacity
- improved force generation efficiency
- improved aerobic condition and VO2 max value
- improved cardio-vascular system

- injury resistant bones, joints, tendons and ligaments
- higher testosterone levels
- better health overall

Would this be enough reasons for you to start training for power?

004. Reasons for Choosing Natural Way to Build Power

Big Bang or God created the Universe and everything in it, with human species included. You may believe in science or in the Bible, but we won't debate how we got here, was it a miracle, biological evolution or something else. Let's rather focus on human body and its mechanical functions. Purely for practical reasons, let's assume that we are a Nature's creation. Our bodies are constructed with abilities to perform lots of different tasks: to run, to jump, to lift heavy stuff, to move objects (by carrying, flipping, pushing, pulling), to throw things in the air, to climb trees, to swim and so on. Our ancestors performed these tasks regularly in everyday life, during hunting, gathering fruits, building shelters, fighting other humans, escaping dangers, etc. It is interesting that all these different tasks can be efficiently executed with the same body, so there is no doubt that human body is very versatile and universally functional mechanical system. In respect to these facts, Natty Power training method fully complies with Nature's design and Nature's expectations. That is how we should train and live our everyday lives - *in tune with the Nature*.

Here is one example of Nature's perfection and geniality. Let's say you want to run faster. What will you do? I say you should train the triple extension movement (straightening of leg). The Nature says the same, because that is probably the most important body movement of all. It is involved in all kinds of activities like jumping, running, lifting weight off the ground, pushing, pulling, etc. Now, you may also want to be able to jump over higher obstacles? Well, Nature's answer is the same - triple extension. Athletes who are strong in triple extension are always excellent sprinters, jumpers, cyclists, etc. What if you need to lift heavy objects from the ground? The same solution once again - triple extension. Wanna become better in sex? Triple extension! Wanna become a millionaire? Triple extension! Ok, this is a silly joke, but many different tasks with different particular goals will be covered if you improve the triple extension. That is how perfect Nature's solutions are and, as the saying goes, they kill many birds with just one stone. So, if Mother Nature expects you to train the triple extension, then please do it.

So, what else Nature expects? Among other things, Nature wants you to be strong and fast. Nature wants you to be well conditioned. Nature wants you to feel capable and avoid injuries. Nature wants you to have healthy body and live a long life. Nature even made it easy for you to achieve all these goals. There is no need to think much about it all, because everything is quite logical and "natural". Just listen to Mother Nature and you will be rewarded. Getting in accordance with Nature is absolutely the best thing you can do for your physical training and life in general.

Sometimes it is not so obvious what exactly Nature is telling us, simply because we are bombarded with aggressive marketing and tons of irrelevant information. Too many blogs and magazines are advertising too many useless stuff, everything in hope to get your money. Furthermore, there are millions of scientific studies out there and you would need a hundred lifetimes to read them all. After reading them, you would probably realize that only 1% of information has any practical value for your training. Something similar goes for books as well. There are fantastic books about training and some coaches are pure geniuses, but as often happens, their knowledge and expertise are useful only to steroid users, professional athletes and World record aspirants. Complicated training programs and perfect techniques may not be practical to majority of us, ordinary people. Hard-to-follow training routines or ideal barbell trajectories can become an obstacle for someone who just wishes to be a bit stronger, faster or energized. Amateur athletes prefer simplicity, effectiveness and naturally achievable results. Therefore, Natty Power will decode Nature's instructions and reveal the natural way to natural power for natural people. Give a chance to Mother Nature. Be patient and persistent. You will see the difference, feel the difference and show the difference.

005. Reasons to Choose Natty Way Instead of Steroids

Natty Power is method mainly aimed at natural athletes, but nevertheless, it could be equally useful to those who are using steroids (aka "roids", "juice", "gear") or any other performance enhancing synthetic substances. Nature does not discriminate anyone, so natty or not, everyone is welcome to try Natty Power method.

Steroids can enable athletes to handle larger volumes, higher intensities and shorter recovery intervals. It may result in reaching higher strength in less time, more muscle mass, more energy, etc. These are significant advantages, so achievements surely won't fall in the same range with natty athletes. Because of that, juiced athletes will not be able to distinguish the pure benefits of Natty Power from the gains caused by drugs. Since Natty Power can do wonders for natural athletes, it would be great to try it without steroids, just to see how beneficial the method is itself.

Steroids and other non-hormone based drugs are unhealthy in numerous aspects, so why bother? Yes, they can improve performance and physique, but it is never worth risking health, whatever the reason may be. I have never ever used steroids or any other kind of performance enhancing chemicals in my life. Also, I never used any supplements either, because supplements are often totally useless and could be toxic. After all, I never used any additional vitamins or minerals, because these nutrients are useful only as ingredients of real food and usually are not needed, if you eat properly. My honest recommendation is very simple: *eat healthy, sleep enough and train hard* - that's all. You may heard this before, but it won't hurt to carve it in your mind, since that is absolutely the best recipe for successful physical training.

Steroids can induce faster progress and better final results, but are you a professional athlete whose career depends on elite level performance? Do you earn for a living with your body? Are you planning to crush some World records? Are you competing on a regular basis? Do you plan to participate in the next Olympic games or maybe Mr. Universe? If the answer is yes to any of the previous questions, then go ahead, I would fully understand why you need steroids, although I don't approve their use. If you decide to go juiced route, remember that steroids should be applied only under supervision of a medical expert. If you are just a regular guy or a girl, an ordinary amateur athlete who wants to improve power and physique, then please choose the natty way.

Beside being toxic and generally unhealthy, there is another potential health problem with steroids, which may not be obvious right away. Avoiding injuries was always my priority and it should be yours too. If you are a natty lifter who strictly follows natural approach and pays attention to body signals, you will probably never get injured. You will progress slowly, so your bones and tissues will have plenty of time to adapt to heavy weights, explosive movements and high stress techniques. Therefore, natty lifters who train carefully and within natural limits, will have much higher probability to stay injury-free throughout their whole lifting career. On the other side, if you are on steroids, you will instantly become capable to train harder, use heavier weights, progress faster, rest less and all that increases risk of injury. For professional athletes, the risk is even higher and injuries are almost inevitable. They have to be on juice regularly, since it is a necessity for achieving and maintaining the top level performance. The problem is with bones and muscles having a hard time supporting that boost in strength and energy. Another problem caused by steroids is psychological and relates to mind altering aggressive behavior, false perception of being invincible and possession of immense godlike power. These are all potential dangers for health and question is for how long they can be avoided without consequences. Forever? Most often, injuries occur during competitions or record chasing. Whenever athletes push themselves to the limit and beyond, that is the moment when something snaps. Beside competitions and breaking records, even more dangerous are NFL games, where juiced athletes are slamming into each other. Although it is a "game" and not a competing sport, the participants are "on gear" most of the time and collisions are a guarantee for injuries. Contusions and fractures are just a matter of time. With all this in mind, we can conclude that professional sports are dangerous and certainly not healthy. Therefore, please avoid pro sports, competitions and record breaking. Stay natty and enjoy a lifetime of injury-free training.

I can confirm from my own experience that staying natty and training the natty way will bring power, build muscle and establish capabilities that will last for a long time. This last statement brings me to another advantage of natty approach. If athlete stops training for a while, it is normal to lose some muscle and performance will degrade somewhat as well. However, I was pleasantly surprised how slow this process was in my case. There were periods of 6 or more months of absolutely no training, but my body weight, strength and power didn't suffer much. Once I had a pause of several years with almost no physical activity, except some light hiking, swimming and bicycle riding. I lost around 40lbs of body weight, but strength decrease was relatively small. Loss of muscle volume

mostly resulted in low energy potential, but in a few months of hard training, I was able to get back to old capacities. Of course, I was never a competing athlete and competition levels are much harder to maintain and regain. The point is that for an amateur athlete, there is nothing better than staying natty and training the natty way for long lasting results.

006. Natural Cliché

You probably hear the word “natural” all the time on TV and see it all over the Web. Natural this and natural that, natural food, natural supplements, natural remedies, training the natural way, being a “natty” athlete, etc. Anything “natural” is highly desirable and beneficial for us humans, but the word itself has been used and misused in all possible contexts and meanings. Sometimes the word is there rightfully, sometimes solely for marketing purposes.

Regardless if the term has become a cliché or not, the truth is that we humans can not get far away from our natural habitat, escape the imposed laws of Nature or avoid physical functions we are naturally supposed to perform. For example, we can not live in harsh climate regions or in the outer space. We can not eat concrete or plastic. Our bodies are not built for flying or swimming. All these things are unnatural to humans. Nature wants us to live in pleasant climate zones, to eat healthy organic food and to perform physical tasks which are natural for our bodies: walk, run, jump, lift objects and so on.

Just be aware of scams. Sooner or later, you will come across some product with the word “natural” in its name. It could be totally fake or there may be an underlying plot to sell you stuff you wouldn’t purchase if it wasn’t “natural”. Think about natural foods and natural supplements. Are they really natural products? Are they organic? Are they for human consumption? Grass may be natural and organic, but albeit not harmful, there is no nutritional value for us. Even if something is natural, the question may be: “natural to what degree?”. A product can be 100% natural, but some toxic ingredients could also be thrown in to improve taste, smell, color or shelf life.

Lots of athletes are swearing to be natty, but don’t want to explain how their muscles have been built. An athlete may be telling the truth right now, but what we don’t know is if he has stopped using steroids only a year ago. Even if he is natty at this very moment in time, can we assume that his muscles are naturally built? Not so important if someone is natty or not, but it is really sad that many youngsters are looking for shortcuts. They usually want instant popularity and followers on Youtube and Instagram. They don’t have patience nor will for natural muscle building process, way too slow and too hard for them.

Lifting heavy objects from the ground up is a very natural movement, but if the weight is heavy and you lift frequently, your palms will eventually start to bleed. Can this be considered as natural? Step back and think about it. The movement is natural and even

essential, but Nature would prefer you to stop before you tear the skin of your palms. If you bleed, you can get an infection and eventually die. Heck, the Nature will even send you warning signals in the form of blisters and calluses. If you insist on training hard, it would be wise to use gloves to lower the friction. No need to sacrifice anything, you can keep your palm skin intact and progressing with weights at the same time. Nature wants you to use your brain and realize that using gloves will allow you to train hard without danger of injuries. Only boneheads will get to the bleeding point, keep on lifting further and probably be proud of injury. Don't be a bonehead.

These few examples show that term "natural" is overused, sometimes misleading and even fake. What you should do is think for yourself and never blindly accept anything served on the Internet. Always try to find out if something is really natural and what was Nature's intention. Remember, Nature is not selling anything and has nothing to prove. It is a higher being that created us in a certain way and we just have to accept it and comply with imposed natural laws. So, natural is good for us, but only if it is really natural. If we listen to what Nature is telling us, if we think rationally, if we are honest with ourselves, if we do everything right... then Nature will reward us.

007. Nature and Science

Science is a way of understanding Nature's principles. It tends to be universal and useful knowledge, but in science nothing is written in stone. For example, in ancient times the Earth was considered to be a flat plane. Later on it was proven that Earth is actually a sphere. In geocentric system it was thought that Earth was the center of Universe, but later came the heliocentric model with Sun at the center of the Universe.

There are more examples of theories that changed the initial or previous postulates of science. Sir Isaac Newton built the foundation of classical physics with laws of motion and universal gravitation. Then came Albert Einstein and turned the whole classical physics upside down with his theory of relativity. Finally came quantum mechanics to shake the science once again, to change our understanding of Nature's essence and make things unbelievably weird in the atomic world.

As it was usually seen throughout the history, we have some established knowledge based on proven theories and then some scientist comes up with better or wider theory. The conclusion is that no knowledge is absolute. We should believe in science, but not blindly, because it evolves over time.

Luckily, in physical training world everything is much simpler and more obvious than in fundamental science. Training studies are not so complicated and can be easily tested in practice. However, our skepticism should be preserved, as well as reasoning. Always doubt and think for yourself.

Let's say you find some scientific research that is "proving something". Never believe the results right away. Always ask yourself the following:

- Which institution organized and conducted the research?
- Was it paid by some agency or corporation?
- Was it a genuinely objective research or biased in some way?
- How the researchers did the modeling of the process?
- Are the measurements correct?
- Is the observed sample adequate and representative for larger sets of same elements?
- Is the research purely theoretic or could be applicable in the real world situations?
- Are there any simulations, approximations, postulates, imprecisions or other kinds of assumptions involved in the research and how they influenced the results?
- Are the conclusions logical and verified or could be in contradiction with already established knowledge?
- Is there something covertly promoted for sale?

Just ordinary questions out of curiosity and skepticism, hope you get the picture. Scientific knowledge is out there to be challenged, proven or eventually denied, so there is nothing wrong in being a skeptic.

Nature principles are not always obvious or easy to decode, especially for modern humans. We have distanced ourselves from the Nature quite a bit. Instead of going out and simply doing tasks natural for our body constitution and function, we sit by the computers or stare at smartphones and overanalyze training process. Everyone from wannabe coaches to successful pro athletes, wander through training theories, unnecessary complicated methods, overplanned programs and long lists of exercises. They do all that in attempt to discover some holy grail of quick and easy achievements.

Nature is beautifully simple and listening to it seems to be more important than thinking. That doesn't mean that you should not think and experiment with complicated or weird stuff. After all, your life probably doesn't depend on results, so you should have fun and enjoy training. Being bored will certainly lead to bad results, keep that in mind. On the other side, even scientists sometimes resort to experimentation, intuition, guessing or even fantasizing when they launch some hypothesis. Listening to scientists is good, because they are almost always correct. They rely on facts and logic, but their thoughts also wander and they do make mistakes. Heck, they are humans after all, although smart ones. Scientific studies could be very helpful, but it won't hurt if you do your own thinking. What works for me may not work for you, because we are all different. Be open-minded and read studies. After reading, think about it, use common sense, "consult" Nature and implement newly acquired knowledge in practice, at least for testing purposes.

Just don't dive deep into the science, unless you want to become a scientist. Becoming physically powerful is very simple and all you have to do is to listen to the Nature and try

it. If it works for you - great! If it doesn't work for you – forget it and move on! Simple as that. At least it should be, unless you want to make it complicated.

008. Definition of Power

Motion or movement is in the very essence of the Universe. Absolutely everything in the Universe moves in some way or another. From atoms to stars and galaxies, everything! A house may look static relative to Earth's surface, but it circles around the Sun together with Earth and also, all three of them move together around the center of our galaxy.

- **Motion is process of changing position of an object in time.**

Motion is also in the very essence of human existence. Each and every human activity starts with the movement. Without the movement we would be a plant-like organisms (ouch, what a boring life that would be). Fortunately, Nature gave us muscles, so we could move ourselves and things around us. Muscles are biological motors. Muscles are able to generate force which can initiate, maintain, change direction or prevent the motion.

- **Force is ability to move objects.**

So, our muscles are capable of generating force which then causes movement of our body and objects around us. Force generation is the most important muscle quality and it is called strength.

- **Strength is ability to generate force.**

Intensity of generated force depends on muscle strength. Heavier objects require generation of greater force, which in turn requires stronger muscles. Beside the fact that stronger muscles will generate greater force, they will also become better in many other ways. Even if strength may not be your main goal, you will achieve numerous benefits from stronger muscles. Think about muscle size, muscle efficiency, speed, explosiveness, resistance to injuries, coordination, balance, to name a few benefits right off the bat. Stronger athlete is always a better athlete and strength is the main characteristic of athleticism.

Main characteristic of motion is speed. It represents ratio between distance and time, thus tells us how much distance some object has traveled per unit of time. Higher speed means covering more distance over fixed time interval or covering a fixed distance for shorter time interval.

- **Speed is the rate of motion.**

Just like strength, speed is also a very desirable quality in sports, as well as in daily activities. Training for speed is related to training of the central nervous system (CNS) and the peripheral nervous system (PNS) to generate and transmit neural signals in shorter period of time. It is also related to training muscles to quickly react, to contract in shorter period of time and to keep on contracting at a higher rate. The result is faster running, higher jumping and quicker reactions.

If you take a broad look at the Universe, you will see there are objects, there are movements, there are forces causing the motion of objects which are moving in space and time, thus, have some velocity. We will only downscale it all for our specific subject of training for power, but the basic principles of Nature are the same.

Strength is the scalar quantity of force. Speed is the scalar quantity of velocity. These two scalar quantities are interconnected and deeply associated to the phenomenon of motion. Strength is causing the motion and speed is the main characteristic of motion. When muscle strength generates force and applies it to some object, it will start to move at some speed. If something moves at any speed, that motion was caused by force generated from muscle strength. So, how the strength and speed correlate to each other? Ladies and gentleman, allow me to introduce the power:

$$\text{Power} = \text{Strength} \times \text{Speed}$$

Power is defined as a product of strength and speed. People usually don't know the exact difference between power and strength or sometimes think they are synonyms for the same thing. To avoid any confusion, here are the simplest explanations of each physical parameter in terms familiar to lifters:

- **Strength is ability to move weight.**
- **Speed is ability to move fast.**
- **Power is ability to move weight fast.**

From the equation it is obvious that more strength means more power and more speed also means more power, so athletes can improve power by improving strength or by improving speed. For example, powerlifter and sprinter are both powerful, but highly specialized. Powerlifter does not need the speed of a sprinter, while sprinter does not need strength of a powerlifter. For average Joe, the most natural way seems to be improving both components simultaneously together. Eventually, a powerful amateur athlete may decide to specialize in any of the two components or bring each component up to its own limits independently from the other component.

009. Energy and Power

Your muscle strength and speed of the movement will determine how powerful you are. Beside strength and speed, there is also another physical value involved in any exhibition of power and that is energy.

- **Energy is ability to do work.**

Regardless if you move your body or external objects, you always need energy to perform that work. Energy and work directly correlate to each other. Therefore, more energy will enable you to do more work and vice versa, more work will require more energy. For example, lifting weights requires energy, but lifting heavier weights or lifting for repetitions will require more energy. Running requires energy, but running fast or for longer distance will require more energy.

Energy is stored in our bodies in the form of nutrients. Overall quantity of stored energy determines the amount of work that could be done. On the other side, power determines the rate of energy utilization for work. For example, if an object should be carried over some distance, the faster accomplishment of the work means higher power exertion. Athlete who accomplishes the same task in less time is a more powerful one and he is more efficient in energy transfer then others.

$$\text{Power} = \text{Energy} / \text{Time}$$

From this equation we can conclude that power can be interpreted as a rate of energy transfer and faster transfer of energy relates to higher power output. For example, if 20 bags of cement has to be loaded into a truck, such work can be done by a construction worker or a strongman, but strongman would do it in less time, which means he is more efficient in energy transfer, thus, more powerful then construction worker.

010. Different Types of Power

We are familiar with strength measurement: athlete who lifts the heaviest weight is the strongest one. Deadlifters don't care about the time when they lift. There is no rush, because time and speed of the movement are not measured, only weight on the bar counts. When the lifting speed is close to zero, we can consider it to be a demonstration of pure human strength. In that case, the athlete demonstrates a **strength dominant power**.

We are also familiar with speed measurement: sprinter who finishes the race in shortest time is the winner and the fastest one. Sprinters are not carrying any additional weight, so their strength is not measured. The only thing that matters is time and therefore, speed. When the additional weight is practically nonexistent, we have a manifestation of pure human speed. In that case, the athlete demonstrates a **speed dominant power**.

Other cases of power exhibition are falling somewhere between these two extremes, which means that both components of power are engaged to some notable extent, at the same time. However, there are a few kind of untypical sports for power showcasing.

For example, bodybuilders intentionally choose sub maximal weights to be able to do more volume (sets and reps). While, powerlifters lift slowly, because the weight is way too heavy to be lifted any faster, bodybuilders intentionally lift slowly to increase time under tension, deplete energy and achieve pump. Bodybuilder's goals are muscle size and aesthetics, not maximal strength. Both sports exercise strength dominant power, but bodybuilders intentionally keep their power at reduced levels.

Another untypical example are martial artists, who move quickly inside the ring and have very fast kicks and punches. Their power falls into speed dominant group, although there is no significant body displacement and their running speed is totally irrelevant. In this case, running speed is replaced with limb agility (sudden moves and swift changes of movement direction).

Regardless of strength and speed engagement in power output, energy is always involved. Without energy, there would be no power, no force generation, no work would be done and there would be no movement. Power as the rate of energy transfer is described with the following equation:

$$\text{Power} = \text{Energy} / \text{Time}$$

As we can see, power is affected by time during which the energy is transferred. If time of energy transfer is very short or near zero, power automatically reaches the maximal possible level and it is then called peak power. If the time of expending energy is prolonged, then the power output is lower, but lasts during whole interval of time.

- **Peak power** is the maximal power that could be generated for a short moment of time.
- **Continuous power** refers to total amount of power that could be produced continuously over longer period of time.

Think about Olympic weightlifters. They burst in a fraction of a second and lift enormous weight up to the overhead position. This wouldn't be possible if they tried to lift slowly, without help of the momentum, neither they would be able to lift such huge weight for repetitions, since a lot of energy has already been spent in the first rep. Therefore, Olympic weightlifters are the masters of **peak power**.

Now let's take a look at strongman behemoths. They are strong, fast and capable to maintain high power output for longer periods of time or for repetitions. Also, they have a very high energy capacity and usually deplete it all in each discipline. In other words, they have to be able to pick up heavy objects, then to move them as quickly as possible

and sustain the continuous power output to finish each discipline. Therefore, strongman competitors are the kings of **continuous power**.

Another representation of power could be expressed with the following equation:

$$\text{Power} = (\text{Strength} \times \text{Distance}) / \text{Time} = \text{Work} / \text{Time}$$

As we can see, power could be defined as amount of work done during time interval. Work and time are the two variables influencing the power output. The equation implies that more work results in more power and finishing the work in less time also results in more power. The difference is that more work leads to higher continuous power output, while shorter time interval leads to higher peak power output.

Let's get back to Olympic weightlifters and strongman competitors. Olympic lifts are performed in shortest possible time, while the work has a fixed value - lifting constant weight to constant overhead height. Time is the variable and the shorter the lifting time gets, the more powerful athlete becomes. Also, the barbell has to travel over shortest possible distance and that's why the perfect barbell trajectory is such a big deal in Olympic weightlifting.

Now, the strongman competitor first has to be strong enough to pick up a heavy object and then be able to accomplish the task over distance (like yoke), for repetitions (like car deadlift) or for time (like atlas stones). Reaching longest distance, accomplishing the most reps or finishing the task in shortest time, means more power exertion in that particular discipline.

Here are the specific sports as examples for each type of power:

- Peak power, single repetition at max strength, low energy demand: Olympic weightlifting, powerlifting.
- Peak power, single repetition at max speed, low energy demand: jumping, throwing.
- Continuous power, multiple repetitions at high strength level, high energy demand: strongman, rowing.
- Continuous power, multiple repetitions at high speed level, high energy demand: sprint, boxing.
- Continuous power, multiple repetitions at low strength levels, low speed level, ultra high energy demand: marathon, triathlon.

Please note that by sprint it means any kind of sprint: running, cycling, swimming.

WARNING: Serious training for real peak power can lead to injury. To stay on a safe side, simply train with submaximal weights. This applies for powerlifting and Olympic lifts as strength dominant peak power sports, but similar logic applies to speed dominant peak power sports. Train at submaximal speeds and don't worry about injuries. Keep in mind that involving higher number of repetitions and prolonging power exertion time will

get you closer to training for continuous power, which is significantly safer than training for peak power. Just never push yourself to the limit of any kind. Stay away from maximal weight and top speed to avoid injuries, but also never completely exhaust your energy, to avoid physical and neurological collapse and overtraining.

011. Great Power vs Maximum Power

Being powerful means being strong and fast at the same time, because power is directly proportional to strength and speed. It means that more strength will result in more power, as well as more speed will also result in more power. Improving any of these two components will result in power improvement. However, if the aim is maximal power, then both components should be improved independently, each one to its own maximum:

$$\text{Power}_{\max} = \text{Strength}_{\max} \times \text{Speed}_{\max}$$

So, anyone who wants maximal power now knows what to do: train for maximal strength and maximal speed. Maximal power sounds like some Holy Grail of sport capabilities and it really is, but maximal power carries a hidden danger. Exerting maximal strength increases the possibility for injury and exerting maximal speed also increases the possibility for injury. When these two components are multiplied to get maximal power, possibilities for injury also multiplied. Sports which require athletes to regularly perform at maximal power level, will render the injuries inevitable. Just ask any of the strongman competitors, they know very well how risky maximal power can be. Handling huge weights and then rushing to finish the task, multiplies the risk several times and injury becomes only a matter of time.

Franco Columbu was one of the World's greatest athletes ever. He was famous as a bodybuilding champion, but nevertheless was very successful in powerlifting, strongman, Olympic weightlifting and boxing. Beside having a fantastic physique, he was also the strongest bodybuilder pound-for-pound. He participated in first World's Strongest Man competition back in 1977. One of the disciplines was carrying a huge refrigerator on the back for 40 yards while racing an opponent down the hill. Do you get the picture? Big, heavy, odd shaped object on the back, race with the opponent, downhill... Everything screams disaster! After a few seconds in the race, Franco dislocated his leg. Here is what he said after the accident:

"I was going too fast you see, I wanted to win because I was behind on points... I began to run and that was the wrong thing, you can only walk fast..."

So, the moment he started to RUN downhill with the refrigerator on his back was the moment when the injury happened. Lifting heavy refrigerator is dangerous and running fast is dangerous, but running fast with refrigerator on the back is dangerous multiple times. It took him 3 years to recover from the injury and those 3 years would surely be the most successful period in his whole sport career, only if he stayed healthy. It would

be ridiculous, but if he had rejected participation in such a dangerous discipline or at least avoided running, he would continue his successful career, broke more powerlifting records, won more bodybuilding championships and enjoyed even more glory than he already did. That certainly sounds silly as an advice to a competing athlete, but the truth is competitions are dangerous indeed, mainly due to performance at maximal power levels. Avoiding injury must be everyone's priority, regardless of athletic rank, health status or training goals. Therefore, avoid competing if you are not doing it for a living.

You probably heard about the great French writer Voltaire and his famous wisdom:

“With great power comes great responsibility.”

Yes, you have to be responsible, because with great power you can hurt somebody or more often – hurt yourself. Please don't hurt anyone, including yourself. If your friendly neighborhood adopted this philosophy, so should you. Train for great power and be careful how you use it, but never test or exert your maximal power. Simply, it is not worth the risk.

In accordance with the scientific definition of power, the previous thought from Voltaire could be modified in the following way:

“With great power comes great strength and great speed.”

This is very true, because training for power will make everyone strong and fast. Train for power and kill two birds with one stone. You can always specialize later on, if you wish. Beside improvements in strength and speed, there are numerous other benefits of training for power, so it seems to be the most beneficial, the most natural and the most universal approach to physical training.

To resume, you should train for great power, but never for maximal power. This also means you should never train for maximal strength or maximal speed, neither you should test your maximal strength or maximal speed. What you want is a great power, not maximal power with injuries. Keep in mind that when you come near the maximal power levels, the probability of injuries increases exponentially. Only if you are a professional competing athlete and you are earning for a living with your body, then it is understandable that you have to push yourself to the maximum and beyond. In that case, God bless you and wish you a good luck in avoiding injuries. For all ordinary people out there, training well below the maximum power levels is the way to go. You will have much more success in training and a healthier life too.