Natty Power

by Old Oak

3. Activities

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

028. Natural Human Activities

Let the Nature guide you what to do and how to do it.

There is an infinite number of natural activities that our bodies can carry out. However, there are only a few of them that are truly essential for the very existence of human beings.

Some of these activities are quite simple, but some are relatively complex. Some are perfect for development of strength, while others will develop speed, agility, stamina and other physical qualities. It would be wise to practice them all and combine on a regular basis. The cumulative improvements of different physical qualities and their interaction will ultimately lead to development of universal and fully functional body power. Benefits will be numerous. Becoming powerful will enormously help in dealing with any kind of real life situations that may emerge.

Here is the list of fundamental human movements, actions and activities:

1. Hinge
2. Squat
3. Push
4. Pull
5. Olympic Lift
6. Walking
7. Running
8. Jumping
9. Loaded Carries
10. Throwing
11. Impacts
12. Sit-Ups

029. Hinge

Hinge is a rudimentary movement in which you bend forward to pick something up from the ground.

Before lifting any actual object, first try to perform this natural movement by itself, to get accustomed. It should be a reminiscent of powerlifting movement known as deadlift, except you won't lift anything at the beginning, especially not a heavy barbell.

Also, put aside complicated techniques and correct angles required for proper execution of real deadlift. Rather consider this as a test of your mobility and flexibility which will be necessary for the real lifting:

1. Stand straight with feet at normal shoulder width stance.
2. Tips of your fingers should be pointing vertically down toward your toes.
3. Lean your torso forward and down by bending hips and knees at the same time.
4. Pay attention on keeping your back as straight as possible.
5. Go down until your fingers touch your toes.

If you can not touch toes with tips of your fingers, then you must practice this movement every day until you manage to actually do it. Try few times in the morning and few times in the evening. Be patient and persistent and eventually you will succeed.

If you touched your toes right away, then you are ready to start lifting objects with this movement. For the beginning, choose very light objects and gradually progress towards heavier ones: bottle of water, medicine ball, bag of sand, wooden log, stone, etc. Slowly lift it up and put it down, that's one rep. Do several sets of several reps.

This is a pure strength movement, but it can be used for development of strength dominant power. Once you get accustomed to lifting heavy objects slowly, start working on increasing lifting speed. Lift a heavy object quickly up and return it slowly down to the ground. Do it for reps and sets. The faster you lift, the more powerful you are, but always use heavy objects with this movement.

030. Squat

Develop all physical qualities from the waist down with one single movement.

First test your squatting abilities by going down as deep as possible, with heels touching the ground. If you lack flexibility to squat this way, try working on solving this issue by going deeper and deeper every day.

After a month or two, you should be able to do it, but if you still can't, simply wear a high heel sneakers like Olympic weightlifters. If the problem persists, just squat as deep as you can.

As a warmup, spend some time in the deep squat position. Think about being outdoors and doing "*number 2*" for a few minutes. Your muscles, tendons and ligaments will get a good stretch and be prepared for harder training.

Proceed with regular full range bodyweight squats. Do them slowly with 1 second pauses at the top and bottom of the movement. When you manage to do 30 bodyweight squats, start using additional weight: a kettlebell in the hands, sandbag on the shoulders,

girlfriend on the back, etc. As the weight gets heavier, you must shorten the range of motion and avoid going deeper then parallel squat position (thighs parallel to the ground).

After a few months of slow and heavy squats, switch to fast and heavy squats. Go fast up and down, without any pauses at the top and bottom positions. This squat variant will build powerful legs, capable of fast sprinting and high jumping.

031. Push

You have to be able to forcefully move objects away from your body.

There are 2 ways to push objects and applying a proper pushing movement will largely depend on actual situation. While you have a free will to choose how to push objects, the movement will be mainly determined by the size and mass of the object:

- **Upper body push**: Natural way to push smaller and lighter objects by standing still and just extending arms away from the body. Think about opening a door, passing a pot across the table or distancing from a person standing too close to you.
- **Whole body push**: Natural way to push larger and heavier objects by marching forward mainly with leg power, while keeping arms extended and straight. Think about pushing a car with empty gasoline tank, rolling a bale of hay or pushing a sled.

The best exercise for upper body push is ordinary pushup. We all remember this exercise from the school days. It is well known and very effective way to build pushing power. Choose comfortable natural hands width and placement. Keep the body straight and rigid. To make pushups easier, place hands on some elevated surface. To make them harder, put an additional weight on the back or elevate feet. Do pushups for several sets and reps.

Whole body push can be trained by pushing a car on an empty parking lot. Just remember to keep the engine turned off, shift to neutral gear and deactivate hand brake. Push with legs slowly and steadily. Transfer force directly to the car with straight arms. To make exercise harder, ascend upwards over some gentle incline. Push for time or distance and then repeat a few times. When training outdoors, you can also use an ordinary snow sled with additional weight on top of it. Push it on different surfaces to vary intensity of the exercise (snow, grass, sand). When indoors, push against the wall and alternate legs to simulate walking.

After a few months of slow and controlled exercising, switch to more powerful pushing movements. Do powerful pushups by quickly going up and down, without any pauses. Push car vigorously in attempt to accelerate it. When exercising indoors, push hard against the wall while running in place.

Both variants of push are equally important and should be trained with equal attention. This is important for development of balanced and fully functional pushing power.

032. Pull

You have to be able to forcefully move objects towards your body.

Similar to push, there are also 2 ways to pull objects, depending on actual situation, object size and mass:

- **Upper body pull**: Natural way to pull smaller and lighter objects by standing still and just flexing arms towards the body. Think about pulling a lever on slot machine, rowing a boat or pulling a starter cord of a lawn mover.
- **Whole body pull**: Natural way to pull larger and heavier objects by walking backwards mainly with leg power, while keeping arms extended and straight. Think about tug of war or pulling a rope attached to some object, like a car, sled, tire, wooden log, etc.

The best exercise for upper body pull is bent-over row. Find a heavy object (stone, barrel, sandbag) or two identical smaller objects, one for each hand (2 buckets filled with sand, 2 canisters filled with water, 2 sport bags). Take object or objects in your hands. Lean forward and hold torso at 45° degrees or lower. Lift object or objects toward your waist or chest, up and down, with power of your arms. Do bent-over rows for several sets and reps. Another, more entertaining exercise, would be to actually row a boat.

Whole body pull can be trained by pulling a sled or any other object. Put some weight on the sled. Attach a rope and hold it in your hands. Start pulling it with leg power by going backwards and arms fully extended. It is important to walk backwards and drag weight while facing it, because walking forward would be similar to the previously explained whole body push, from the leg standpoint. Pull for time or distance and then repeat a few times. When training indoors, put your hands on the widow frame or attach rope to a wall or any other immovable object and pull mostly with legs by walking backwards in place. If you use rope, don't forget to alternate hand positions: left hand forward, right hand forward.

After a few months of slow and controlled exercising, switch to more powerful pulling movements. Do powerful bent-over rows by quick lifting up and down, without any pauses. Pull rope attached to a sled or any other object by quickly walking backwards. Be careful not to fall and be sure there are no holes in the ground, stones or other obstacles on the path behind you. When exercising indoors, pull hard by simulating running backwards in place.

Both variants of pull are equally important and should be trained with equal attention. This is important for development of balanced and fully functional pulling power.

033. Olympic Lift

One powerful movement to rule them all.

Hinge, squat, push and pull are essential movements for building pure strength and strength dominant power. For pure strength development, use maximally heavy weights and lift them slowly and under control. For strength dominant power, lift sub-maximal weights abruptly and rapidly. First train for pure strength and then slowly move to power training by incrementally increasing lifting speed over time. After achieving a solid strength and power basis in 4 essential movements, you can experiment with more advanced, more complex, more efficient and more balanced movements.

Training essential movements separately will enable exceeding in strength and power to the fullest potential of each corresponding movement. Establish these movements as 4 pillars of your training and practice them regularly. Your next step should be focusing on concatenation of these 4 movements and development of balanced whole body power. The only way to do it is with **Olympic style weightlifting**, because it involves all 4 essential movements packed in one complex motion. Beside that, Olympic lifts are performed over the longest range of motion our bodies are able to reach: from the ground to the overhead position.

Olympic style of weight lifting requires significant amounts of strength, agility, precision, coordination, mobility and flexibility. Obviously, Olympic lifts are hard to learn and execute, but they are probably the best overall exercises you can choose for your power training. Synergy of high strength and fast lifting speed will result in development of a very valuable physical quality called **strength dominant explosive power**. Explosive power doesn't mean maximal power, so it is assumed that the lifted weight is very heavy, but still below maximal weight athlete could lift. However, if the weight on the bar is maximal and athlete can not lift even a pound heavier weight, then it will be an expression of **strength dominant peak power**. Both types of power, explosive and peak, are manifested as instant burst of huge force, delivered in shortest possible time to finish the task. In case of explosive power, force is generated at sub-maximal levels using sub-maximal weights, while in case of peak power, force is generated exactly at the maximal level using maximal weight. You should always train for explosive power with sub-maximal weights. Training for peak power with maximal weight is potentially dangerous. Be careful, train safely and avoid injuries.

Explosive power is crucial quality for success in majority of sports. It is very desirable, very useful and very effective capability in everyday life. After all, explosive power is irreplaceable for solving or escaping different dangerous situations that may arise.

There are 2 styles of Olympic lifting: **clean & jerk** and **snatch**. Both are very powerful movements, can bring excellent results in athleticism and will be very beneficial for power transfer to sports. While being quite similar in essence, snatch is technically more demanding and requires more explosiveness, more balance, more flexibility, more mobility, etc.

There is a moment in the snatch lift when weightlifter falls into a deep squat with arms fully extended up and slightly backwards. Ordinary people can not hold a broomstick that way, not to mention a bone crushing weight. A legend says that onlookers can start to feel the pain in their shoulder girdle only from looking at the lifter in the bottom snatch position.

Holding a heavy barbell right above the head in uncomfortable deep squat position certainly brings some risks, so it would be wise to avoid such dangerous situation. Beside being more dangerous and harder to learn and execute, snatch is also a weaker lift then clean & jerk. With all this in mind, there is no need to bother yourself with snatch, unless you are planning a professional weightlifting career.

Therefore, you should focus on clean & jerk. Try to imitate movements of professional Olympic weightlifters and put it in practice. The movement itself is executed in 2 stages, with a short pause between them, quite enough for a few short breaths:

1. **1st stage - clean**: bring barbell from the ground up to the chest level.
2. **2nd stage - jerk**: bring barbell from the chest up to the overhead level.

You are free to modify this lift the way it feels natural and comfortable to you personally. For example, you can do it in 3 stages, with 2 pauses in between, like this:

1. **1st stage - deadlift**: bring barbell from the ground up to the thighs level.
2. **2nd stage - hang clean**: bring barbell from the thighs up to the chest level.
3. **3rd stage - push jerk**: bring barbell from the chest up to the overhead level.

Instead of regular clean, you can do **power clean** or **hang clean**. They are similar to regular clean, but instead of going into a deep front squat when catching barbell in the front rack position, you would go down only to shallow squat (above the parallel). In power clean you start from the ground, while in hang clean you start from the hang position.

Also, there is no need to do a tricky split jerk. Splitting legs forward-backward during jerk phase is risky move, because it can throw you out of balance, while the heavy barbell is right above your head. Rather slide your feet out to the sides to help bringing barbell to the overhead hold (**power jerk**) or simply do not move your feet at all and just go down into a shallow, above the parallel squat (**push jerk**).

Here is how you can perform clean & jerk style of lifting, divided in phases:

1. Lift barbell up from the ground and stand straight (hinge).
2. With barbell in hands, slightly bend knees to initiate next lifting stage (squat).
3. Straighten legs and pull barbell up with arms, to catch it on your chest (pull).
4. With barbell on your chest, bend knees again to initiate next lifting stage (squat).
5. Push with legs and arms to bring barbell up to over head position (push).

6. Hold barbell there with straight arms for a short moment of time.
7. Reverse all movements under control and put barbell down on the ground.

Don't worry about complexity of proper Olympic technique, because everyone should be able to lift things this way. There is no need to be a professional weightlifter just to be able to put luggage in the overhead bin on a plane or a pickle jar on the kitchen shelf. Besides, the Nature and intuition will take care of your lifting technique and improve it over time.

If you have never lifted anything Olympic style, start doing it slowly and with empty hands. Later on, use a very light weight and gradually progress toward heavier weights. When you get used to the movement, try lifting the same weight quickly. If you become proficient in this lift and capable of handling heavier weights, then you may start working on explosive lifting of a regular barbell. That will be the perfect time to try imitating technique of professional Olympic weightlifters. Here is an example of possible weight progress:

1. Single 1-gallon bottle of water ~ 8lbs
2. 2 x 1-gallon bottles of water (one in each hand) ~ 2 x 8lbs = 16lbs
3. Heavy medicine ball ~ 25lbs
4. Single heavy dumbbell ~ 30lbs
5. Big 5-gallon jug of water ~ 42lbs
6. Average heavy sandbag ~ 50lbs
7. 2 x heavy dumbbells (one in each hand) ~ 2 x 30lbs = 60lbs
8. Barbell ~ 70lbs and up

You must rely on momentum and inertia to be able to lift weights heavier then it would be possible with slow lifting. That's exactly what Olympic weightlifters do when they lift such enormous weights in a blink of an eye. To make it clear, momentum is object's tendency to continue motion in the same direction, without further influence of force. Inertia is object's tendency to resist changes in speed and direction, as well as tendency to remain still in place. Momentum helps barbell to continue traveling upwards during high pull phase. Inertia helps barbell to stay immovable at the chest level, while lifter drops down to catch it in overhead hold.

034. Walking

Not very powerful activity, but fundamental indeed.

Put on your most comfortable sneakers and go outside for a walk. It can not get any simpler then this. Walking is such an essential activity for human beings that everyone must practice it on regular basis.

Short Walks

If you haven't walked much in the recent past, start walking immediately and make it a daily habit. Do it at least once a day for 10 minutes. Even if you are too busy with everyday duties, you must find time for these short walks and they will do wonders for your health. If the weather is bad, walk inside your house. If you don't have enough space, walk in place or buy a small stepper machine.

Long Walks

Beside regular short walks, you should occasionally go out for a longer walk as well. Walk at least twice a month for 5 miles and set it as a bare minimum even if you are old and overweight. At the beginning, go very slow and make pauses. Once you get into the groove, switch from relaxed stroll to quick and steady stride without pauses.

Long walks are ideal for wearing ankle weights. Choose light ones, because their purpose is only to wake up sleepy leg flexors, tendons and ligaments. Ankle weights can not make your legs big and muscular, because targeted muscles are small and invisible. However, these muscles have a very important function in walking and running. If knees start to hurt, take the weights off and try wearing them again in a week or two.

Power Walking

Power walking is a very intense walking activity, performed at the highest walking speeds. It is manifested with characteristic vigorous arm movements. To be considered as walking, one foot has always to be in touch with the ground. If in any moment both feet end up in the air, walking becomes running. Practice power walking on paved roads or established and beaten country trails. Go for longer distances or circle around short distances for longer time, but even the shortest power walk will be very beneficial for your condition and health.

Hiking

Walking in Nature is called hiking. Beside walking, it includes breathing fresh air, enjoying calm sounds and seeing beautiful landscapes. First of all, it would be wise to buy a high-top hiking boots to protect your feet and ankles. Test them on short walks. If they are comfortable, plan your first hiking tour on a nearby dirt-road. Put a bottle of water and some snacks in your backpack and take a hike. You can go alone or with family members, friends or pets. Whenever you hike in a company, be prepared to adjust walking speed to others. Hiking on beaten paths is much easier then hiking on other surfaces, like tall grass, sandy beach, rocky trail, deep snow, uneven terrain, etc.

It's easy to make hiking a more productive activity for power development. Just increase the walking pace, put weight in backpack or ascend a steep hillside. Of course, you can

apply all these 3 intensifying methods at once, but hiking may become way too hard and certainly not enjoyable anymore.

Keep in mind that hiking on unmarked trails, off the beaten tracks and especially in the forests, could be quite dangerous. Pack enough food and water, wear protective clothes and be sure your phone has an offline functional GPS application. It's the one that doesn't need network connection to be able to operate as a navigation.

Trekking

While hiking represents one-day walk in the Nature, trekking is a multi-day walk with included camping for a night sleep. This means you would need a tent, sleeping bag and many other things. Obviously, everything becomes much more complicated and trekking may not be easy to organize for busy people. On the other side, if you like adventures and spending lots of time in Nature, then trekking may be a perfect activity for you.

Mountaineering

The most physically demanding type of walking is mountaineering or climbing mountains. Play safe and focus on mountaineering on beaten mountain trails. Forget all dangerous forms of mountaineering, like alpinism, rock climbing and ice climbing. These activities are extremely dangerous and eventually could be fatal. Furthermore, they require lots of different knowledge, lifelong experience and even proficiency in some very complex and tricky skills.

If you decide to try mountaineering, start with gently inclined hillocks and ascend upwards slowly. This is a very energy consuming activity, so you can do it in stages with frequent rests (whenever you need one). If this is not hard enough for you, go as fast as you can and put additional weight in backpack. This approach will drain your energy quickly and turn you into a powerful beast. Few water bottles as additional weight in the backpack should do the trick. You can drink water or spill it, if the weight becomes too heavy. Bring along a pair of walking sticks, to put more strain on arms and allow some relief for legs. Engaging arms and upper body muscles will make mountaineering a whole body activity. Finally, prepare adequate clothes for cold winds and scorching Sun at the top of the mountain.

The hardest form of mountaineering is ascending over snowy slopes in winter. Deep and wet snow will cause each step to be a challenge. Try it only if you are in perfect physical condition, well equipped and psychologically prepared for such hard task.

035. Running

Human body is made for running.

Scientists think that our bodies are constructed specifically for the purpose of running. Today we have cars, trains, airplanes and other means of transportation, but it wasn't always like that. In ancient times, humans has to use legs to move over long distances, but moving quickly was probably a matter of life and death. Think about running away from wild beasts, escaping floods and fire, hunting prey, fighting enemies, chasing women… ok, last one was a silly joke.

Jogging

This is the most relaxed form of running, but very efficient one as well. Pace should be slow enough, so you could have enough breath for conversation with jogging partner or partners. This also means that you will move relatively quickly and be relatively fugal with energy consumption.

Jogging is very popular in urban areas, but running between pedestrians and cars on crowded streets could be dangerous and unhealthy. Risk of being run over by a car and breathing polluted air are sufficient reasons to choose safer environments. If you live in a town, choose parks, river banks or athletic tracks rather then street sidewalks. Jogging in place at home is always an option, although a boring one.

Cross-Country Running

Whenever possible, go to the countryside for a healthy and enjoyable cross-country adventure. Seeing beautiful scenery and listening to the birds singing, while running on curvy country roads and forest trails, certainly will be an unforgettable experience. There is no dangerous traffic in Nature, no air pollution either and running on soft dirt will be more gentle on your knees and connective tissues then running on concrete or asphalt.

Running on Sandy Beaches and in Shallow Waters

Running barefoot is immensely good for your feet. The safest place to run barefoot is on sandy or pebbly beaches. Equally beneficial, but more physically demanding variant is running in shallow waters. If the beach or seabed are not safe for barefoot running, put on some minimalist footwear, like water shoes or aqua shoes. These shoes have very thin and elastic soles that will allow engagement of small feet muscles, but will protect you from sharp rocks, broken glass, thorns, etc.

Sprint

The fastest possible running style performed over short distances is called sprint. It is literally one and only activity for development of pure speed. Don't think too much about complicated techniques and proper limb geometry, because you probably won't be a professional sprinter. Anyhow, professional or not, everyone must be able to run fast.

Therefore, simply run as fast as you can and the way it feels natural to you. Practice it at least twice a month, with several maximal effort sprints in each session, separated with complete rests. Choose sprinting distance between 50 and 100 meters or yards. Never use additional weight when sprinting. It will slow you down, which is counterproductive and directly against the purpose of sprint. Remember, regular sprinting will build a **speed dominant power**.

Alternatives to Running

Running can not be substituted with anything. You have to run occasionally and there should be no excuse. However, if you are recovering from a running injury or want to try something different for variety, there are several excellent activities you can experiment with. They are all equally good for aerobic conditioning, enlargement of energy depots and power development:

- **Cycling**
- **Rowing**
- **Swimming**
- **Cross-Country Skiing**

When you are short with time or the weather is bad, simply run in place. It is an excellent alternative to real running and doesn't require any space or equipment. Running in place at home is perfect for testing new running shoes or hiking boots. It is also a nice opportunity to use ankle weights to strengthen leg flexors.

036. Jumping

Jump is a manifestation of bodyweight peak power.

While Olympic lifting represents explosive peak power applied towards the movement of an external object, jump represents explosive **speed dominant peak power** applied to the movement of our body.

Jump is an instantaneous action in which our body is propelled into air from the static stand or from the run-up motion. It could be quite useful in everyday life. Just think about reaching a fruit on a high branch or skipping over obstacles in the woods or jumping to the other bank of a stream. We all did a lot of jumping in the childhood. Later on, in the adult age, we forget about it and never jump again. It's a pity, because jump is a synonym for vitality and everyone should practice it from time to time.

Standing high jump (aka vertical jump) and **standing long jump** (aka horizontal jump or broad jump) are the best for power development. Both are performed from the standing still position, with no run-up. All you have to do is lower yourself to parallel squat and jump with both feet together. For high jump, try to jump as high as possible. In

case of a long jump, jump forward as far as possible. Focus on explosiveness and maximal effort. Swing arms vigorously to get momentum, because momentum will help you in jumping higher or farther. If your goal is maximal peak power manifested as the highest or farthest jump, avoid any additional weight. For strength dominant power, you should use additional weight.

As stated above, standing jumps are executed with both feet at once, simultaneously. It means both legs are extended in synchronicity. These simple jumps rely on pure leg power, with no complicated technique. If you wish to experiment, try athletic jumps executed from the run-up, like long jump, high jump and triple jump. Keep in mind that these jumps are official Olympic disciplines and involve some techniques.

From the power standpoint, complex or acrobatic jumps have absolutely no purpose. Therefore, you should forget about ski jumping, pole vault, diving (jumping into water), parkour, jumping on trampolines, skipping rope, skateboard jumps, etc. Beside being hard to learn and perform, many of these jumps are seriously dangerous.

Jumping exercises are also known as **plyometrics** or **Soviet shock method**. If additional load or weight is used for jumping exercises, such form of training is called **loaded plyometrics**.

037. Loaded Carries

Sure way to become tough as a countryman.

One of the most common everyday tasks for farmers is to move heavy stuff around the farm. In strongman world, such activity is known as **farmer's walk** and it is one of the official disciplines. However, this activity is not reserved for farmers and strongmen, because it is very natural and very functional, so everyone should practice it.

Of course, ordinary humans should use much lighter weights then farmers and strongman do. Pair of average dumbbells, kettlebells or weight plates will do the job. Alternatively, you can take 2 canisters or 2 buckets and fill them up with water or 2 gym bags and load them with books or stones. Then hold objects of your choice in hands and go for a stroll. Do it for time or distance. If you are training at home, walk around the house or just march in place.

Once your body gets adapted to regular farmer walks, you can slightly increase the walking speed. Avoid running with heavy objects in your hands at all costs, unless you are a professional strongman. Swift power walk and average weights will be all you need to become seriously powerful.

Farmer walk is probably the most common and most recognizable form of moving heavy objects, but there is a much broader set of similar activities, which are called **loaded carries**. Here are the best ones:

- **Farmer Walk / Suitcase Carry**: carrying 2 or just 1 object with handles.
- **Bear Hug Carry**: appropriate for bulky unwieldy objects, like barrels and stones.
- **Overhead Carry / Waiter Walk**: use 2 arms or 1 arm, good for posture.
- **Piggyback**: carrying a person on your back or shoulders.
- **Shoulder Carry**: put long wooden log or large basket on one shoulder.
- **Sumo Walk**: practical only for moving very heavy objects over short distances.

Although there are many more styles of loaded carries, they are ether modifications of those listed above or are insignificant for power development.

Loaded carries are manifestation of **strength dominant continuous power**.

038. Throwing

Launching objects into the air is another essential human ability.

Ancient men practiced throwing whenever they were hunting prey or fighting enemies. Different objects were used as projectiles, like stones, sticks, javelins and axes. To increase the throwing distance, they invented slings and bows, but such tools are not in scope of our interest. We will stay focused on launching objects solely with the muscle power.

Exercising throws is also known as **ballistic training**. While it may not be much beneficial on its own, ballistic training could be a nice additional or complementary training method for general power development. Throwing heavy objects leans towards **strength dominant peak power**. On the other side, throwing lighter objects falls into category of **agility dominant peak power**.

There are 2 distinct methods for manually launching objects through the air: throwing could be done with two hands or with one hand. Let's elaborate differences between these methods.

Two-Handed Throwing

Appropriate for larger and heavier objects, like medicine balls, sandbags, kegs, stones, wooden logs, etc. Here is the list of two-handed throws you can implement in your ballistic training program:

- **Overhead Downward Slam** (alternatively overhead throw for distance)

- **Underhand Upward Toss** (alternatively underhand toss for distance)
- **Chest Pass** (practiced in basketball)

First two throws represent very powerful whole body movements. On the other side, chest pass is quite weak in comparison and uses only arm power instead of the whole body. This means you can skip it and practice only slam and toss and resort to chest pass for variety and fighting boredom.

One-Handed Throwing

These throws are technically more demanding, but also more precise, if that is of your concern. They are practical mostly for quick throws of smaller and lighter objects, like pebbles. Here is the list of one-handed throws you can implement in your training program:

- **Pitch** (practiced in baseball, cricket, water polo, javelin throw)
- **Forehand Rotational Throw** (like throwing a discus)
- **Backhand Rotational Throw** (like throwing a frisbee)
- **Shot-Put** (ideal for heavy objects; Olympic version requires body rotation)

Be careful if you haven't practiced single arm throws lately. Tendons and ligaments of the shoulder and elbow area are particularly sensitive and vulnerable. If you have experienced any shoulder and elbow issues in the past, it would the best to avoid single arm throws all together. For building explosive whole body power, rather stick to two-handed throws.

Throwing for Power

You will often see athletes lightly throwing medicine ball at the wall, waiting for it to rebound, then catch it and do another repetition. While this may be a good exercise for coordination, it is not beneficial for power development at all. For power, you have to throw objects with all your might. Therefore, regardless of which throws you included in you ballistic training, always put your maximal effort in. If you want to measure the exerted power, throw for distance, then measure it and monitor progress.

Safety

As you can guess, throwing objects could be dangerous. Soft medicine balls or sandbags are relatively safe and can be used indoors, while hard objects may be used only outside. Wherever you are practicing ballistic training, always be sure there are no people around when you start throwing. Considering injury possibilities, two hand throws are significantly safer then single hand throws, although the throwing weight is usually heavier. This is certainly something to think about when planning a ballistic training program.

039. Impacts

Powerful hit can solve all kinds of problems.

Sooner or later, colliding with other people and objects in your surrounding is inevitable. That's why it would be wise to become capable of generating impacts, as well as be prepared to withstand the incoming impact forces. Besides, everyone should be able to perform simple impacts, like hitting nails with a hammer or chopping wood with an axe.

A word of caution needs to be said here. Light impact training can be very beneficial, but powerful impacts carry a significant probability of injury. Unlike ballistic training which can be brought near the maximum levels of effort and exerted power, the same approach should not be done with impact training. Therefore, you can hit hard, but never ever near your maximum hitting potential.

Body Impacts

Examples of body impacts in sports are body checking the opponent in ice hockey and hitting ground from judo throws. As can be seen from these examples, back side of the shoulder and latissimus dorsi muscle are the only safe area of torso for generating and receiving impacts. To train body impacts, stand by the wall and gently hit the wall with above mentioned area of your back. This exercise should toughen up your body and eventually, prepare you for movie-style door breaking.

Limb Impacts

Typical examples of limb impacts are kicks and punches in Muai Thai and other martial arts. If you can find a heavy boxing bag, you can hit it with fists, elbows, feet. shins and knees, but never without a protective gear. For the first few months, hit the bag very gently, so your arms and legs could have plenty of time to adapt to this type of training. If you don't have a heavy boxing bag, you can roll a few blankets and fix them to a tree with sticky tape. Be careful, because tree won't cushion hits like a hanging boxing bag. This type of training will build **agility dominant peak power**, but also could be practiced as a form of aerobic conditioning. Hitting a bag eagerly for 5-10 minutes will make you puff and pant, that's for sure.

Impacts With Hand-Held Objects

Beside building powerful arm muscles, vibrations transferred through the hand-held objects will strengthen your bones, joints, tendons and ligaments. This is the safest way to train impacts, because no body parts will come directly in collision with any object or person.

Practically, you would take some object in your hands and hit other objects with it. The most popular example of this type of impact training is hitting a tire with sledgehammer.

More work oriented example is digging ground with a pickaxe. Slightly dangerous activity is splitting wood with timber axe. If nothing else, just use a long wooden board or a heavy stick and hit the ground with it.

040. Sit-Ups

Important motion for completing balanced and fully functional body power.

Training sit-ups may not be mandatory in general sense, but it would be very beneficial to practice them at least occasionally. They are probably the best go-to exercise for training total lower body flexion. Sit-ups will activate flexion in abdominal muscles and hip flexors, while maintaining tension in knee and ankle flexors.

Here are the main reasons and situations that require regular exercising of sit-ups:

- Counterbalancing strength and power of lower body extensors.
- Improvement of leg lifting motion and knee height in sprint.
- Preventing shin splints.

The most significant purpose of sit-ups is counterbalancing huge power of antagonist muscles, which are in charge for the lower body extension (erector spinae, gluteus, hamstrings, quadriceps, etc.). Those are the prime movers in deadlift, squat, running, jumping, etc. Second reason for training sit-ups is achieving powerful and efficient running, particularly sprinting. Every runner must be able to lift his knees high enough and quickly enough or his technique will suffer. Third reason is reducing and preventing pain in the front area of the lower leg (aka shin splints), which usually caused by prolonged walking or running on hard surfaces or hiking downhill.

Perform sit-ups like this: lay down on the floor, anchor your feet under the sofa, comfortably bend your knees, go up fast into the sitting position, then lay back down slowly and repeat. Holding hands locked behind the head usually feels the most natural. Alternatively, you can explosively swing your arm forward in “hammering” motion, to give momentum to sit-ups. If you haven’t practiced sit-ups for a long time, start with slow motion for a week or two. Gradually progress to faster and explosive sit-ups. To make them harder, hold a medicine ball in your hands