Welcome to Natural Movement®.
Welcome to MovNat.

The 2-day curriculum is focused upon expanding your understanding of Natural Movement® and movement efficiency. The knowledge you’ll gain will help you incorporate MovNat training into your daily life and routine.

Day 1 will introduce you to the fundamental principles of MovNat and explore locomotive and manipulative movement aptitudes across a broad array of skills and techniques. Day 2 allows for the opportunity to reinforce techniques through practice and gain experience training in more complex environments and in training MovNat combos.

You will have the opportunity to:

- Learn the MovNat approach to training natural human movement skills for physical competence, efficiency and practical performance
- Understand our Movement Efficiency Principles and how to apply them to any technique or drill.
- Train the Fundamental MovNat Techniques and countless movement variations in walking, running, jumping, balancing, crawling, climbing, lifting, carrying, throwing and catching.
- Apply these techniques and key principles during challenging combos and obstacle courses designed according to your individual abilities and limitations.
- Learn the basics of movement video analysis and be able to analyze, correct, and improve your MovNat techniques.
- Be coached on how to program and implement your own MovNat training through technical training, Combos, and Opportunistic Training in nature, indoors, or in a city.
- Ask questions about lifestyle, diet and training regimen that will boost your results.
- Connect with like-minded people from your area, dedicated to their “True Nature” to be strong, healthy, happy and free.
- Join our MovNat Alumni Facebook Group with more than 1000 members.
YOU DON’T NEED TO BE FIT
TO MOVE, YOU NEED TO MOVE
TO BE FIT
WHAT IS MOVNAT?

MovNat is a fitness and physical education system based on the full range of natural human movement skills. The MovNat system trains physical competence for practical performance. MovNat aims at effectiveness, efficiency, and adaptability.
WHAT IS MOVNAT (CONTINUED)

Fitness is physical competence in responding to demands placed upon you by the environment and the situation. Environmental and situational demands together constitute the context in which practical physical performance will take place.

Depending on its complexity, the environment may contain a variety of variables such as the terrain, surfaces, distance, height, weight, or weather conditions. The situation may involve a variety of variables as well, such as the presence of safety or threat, the duration of the event and the time available, the physical and mental state of a given individual, etc.

In order to respond to such contextual demands with effectiveness, you will first and foremost need physical competence, i.e., movement skills and conditioning. From our perspective, fitness should primarily address physical competence. Ultimately, you will also need the proper mindset and some situational intelligence, which can be developed through training, as well.
THE 10 MOVNAT PRINCIPLES

1 - EVOLUTIONARY

The movements are evolutionarily natural.

The word “natural” is probably one of the most evident, yet most misunderstood words. What is natural is always popular and will always draw the attention and interest of anyone in search for authenticity and health. A truly natural approach to fitness means taking an evolutionary approach to fitness. This “evolutionary fitness” is practicing the full range of human Natural Movement® skills. Here, we mean physical activity based primarily on locomotive skills; secondly, on manipulative skills; and finally, on combative skills.

There are thousands of fitness programs and dozens of traditional physical disciplines out there, but only one original, evolutionarily natural human movement mode ... and it is to move naturally: walking, running, jumping, crawling, climbing, carrying, throwing, and so forth. If we were to invite a group of hunter-gatherers to visit a typical gym, they likely would be bewildered or even amused by the contrived patterns, routines, protocols and other fitness rituals being practiced.

2. INSTINCTUAL

The movements are mostly instinctual. We learn technique, develop proficiency, and turn them into skills. Nobody starts from scratch.

Moving naturally is instinctual – an innate behavior, and it is the second MovNat principle. Moving naturally is so instinctive in young children that they will run, jump, climb, move on all fours, etc. Even in artificial, man-made, urban, or indoor environments. They have no concept of social convention or other restrictions that might inhibit their instinctive movement exuberance.

Unfortunately, under constant pressure of social conventions, and the irresistible comforts and distractions of modern life and technologies, this instinctual drive
for moving will, in most cases, seemingly disappear. So reawaken your instinct to move...naturally. Whatever the causes, it is time to stop torturing our nature and begin nurturing it. It is time to re-acquire what is innate to us. Now is the time to start your movement exploration again.

Not everyone may be in great shape or naturally skilled and proficient at performing these movements, but at least no one really starts from scratch. Absolutely everyone possesses Natural Movement® abilities. Once you realize the powerful simplicity and amazing potential that moving naturally holds for your life and health, it will start to become your practice. Moving naturally may be instinctual, but moving efficiently is a skill that must be acquired and that demands mindful, consistent practice.
MOVNAT-ISM

Think with your whole body.
Move with your whole mind.
The movement aptitudes practiced belong to every human being regardless of origin, gender, age, or background.

In every corner of the world, given the freedom to do so, children cycle through and master the same species-specific movement stages as they develop, driven by instinctual curiosity and determination. Everywhere. On every continent and in every country.

‘The human body navigates its environment using the very same movement aptitudes, no matter the country, terrain, or family into which it was born.’ You can go anywhere in the world and see people move naturally. You can go anywhere in the world and ask people if they know how to jump, climb, carry, throw or defend themselves, and they will know what to do immediately. They may be in poor physical shape, they might be clumsy or frail, but they will still possess – barring any severe physical disability – the basic ability in all these movement aptitudes.

They may not move with great efficiency, but everyone, young and old, women and men, rich or poor, can perform some of these fundamental movements. We may have different skin tones, voices, eye and hair color, personalities, morphologies, etc., but our human anatomy and its biomechanical functions are the same, and they respond and adapt to the same natural laws of physics. They are all the outcome of the same basic evolutionary demands.

Movement is a universal human language.
Movements are directly useful to situations in life, both simple and challenging, that demand a physical response or performance.

The primary reason behind the existence of our universal, human species-specific movement aptitudes is the necessity to perform all of the tasks that are essential to natural life. At MovNat, our motto could be: ‘Show us how well you move and perform in the real world, and we will tell you how fit you are.’ The general population has been consistently conditioned to believe that “true” exercise must be compartmentalized, addressing either strength or cardio, and that it should target specific muscles independently and regardless of real-life applications.

The truth about fitness can be found in the reality of our biology: the body is not meant to work in isolation, rather, it is designed to work as a whole. And the psychological reality is that isolation drills are boring, because they are significantly divorced from how nature wants us to perform physically. Real fitness is functional. But you must understand “functional” as utility or practical capability, because it is manifested in practice and action. It is an essential distinction. Of course we need a functional body in order to perform practical actions. But the problem with functional fitness is that it is mostly focused on theories, which leads to performing drills that have little practical application.

When you focus on practical outcomes – let’s say the various ways to clear a particular obstacle or to manipulate a particular object – you are going to move and perform in the most functional way.

Training for practical goals means you’ve got the most direct and objective way to assess if your physical action is effective or not.
In MovNat, an unfit body or an untrained mind will be revealed immediately, regardless of physical appearance. *Looking fit and being fit are not the same thing.*
The movement aptitudes practiced are useful in times of emergency and contribute to safety.

The practicality of our universal, human-species-specific movement aptitudes is so essential that it can potentially save your life and the lives of others. The vital nature of such a competency is timeless. From a biological standpoint, fitness is the ability to reproduce. But you won’t propagate your genes if you cannot survive long enough to do so. You need fitness first for the primal, fundamental purpose of survival.

In a world where modern comforts are slowly but surely making even walking optional, you may wonder why you should bother practicing the evolutionary movement skills, like jumping, climbing, carrying heavy objects or even crawling. You practice, because even a hi-tech world like ours is not devoid of danger and it can strike at any time. In times of danger, you will never hear “Play ping-pong for your life,” but you may very well hear “Run for your life!” You may have to jump, climb, crawl or swim for your life, even fight for your life ... or do all of those things and more to help save the lives of others.

At MovNat, we want you to be strong physically and mentally. We want you to exercise the mental qualities for action – to be prepared, alert, responsive, self-controlled, brave, and ready and willing to help. We want you to embrace a realistic, no-nonsense, situational mindset in your physical training. We want you to leave behind the learned helplessness and self-imposed limitations and acquire indestructible self-confidence. One of the most effective ways to accomplish this is to train for optimal physical competence. This includes training broad movement skills and the conditioning associated with them, as well as acquiring a certain level of situational intelligence.

Ultimately, physical training is all about being life-ready.
BE STRONG
TO BE
HELPFUL
`The movement aptitudes are practiced in order to acquire and maintain an equalized, well rounded skill set and conditioning level.

Real-world, practical physical competency means a certain level of physical and mental preparedness. Some of those demands are predictable, some are not. You never know which movement aptitudes and physical or mental quality will come in handy. What’s the point if you can lift heavy, but cannot run? If you can run for distance, but not climb? If you can fight, but not swim?

With such a situational approach in mind, it is clear that no movement skill is optional and no physical quality is accessory. All of them are potentially vital. This is why the 6th MovNat Principle is unspecialized. As a species, we did not evolve with this rich variety of movement aptitudes so that one day we could become sport-specialists or elite athletes and gold-medal champions. Originally, we’re not movement specialists, nor could we afford to be. MovNat is not a hodgepodge system of specialized sports activities; it is the general practice of the full range of human movement.

The goal is to be well rounded...with sharp edges. We strongly encourage you to address your weak points rather than only specializing on your strong points and to broaden the scope of movements you can perform with ease and efficiency.

We encourage you to do this even if it doesn’t feel quite “natural” at first, even if it gets you out of your comfort zone, because we believe courage is about finding and addressing our weak points and transforming them to strength.
The first step to becoming strong is to know that you are.
The movements practiced are performed skillfully, i.e., with efficient technique, resulting in greater performance, higher energy conservation and safety.

It’s natural, but is it efficient? Anyone can run, jump, balance, lift and carry, etc... But will everyone move with efficiency or skill? Indeed, one can move naturally either poorly or skillfully, impacting both performance and the body negatively or positively. So, what is the difference between natural and efficient? The answer can be found when you reflect on the difference between an aptitude and a skill. An aptitude is a natural ability or tendency to do something. It is spontaneous and subconscious, but it is also basic and rough. A skill, on the other hand, is the ability to do something well. A skill is an expertise – it is mindful, advanced, and refined.

It is easy and common to correlate “spontaneous” or even “random” with “natural” and to confuse “natural” and “efficient.” At MovNat, we have observed time and time again that the spontaneous, Natural Movements of an untrained individual are most of the time random, but rarely efficient.

Moving naturally is innate, a primary nature in us, but moving efficiently is an acquired, second nature. There is a widespread notion that what is natural to us cannot be learned or taught. This must be one of the most romantic misconceptions of all. Until you’ve been able to transform basic, innate abilities to move into acquired, advanced movement skills, you will not be able to perform as well as you could or should. Practice does not make perfect. You will only improve if you practice efficiently.

Repeating a mediocre or harmful movement pattern over and over will imprint an inefficient pattern in your neuromuscular system, leading to inefficiency and even chronic injury. Unconscious incompetence can be very costly. Don’t take efficiency in movement for granted. Exploring your movement patterns is only the beginning. The practice of MovNat is based on knowledge, principles, techniques, and mindful practice which together allow superior movement efficiency.
Practice does not necessarily make perfect. Bad practice makes worse, while good practice makes better.
The movements practiced must adapt to the contextual demands of the environment.

Adaptability is the essence of evolution, of natural life. Biologically, you have a brain primarily in order to produce adaptable, complex movement. Not surprisingly, movement adaptability is at the very core of the MovNat practice. When you move or train a la MovNat, you must first and foremost move and perform adaptively.

So, you may ask, adaptability to what? Adaptability to context, of course! By context, we mean the combination of two things: the environment and the situation. Environmental and situational demands together form what we call “contextual demands.” The primary reason we need to be able to move adaptively is so that we can be responsive to the variables imposed by our direct environment in a manner that supports our daily and long-term survival. Those environmental demands stem from the terrains, the surfaces, the vegetation, the weather, etc., that you encounter as you move. This is the form of adaptability we emphasize the most in MovNat.

Why is that so important? After all, we are not living a ‘primal’ lifestyle anymore. And, in fact, given our modern sedentary, indoor-based lifestyle, why run, climb, or jump? Why move at all?

Most modern fitness methods are optional, moving naturally is a biological necessity. Responding to environmental demands is a biological necessity. Moving naturally means there is an adaptable interaction of your movements to the environment. It’s that simple.
If today even walking is almost an option,
Tomorrow it may be a mere notion.
The movements practiced can be executed cooperatively (by two or more individuals) in order to perform physical tasks that no single individual could achieve alone.

How often does your training necessitate cooperation with others to achieve a particular task? By cooperation, I mean more than just the psychological benefits provided by the encouragement, moral support or camaraderie with others - I mean performing with others tasks you could not perform alone. Training together and training cooperatively are not exactly the same. You are always training together when you are training cooperatively, but you are not necessarily training cooperatively when you train together.

Cooperative training is based on tangible interaction, communication, and synchronicity of physical actions and efforts among individuals. Competition is in human nature, but so is cooperation! Most people today presuppose that competition between individuals and groups is not only inevitable, but that it is the only drive behind human growth. However, the truth is that cooperation is also an inherent part of human nature, and it has an equal, if not greater, potential to make us stronger and more successful.

We also encourage our practitioners to train to be strong together, because we know and value the benefits of cooperation and cooperativeness. By strong together, we mean the synchronization of individual strengths into a stronger whole in order to perform a task cooperatively and/or to help each other. In cooperative settings, everyone is a hero.

Embrace a mindset and actions that can be sometimes competitive, but always and mostly cooperative. The MovNat mentality implies that my empowerment is everyone’s empowerment, and everyone’s empowerment is my empowerment. Fitness without the drive to better oneself as a person and help others is a shallow, meaningless endeavor. BE STRONG TO BE HELPFUL.
‘We are not more than others, we are more with others.’
The movements are regularly practiced outdoors in order to increase well-being and connection with nature.

This principle emphasizes the need for moving naturally...in nature. Nature is the cradle where we have tested human movement abilities over millions of years of evolution. While it is fundamental that you learn to navigate your body through any environment, including indoor environments, it is especially important that you learn to move your body through natural environments.

Natural environments typically provide more variety than indoor environments, which stimulates adaptability, alertness, and reactivity. Though you may never master your environment, you may learn to master how you will move through it. At the same time, if you're going to move naturally as your primary form of exercise, that doesn't mean that you must train MovNat in nature all of the time, as it can be practical and often safer to exercise indoors when the indoor venue is suited for adaptive, natural human movement.

The bottom line: move in environments that encourage the engagement of complex motor skills and where the ability to adapt efficiently to environmental demands is key. Science has proven that complex movement in complex environments stimulates and increases brain function, as it requires greater body intelligence and mind-body connection.

Nature is not a jungle gym. It is much more than that. Nature is where we all come from, what we are made of. We are nature. This reality has a tremendous impact on who we are and on our biological needs. Lack of interaction with nature and lack of movement have been shown to lead to sensory processing disorders. We need nature. And we need movement.

So what are you waiting for? Connecting to the nature that exists within you is the surest way to reconnect with the nature outside of you. The natural world is not only outside of you. You are the natural world, too. Move like it.
Though you may never master your environment...

You may learn to master how you move through it.
MOVEMENT EFFICIENCY PRINCIPLES

Teaching Efficiency, Made Simple
Awareness of the concepts and application of the principles below will create and increase movement efficiency. Greater efficiency will, in turn, support greater effectiveness in physical performance.

Understanding the Difference Between Effectiveness and Efficiency
Effectiveness is the ability to produce a desired result regardless of the method employed. In our case, effectiveness has to do with practical performance or outcome. For instance, being able to hoist yourself on top of a tree branch, regardless of the technique employed. Efficiency is the ability to be effective while performing better. For instance, climbing faster, conserving energy, and maintaining safety.

Efficiency Outcomes
Movement efficiency produces 3 essential outcomes which are highly desirable. Greater performance, energy conservation, and more safety.

Mind and Body Interaction
Efficiency requires mindfulness, which is the mental aspect of the execution, as well as technique, which is the physical aspect of the execution. Technique is the tool, and mindfulness is the attention necessary to use the tool well.

REQUIRED TO MOVE EFFICIENTLY

Breathing / Posture
Posture and breathing are closely related and support each other. A strong, proper posture will provide a significant mechanical advantage, optimizing the production and use of strength, as well as the ability to transfer momentum. Posture will also help balance, relaxation, and motor-control.

Tension / Relaxation
Tension and relaxation are necessary to maintain good posture and to execute the sequence properly with the right timing. There is obviously no movement without muscular tension, but movement also would not be possible if every muscle in the body was tensed at the same time. Muscular tension is essential to movement, but
MOVNAT IS TO FITNESS WHAT ORGANIC IS TO FOOD.
so is relaxation of the all the muscles that should be relaxed at a given time.

**Sequence / Timing**

Sequence regards the particular order that each body part follows as they combine together to form a compound or complete movement. Every technique follows a particular sequence of events. The more in sequence, the more efficient the movement. Timing concerns the optimal moment, speed, and duration for executing each part of the sequence of the movement. The better the timing, the more in sequence the movement.
If you’re wondering what moving naturally means for human beings, think of human species-specific movement aptitudes. Visualize how the human animal would move in nature for his survival – that is natural human movement. ‘Aren’t there more natural ways to move naturally than just running?’

Human beings possess locomotive skills such as:

1) walking,
2) running,
3) jumping,
4) balancing,
5) crawling,
6) climbing,
7) swimming.

In addition to locomotive skills, human beings also utilize manipulative skills such as:

8) lifting,
9) carrying,
10) throwing,
11) catching,

And combative skills, such as:
12) striking
13) grappling.
RUNNING

The running technique we teach recently gained more exposure and emerged in the collective consciousness as “natural running” or “barefoot running.” At MovNat, we prefer to call the technique presented below “efficient running.” The uniqueness of the technique is its ability to produce efficiency regardless of whether or not the runner is wearing footwear.

While internal forces, such as muscular action, certainly play a major role in the horizontal motion of the body during running, the primary force responsible is none other than gravity itself. Indeed, the constant external force produced by the pull of gravity is a much more powerful force in running than that produced by muscle activity alone. Therefore, it stands to reason that the ability to “harness” this propulsive force and the gravitational torque it generates is of the utmost importance for developing greater efficiency in running.

Technique

As in other movement skills, the formation of the running technique relies on posture and breathing, sequence and timing, and tension and relaxation.

Posture & Breathing

Postural integrity is the most important factor for harnessing the power of gravity in running, and it is paramount to the development of running efficiency. Consequently, it must be addressed first, prior to taking care of other considerations, such as stride, landing, cadence, etc.

Maintaining proper posture will optimize the use of gravity, muscle action, and muscle elasticity, as well as prevent unnecessary strain in the muscles, tendons, and joints, and assist in avoiding unnecessary and counterproductive muscular tension, particularly in the back and neck.

Stand with a “tall,” upright posture with the shoulders down and back. A good way to (self) assess proper posture is to stand against a wall, feet half a foot apart and the knees and elbows slightly bent; with the posterior surface of the body (heels, glutes, back, and the back of the head) making contact with the wall. Postural integrity will also prevent forward positioning or movements of the head, shoulders, or torso (sagittal plane), and will also prevent or limit lateral motions and leaning side-to-side (frontal plane), or overly pronounced rotation of the hips.
and torso (vertical plane). These are all conditions that result in “energy leaks” and dispersing kinetic energy in the wrong directions. The practice of movement skills and drills such as balancing, crawling, jumping, lifting and carrying, are particularly effective for improving posture, joint stability, and breathing.

SEQUENCE & TIMING

Leaning

The first part of the running sequence is to initiate a forward “fall,” or momentum, by making oneself lean forward out/off of balance, in order to trigger the gravitational torque that will result in the effortless forward motion of the body’s Center of Gravity (COG).

Beginning in a standing position, gently lean forward, bending from the ankles, while maintaining joint alignment from the heels to the head, making the line of gravity immediately move in front of the feet (normal points of support in a standing position).

Quickly tuck one knee up to waist level, the foot pulled back to the same level of the opposite knee and positioned under the hips, resulting in a one-leg support on the ball of the foot with the heel off the ground and moving in a state of horizontal acceleration. This movement, by its very nature, forces you to quickly change the point of support to the opposite leg.

Landing

Upon landing, foot strike should occur directly under the hip, with body weight centered over the foot. The ball of the foot should reach the ground first, immediately followed by the heels lowering to the ground, and then quickly recoiling off the ground as the center of gravity moves forward and beyond the support of the foot again. This sequence happens very quickly, with the heel almost instantaneously following the ball of the foot to the ground, though connecting with it very briefly and almost weightlessly, and bouncing off it again in a “spring” effect. Such foot placement upon landing facilitates effective dispersing of impact forces and the loading the lower limbs with elastic or “strain” energy, which is then easily transferred to swiftly leaning forward and propelling the body into horizontal acceleration again.
During this phase, the knee bends slightly, aiding in absorbing the forces of landing and in re-engaging the body in the use of gravitational torque.

**Leg Pull**
The leg pull is the ability to pull the support foot from the ground, on time, during the leaning phase, in order to bring it forward for the next landing. The leg pull begins just after the support foot becomes airborne and as the opposite leg moves forward, and it continues as the opposite foot lands. The heel is being pulled towards the rear (the faster the running, the higher the heel is pulled) and forward while the knee travels forward.

The efficient way to land is on the ball of the foot with the foot under the hip, and not far ahead of the center of gravity. Compared to the typical heel strike running (and landing) where the back leg is often “trailing”, the cadence (or frequency of strides) of an efficient style is higher. This is only possible if the trail leg is actively and swiftly pulled forward immediately after the landing phase.

Actively pulling the leg forward does not imply that the technique involves forcefully pushing off the other leg and jumping forward (as in a bounding hop); it implies that the technique is performed by swiftly pulling the trail leg forward as the front foot is on support. This motion allows, as the forward lean is continuously recreated and the horizontal acceleration through the pull of gravity maintained, the rapid turnover in point of support from foot-to-foot. By decreasing the time of support spent on either foot, you will strain the muscles less and benefit more from muscle elasticity, increasing your running efficiency.

**Cadence, Speed, & Stride**
Stride frequency, also known as rate or cadence, remains relatively the same at any speed on flat ground, increasing significantly only for an “all-out” sprint. Otherwise, a cadence of approximately 170-180 landings-per-minute (LPM) is considered to be an optimal stride frequency for a relatively skilled runner, regardless of individual morphology.

As a reminder, gravitational force is the primary force for propelling the body in a horizontal direction. If the goal is to run faster, it is necessary to increase the degree of forward lean, while maintaining postural integrity from ankle to head and generating an acceleration through the gravitational torque.
As the forward lean increases, stride length (distance between 2 landings) will change and consequently, speed, as well. A great discovery and learning exercise is to maintain a set cadence, but change the degree of forward lean (greater and lesser) to observe how this subtle change affects stride and speed.

**Tension & Relaxation**

As in the execution of any technique or movement, selective tension, or the ability to produce the appropriate amount of muscular tension in the target muscle(s), is essential to the development of greater efficiency. Applying tension selectively facilitates relaxation in the body. Unnecessary tensions are most frequently found in the upper body (shoulders, neck, and trapezius). They are not always visible as an outward physical manifestation that can be observed. The cause for these tensions are the result of things like improper posture, improper breathing, a lack of flexibility or muscle elasticity, pain during movement, as well as mindset or psychological states. Naturally, postural integrity and proper breathing are the most important variables in preventing unnecessary tensions.
BALANCING

Balance is at the root and core of any movement. In that sense, any movement could be called “balancing,” be it statically, while holding a position, or dynamically, while actually moving.

In MovNat, we consider balancing the skill of maintaining balance when holding a position or moving is significantly challenged by the environment itself. The skill of balancing lies in the balancing technique, and the balancing technique constitutes the balancing skill. Because it is an adaptive skill, posture, foot and hand positioning, level of center of gravity, speed and direction will change in relation to the environment and the situation, making for a broad array of movement variations and training drills.

While balance training will not dramatically improve muscle shape or your metabolic conditioning, it is a highly practical skill which will also considerably improve joint stability. Balancing techniques and drills provide you with great opportunities to practice and develop focused and mindful movement, patience, and to fine-tune the connectedness between the mind and the body. The perception and management of balance is based on three fundamental and interrelated elements:

1. The Physical Mechanism
To be balanced, your body weight must be equally distributed over an imaginary line that extends vertically from your center of gravity (COG) to the surface of support (environment) and above, or between, the points of support (body parts) holding the body on its SOS. This imaginary line is called “line of gravity.”

The location of the COG is constant regardless of the position of the body, and is situated slightly behind your navel (it may slightly vary, depending on your morphology). The Points of Support (POS) (feet when standing, feet and hands when walking on all fours, buttocks when sitting, etc.,) will support your body weight (BW) by opposing gravity and the reaction force of the ground on the same vertical line (opposite direction).

Anytime you move, you need to shift your body weight and re-distribute it equally over the line of gravity in order to regain balance. If you are carrying a load, your
COG and the COG of the load merge and become a combined center of gravity (CCOG).

2. The Biofeedback Mechanism
To be able to maintain balance, the body needs some information relative to its position in space and to the ground (or the surface of support - SOS - which is supporting your body). The information is provided by:
   a. Exteroception: i.e. the perception of the environment (SOS) through the body parts by which body weight is supported. Such perception may be altered by gear (shoes, gloves, clothes).
   b. Vestibular system: the inner ear is the main organ for balance, based on the position and movement of the head. Try balancing while rapidly moving your head in different directions.
   c. Vision: visual reference is very important for balancing. Balancing with your eyes closed is significantly more challenging.
3. Posture

Posture is essential to balancing skills. A proper alignment or disposition of the joints in the body, especially the spine and its relation to the hips, can provide a significant mechanical advantage and allow you to better manage the distribution of body weight and the placement of the COG above the line of gravity. Aligned joints and steady joint disposition will also reduce unnecessary muscular tensions and prevent wobbly and compensatory motions.

Regardless of how you stand and move and the nature of the surface you are standing on, you will need to be mindful of the SOS, the positioning of your points of support, postural integrity and joint stability, and selective tension. Those principles will apply to balancing forward, backwards, sideways, with high or low center of gravity, when balancing on all fours, etc.

Perception of the SOS and positioning of points of support

Balancing takes place from the ground up. Without strong, stable points of support, posture becomes immediately compromised and unstable, and balance may be lost. But one cannot secure strong and stable points of support before having a good perception of the SOS. One must feel the SOS and obtain the necessary feedback indicating what will be the optimal position for the foot before shifting body weight onto it.

Shifting body weight prematurely onto a point of support that is not positioned correctly will immediately make posture become wobbly and produce significant compensatory movements (counterbalancing), or the complete loss of balance. Placing the ball of the foot first is an effective way to engage with the SOS before shifting body weight. It provides the finest feedback and the best mobility for the foot, allowing it to better adapt the positioning of the rest of the foot on the surface, as well as the repartition of the body weight on both feet while shifting body weight towards the front feet. Depending on the SOS, the position of your feet and ankles may need be angled. It it is essential to try to keep them forward and straight whenever possible, however, as joint alignment helps greater postural integrity, which in turn is conducive to greater stability.

Postural integrity and joint stability

Most people try balancing with their arms raised. Such a counterbalancing strategy involves wide and usually jerky movements, which too often generate even
more counterbalancing motions in return. Needing to constantly counterbalance using the arms is too often a compensation pattern for bad posture and stability impairments in the rest of the body. For skill development, we will learn to minimize the use of the arms when balancing, which demands that you maintain balance through the core and the relation between your feet, ankles, knees, hips and spine.

Following the placement of well-positioned, strong and stable points of support, the overall posture of the body should be as vertically aligned as possible, particularly on the frontal plane. The key is to stand with an upright posture and with relaxed shoulders and arms. Stability of the joints on the front plane, however, is essential and will require smaller adjustments. The prevention or reduction of wobbly, lateral motions on the frontal plane is crucial to minimizing compensatory movements and decreasing the necessity to counterbalance. The distribution of body weight on each foot may vary, and motions on the sagittal plane may occur, but those are relatively easy to manage, or even helpful. For instance, flexing the legs and lowering the center of gravity, or hinging, can help increase stability on the frontal plane.

Selective tension
Learning to release tension in the arms and shoulders will imply increasing tension in the muscles responsible for postural integrity and joint stability. By increasing tension only in the muscles necessary to maintain joint stability, posture will undergo much fewer and smaller compensatory movements during the balancing action, and in fewer muscles, decreasing the overall amount of tension.

Last, in addition to learning to rely on postural integrity and joint stability instead of using the arms for counterbalancing, keeping the arms down and relaxed is useful for practical reasons. These include the ability to catch, throw, or carry a (relatively) light object while balancing, swinging your arms in a given direction before jumping, or communicating through hand gesture. The more you rely on your arms for balancing, the slower or more difficult the transitions to other skills, and the more compromised the ability to combine balancing and manipulative skills becomes.
Counterbalancing
Whenever the body finds itself overly off balance, legs and arms will be used for counterbalancing. Counterbalancing is a compensation pattern utilizing upper and lower limbs to shift and redistribute body weight, thus helping prevent you from losing balance entirely. Counterbalancing using the arms, the legs, or both should be temporary and done on the spot prior to resuming progression forward. Attempting to move forward again before regaining total control of one’s posture and balance and while still being engaged in such a compensation pattern, is likely to lead to losing balance completely. Regain balance as soon as possible by restoring proper joint positioning and body weight distribution, allowing both legs to be on support again and the arms to be relaxed, then resume forward motion.

JUMPING
Following any feat of flight, though, an individual should be well-prepared to land, as the landing is, in fact, the most important aspect of jumping. Landings challenge the trainee to react and adapt quickly to the surface upon which they intend to land. Without the ability to effectively absorb and disperse the forces of impact, jumping can quickly exceed any acceptable risk-to-danger ratio. Therefore, we are addressing the landing skills first. Proper landing should be taught prior to teaching how to jump efficiently.

As a result of developing skilled jumps and landings, a trainee can enhance total work capacity, power, and the confidence to explore more complex aspects of the environment and their surroundings. The act of practicing jumping skills, can alone, develop several physiological qualities that lead to performance enhancements for a broad variety of sports and athletic pursuits.

While the numerous advantages of jump training are no doubt beneficial for sport- or activity-specific performance and conditioning goals, it is important to never lose sight of the primary importance for honing the fundamental jumping abilities: translation into practical skills that are essential to navigating difficult and complex environments.

Landing on a Flat Surface
Whenever possible, a landing should ultimately conclude with both feet making full contact with the ground. Initial contact with the ground is made by the toes
and balls of the feet. Once initial contact has been made with the feet, the legs act as shock absorbers as they naturally move into flexion while engaged in eccentric muscle contractions that serve to “break” the controlled fall of a jump landing.

**Base of Support**
Remember to allow the heels to come into contact with the ground, providing a more sturdy base of support (BOS), and facilitating in the recruitment of the entire posterior chain in order to apply a greater level of control during the descent into a squat position, with shoulders in line with the knees, to absorb the landing.

During the final descent phase of the landing, the arms will swing forward and up to create a counterbalance movement that is used to regain balance while descending into the bottom of the squat landing (sitting back) position. Sitting back into the squat position allows the individual to position the body’s center of gravity in such a way that it allows for optimal selective tension whereby the muscular and skeletal systems work synergistically to “catch” the jumper during the landing. Once control has been reestablished during the landing, ascend into a relaxed-stance standing posture.

**Broad Jump**
*Practical applications:* This technique is employed when there is no necessity or possibility to take extra steps in order to gain momentum prior to takeoff. It is also used when a pause is necessary before initiating the jump, in order to ensure greater focus and a more efficient and controlled landing.

*Description:* Begin with a nice, tall posture. The head may lean forward a little, in order to better maintain eye contact with the landing surface. Bend your knees and push your rear back, while the upper body will lean forward, arms relaxed. How much the legs bend and how much upper body leans forward depends on the distance. Lean forward more if you want to jump further. In a relaxed motion, pull both arms back behind your body then swiftly swing them forward and/or upward Body Weight Transfer (BWT) then immediately push off your legs and fully extend your hips and legs to jump.

Although, to the naked eye it looks like the arm swing and leg push off are taking place simultaneously, the first momentum is generated by the arm swing
immediately followed by the main muscular action. Arms have already passed in front of the body when the legs and hips start extending. The amplitude and velocity of the arms swing depends on the distance you want to reach. Once you have left the ground, release the tension in your arms and return them to your side, preparing them for the landing.

**Vertical Jump**

*Practical application:* This jump is used to jump onto something, or to jump over an obstacle that is higher than the ground, but very close from where the individual is standing. It is also used to extend the body vertically and reach something overhead, in order to hit or grasp it.

*Description:* The beginning position for this jump is the same as that of the broad jump. Jump onto or over something: As the hips powerfully drive forward and the legs extend, both the torso and arms will fully extend upward, generating a vertical momentum. As the feet leave the ground, the knees will be forcefully tucked
towards the chest in order to bring the feet as high as possible. Jump and reach: If the goal is to reach something with the hand(s), the knee tucking is unnecessary, and the legs will remain extended below the body.

**Split Jump**

*Practical application:* This technique is used when needing more momentum from a standing position, with no possibility to step into the jump. The combination of Body Weight Shift (BWS) and Body Weight Transfer (BWT) will compensate for the loss of power when pushing from a single leg. It is also used when stepping or running into a jump without breaking or losing momentum.

*Description:* Beginning from a split stance, start with your weight predominantly on your back leg, with an upright posture and arms down at your sides or even slightly behind you (mimicking an approach). First, BWS over the lead standing leg, upper body leaning forward. In a fluid motion BWT, swing your trail leg and arms forward and up simultaneously, generating momentum right before
exploding off of the working leg a split second after. Once in the air, bring the trailing knee forward and regroup both knees so they are aligned, bring both arms back down, ready for landing in a similar stance as when preparing for landing after a 2 foot broad jump.

CRAWLING AND ROLLING

By crawling we imply all types of “ground movements,” i.e., motions happening when the whole body is very close to the ground or the surface of support (SOS) and with a very low center of gravity (COG). Crawling techniques may involve supporting the body on the feet, hands, knees and elbows, shoulders, the back, and even the rear, with the body facing up or down.

The practical or situational applications of crawling movements are numerous: passing under or through low or narrow obstacles, lowering the center of gravity and maintaining balance when the terrain is steep or slippery, moving while hiding or stalking, dispersing impact forces after a jump, absorbing a fall, etc. As these types of movements require us to move our entire body with a significant level of coordination, crawling movements are a fantastic tool for helping to restore integrated and synergistic movement between the upper and lower body. Crawling movements can be a great way to reestablish function and motor control, as well as improve core strength, posture, and breathing technique. Crawling movements can be quite physically strenuous, while simultaneously being non-intimidating and safe.

In this section on crawling, we also cover rolling, which is a skill that is useful for dispersing impact forces and smoothly transitioning from stand-up positions to ground movement. Rolling is useful for enhancing proprioception, confidence, and relaxation, while also being fun for the trainee.

CRAWLING TECHNIQUES

Contralateral Quadrupedal Movement

Crawling patterns should occur in a contralateral fashion in order to maintain the center of gravity between at least two points of support. This prevents excessive rotation or falling. The exception being those individuals who possess superb rotary stability.
Knee-Hand Crawl (prone, hands and knees)

*Practical application:* This pattern is used when there is a necessity to pass under a low obstacle, for stalking, or when, for safety reasons, one has to remain in close contact to the ground while moving. It provides stability and conserves energy, as the majority of the body weight (BW) is supported by the knees; however, locomotion using this movement pattern is slower when compared to moving using the feet and hands.

*Description:* Crawling on hands and knees is an excellent way to establish contralateral coordination and movement patterns in beginners and in those who are very deconditioned. This technique facilitates learning and practice without creating excessive fatigue, and it requires minimal strength.

Get into the quadruped position, knees in contact with the floor. The knees should be directly below the hips and the hands positioned directly below the shoulders. When viewed from the side, it will appear as though the joints of the shoulder and torso, hip and femur, and knee all form roughly 90 degree angles. Begin the movement by lifting the opposing knee and hand (for instance, left knee and right hand) and placing them approximately 6-12 inches forward in the direction you are moving. The front (lead) knee should touch or almost touch the wrist of the same side (trail hand). Repeat this motion, alternating sides.

Foot-Hand Crawl (prone)

*Practical application:* Locomotion in a quadruped position, on feet and hands, is useful when having to pass under a low obstacle, for stalking, or when, for safety reasons, one must remain in close contact to the ground while moving. It is a fast way to crawl, allows for rapid changes of direction, and for making fast transitions to ground or standing movements. It is a great way to move uphill when the terrain is very steep, and to some extent, becomes similar to climbing in this situation.

*Description:* Setting up for the foot-hand crawl is the same as the knees and hands crawling pattern, with the exception that the knees are just above the ground, making the toes and balls of the feet the new rear points of support. Begin the movement by moving the opposing arm and leg forward. Stride length may be a bit larger using this pattern. The knees can be maintained either directly under the torso or allowed to flare out from the side of the body. In either variation, the knee should touch or come close to the elbow of the same side.
Remember that when contralateral coordination cannot be maintained, either stop the movement or regress to the hands and knees. Attempt to maintain proper posture during the movement by keeping a relatively flat back; however there will be some degree of flexion and extension in the back during the movement. Hands and feet should point forward or slightly outward at all times.

**Forward Roll**

*Practical application:* This technique is used as a fast and smooth transition between a stand-up position and a ground position. It can be used when one is off balance and needing to quickly and safely catch and recover with a controlled fall. It can also be used as a way to disperse impact forces after a depth jump when space is lacking for a power roll.

*Description:* This roll is a basic roll, which is only effective for smooth transitions to the ground upon a low impact jump or a fall, and ideally, it takes place on relatively compliant grounds, such as grass or sand. For high impact jumps or on hard surface, there is an advanced variation which is not covered in the entry level MovNat certification.

The goal of the technique is to protect the back of the head and the spine, avoiding an excessive impact when rolling on any kind of terrain. Initiate a basic forward roll by beginning from a standing position lunge and bend slightly forward. The feet can be in a staggered position or side-by-side. If one foot is forward, roll onto the shoulder on the same side. If the feet are parallel, roll to either side.

Bend forward at the hips and place the hand and forearm on or close to the ground (depending on individual flexibility). Tuck the chin, and move slightly forward in order to lose balance, and then gently roll onto the shoulder, across the back in a diagonal direction towards the opposite hip.

As soon as the legs become airborne, move them into a figure 4 position (one leg straight, the other one bent at the knee, at 90 degrees from the other). Increased forward momentum (the roll) will facilitate transition to an ending position in the bottom portion of a lunge: one foot and the opposite knee both firmly planted on the ground. This is the ideal position to stand up without using the hands or losing balance and becoming disoriented. Climbing
CLIMBING

Climbing is a movement skill that develops abilities which are beneficial for overall physical conditioning; however, that is not the only value climbing has to offer. There is something unique and inspiring about moving above the ground. Overcoming an obstacle that is above ground, despite the challenge of one's own body weight and gravity, inspires great joy and confidence.

Climbing teaches trainees to develop their perception of points of support, selective tension, proper timing, and how to leverage their body weight in relation to gravity (Body Weight Transfer skills) for the most efficient movement. In addition, the practice of climbing in a training program creates an easily scalable training modality for improvement in upper body strength, increased core strength, improved mobility, and increased work capacity for all fitness levels.
Strength and Mobility Considerations
All climbing skills have to be appropriate for every individual. It is important that an instructor consider the trainee’s thoracic and shoulder mobility when selecting candidate exercises. For instance, trainees who have developed overly kyphotic posture (rounded back) or lack overhead shoulder mobility may experience discomfort or injury from movements requiring them to hang with the arms in a position directly overhead.

Other trainees may have good posture and mobility, but lack the fundamental strength (upper body, grip, or abdominal) required for some of the climbing movements. For either situation, the instructor should scale the climbing drills accordingly to allow for improvements in mobility and strength.

Vertical Surfaces
Generality about foot placement in vertical climbing: Climbing a vertical surface relies heavily on distributing as much body weight (BW) as possible toward the feet and as little as possible toward the hands, as well as keeping the arms lengthened whenever possible. Maintaining focus on strong points of support in the feet, as well as moving predominantly utilizing leg strength, is essential to minimize energy expenditure. The smoother the surface, the more essential it becomes to create opposite forces to maintain traction by keeping the hips low.

Extending the legs and lifting the hips over the feet too much will decrease pressure towards the surface base and decrease traction. Your weight will press downward and work against your climbing efforts. This will most likely result in great tension in the upper body and early fatigue. In most cases three points of support will be maintained for optimal balance, but some transitions may rely temporarily on only two, which requires greater balance.

Climb-Up
Practical Application: This technique is used from a hanging position from a vertical surface, to extend oneself upward and reach a higher point.

Description: From the hanging position, keep the arms lengthened and walk the balls of the feet towards the knee or waist level. The higher an individual can place the feet, the greater the force that can be generated through legs. Depending on the surface and the grip, the legs can be parallel or staggered, flexed or extended.
From this setup, drive through the legs and feet (or push off the surface with the legs if beginning with the legs in extension). As the legs are extended, continue driving and generating force through the balls of the feet. Keeping the heels high, drive the hips forward and extend one arm, or both, to secure a higher point of support with the hand(s).

**Foot Pinch**

*Practical application:* This technique is used for climbing relatively narrow vertical surfaces that are smooth and do not provide holds (recesses or bumps) for the feet and hands. When mastered, foot-pinched stance is a very strong position, allowing one to rest and recover from the exertion of the climb or for observation. As the climbing surface becomes too thick or wide, the technique is no longer of practical use, primarily as a result of the weakening of hand and foot grip strength. In such a case, the ipsi climbing technique, which is addressed in our advanced certification curriculum, will be an effective replacement.

*Description: (going up):* Begin by sitting with the hips close to the pole or tree. Grasp the pole or tree with both hands placed at approximately face level. Place the heels and arches of both feet (depending on the vertical surface, the section of the foot most used will vary) on the pole or tree at a level above the hips (individual differences in flexibility and mobility will dictate how high this level can be). From this position, tighten the grip, and contract the muscles in the upper back and shoulders (latissimus dorsi, teres major, rear delts, etc), lifting the hips just above the ground.

Once the hips are lifted, walk the hands up the pole or tree one at a time. After moving the hands upward quickly, press the bottoms of both feet into the pole or tree to lift the hips up and away. As the hips lift up and away, very quickly lift and replant the bottoms of both feet to a higher position along the pole (jumping). Repeat these actions of walking the hands, quickly lifting the hips, and replanting the feet. Be sure to maintain tension in the grip, but maintain relaxed arms. Remember to keep the hips below the feet in order to maintain the force generated by the body weight as a means for “pinching” the feet to the pole or tree.

*Description (going down):* On the way down, rebuilding strong points of support (POS) and smoothly “sitting down” into the foot-pinched position is crucial. If the foot placement is incorrect, or if the hips and knees are not placed in the right
position quickly enough, it is likely that the pull of gravity and lack of strong POS will cause the trainee to slide down. Climbing down in the foot-pinch is even more technical than going up!

**HORIZONTAL BAR**

**Deadhang**
The deadhang is a transitional or resting hang-hold position, where the body is vertically positioned below the surface from which it is hanging. The body is fully extended, with legs and arms also in full extension. The position may utilize both hands or one hand only, in a pronated or supinated position, or it may also employ a split arm position.

**Elbow Swing-Up**

*Practical application:* The elbow swing-up is a variation of the sliding swing-up, which allows you to regain an upright posture faster and to transition more quickly to a higher position on the SOS.

*Description:* The technique and setup is very similar to the sliding swing-up, except that the upper body will be supported by the forearms, and the direction of the leg swing is more vertical. After swiftly swinging the leg downward, immediately continue this momentum by explosively pulling through the forearms, aiming the head and shoulder over and close to the bar, in order to re-distribute body weight over the surface of the bar as much as possible and as fast as possible. Continue leaning the upper body forward over the bar until balance is established from above.

Upon regaining support and balance above the bar, one variation is to rotate the elbows inward and open the forearms outward. This motion will reposition the forearms perpendicularly to the SOS, primarily to prevent them from sliding forward and down when the surface is narrow, and secondarily to set up for a faster transition for placing both palms on the bar and moving the arms into full extension into a locked out position.
LIFTING/CARRYING

It's been said that strength is like a glass, and everything else is what you put into the glass. So having a greater level of strength essentially allows you to do more. This is a somewhat incomplete analogy, though, as the relationship between movement and strength is generally reciprocal. High quality of movement supports a high quality of strength, and a high quality of strength will support a high quality of movement.

Thus, the importance of activities like lifting and carrying goes beyond their immediate practicality in daily living. Manipulative drills facilitate greater levels of strength and power, both of which are immediately practical, but also supportive of greater and more complex movement capacities.

Contrary to a common misconception, the ability to lift and carry effectively does not rely solely on strength, but also on efficient technique, including posture, sequence, timing, and selective tension. Balance and proper distribution of weight...
are also tremendously involved in those skills, as manipulating external loads will impact your own center of gravity.

**Strategies to Develop Tension and Manage Heavy Loads**
The following strategies and cues work twofold: first, they help you maintain a strong posture in order to protect the back from injury while lifting, and second, they help you to lift heavier loads. All of these strategies rely on mechanisms within the body that assist in preventing us from producing so much force that we injure ourselves. These mechanisms are best understood as a central governor for the body. The following (below) all affect specific variables that are instantaneously monitored by the nervous system when deciding when or when not to apply the governor’s brake on our ability to produce force and tension. For example, the first three variables allow one to become more rigid throughout the torso and to better protect the spine from the forces the body is about to produce. Development of tension throughout the body is another critical difference between locomotive drills and manipulative drills. Without external loading, we are able to move with greater speed and efficiency when we utilize the principle of selective tension; however, when lifting heavy external loads, generating selective tension throughout the body will enhance safety and support heavier lifting.

**Abdominal Bracing:** increases rigidity of the torso. **Valsalva Maneuver:** increases intrathoracic pressure and subsequently, rigidity. **Forceful Exhalation:** creates contraction of the intercostal muscles and diaphragm. **Toe curling / Fist clenching:** allows for more forceful muscular contraction.

**Deadlift**
*Practical application:* A deadlift allows lifting an object that is sitting on the ground; for instance, to lift an object in order to free something stuck under it. Though the deadlift can be performed in isolation, it ensures powerful transitions to a clean or a snatch, which are other forms of lifting involving the deadlift. Most of the time, it will be followed by another lifting technique, before carrying or throwing.

*Description:* Begin with a strong stance, both feet placed around or behind the load. Maintain a strong posture, “big” chest and “flat” back throughout the lift. Initiate the movement by hinging at the hips and pushing your butt backwards.
Reach down and bend your knees, allowing you to grip the object which is beneath you or as close to you as possible, and maintain your shoulders in line with the grip, arms extended. Depending on the object, you may externally rotate your arms to “link” up and activate the lats in order to get a stronger grip.

Raise your rear slightly, take a deep powerful breath in, then slowly and forcefully exhale while you drive with your legs to stand up. Unless the object presents you with a challenging grip, keep your arms extended during the entire motion. Once the load passes the knees, extend your hips forward to meet the load, so that the load stays as close to your body as possible. The chest and the hips should rise at the same speed, so that there is not too much stress placed upon the lower back.

**Lapping**

*Practical application:* Lapping objects is a practical method to make adjustments in grip or positioning of the object when the object is too challenging to deadlift or clean and before standing up and carrying it.

*Description:* The set up is similar to the deadlift. Once the load passes your knees, narrow your stance, squat lower, and set the load on your thighs. This position should be relatively comfortable. From this position, you will be able to manage your grip so you can transition to either a waist carry, a chest carry, or a shoulder carry.

**Clean**

*Practical application:* This lifting technique is a preparatory move used prior to a carry on the chest or shoulder, or to be able to stack it or throw the object. Depending on the height at which the object is being picked up, it may incorporate a deadlift, or be a “hang clean” when the object is already off the ground and hanging above the knees before the lift.

*Description:* We will use the example of performing this technique with a sandbag. Depending on the object manipulated, some details of the execution may vary for adaptability.

Straddle the sandbag between the feet, hinge down into forward flexion and grasp the sandbag, hands in a prone position. Initiate the lift just as you would to execute a deadlift. When the hands and object reach approximately knee height, drive the hips forward towards the load and powerfully straighten the legs into extension. As the body moves into an upright posture, continue generating
upward momentum by swiftly rising up on the balls of the feet and shrugging the shoulders. From the shoulder shrug position, pull the object to chest height, finishing with elbows bent and pointing outward. If the velocity of the movement is sufficient, the sandbag will continue its upward trajectory while the body is simultaneously, but quickly, descending into a squat position, which will enable the sandbag to be received (or “caught”) from a lower, stronger and more stable position.

The heavier the load, the faster and deeper the transition should be into the squat (catch) position. Simultaneous to lowering the body’s center of gravity by moving into the squat position, promptly internally rotate the elbows, and squeeze them closer to each other. This will allow you to slide your hands outward underneath the sandbag. Both hands in a supine position and elbows pressing against the chest will strongly support the load.
Upon receiving the load from the bottom against the new hand position, you will need to tense the arms, chest, upper back, and midsection, and slightly lean the torso backward for a well aligned combined center of gravity (CCOG) and to develop a postural mechanical advantage.

Once the load has been received successfully, come to a standing position, fully erect, with glutes and midsection engaged and generating an isometric contraction.
THROWING AND CATCHING

Throwing and catching are two of the most dynamic and varied skills of the manipulative movements domain. These skills require a great amount of focus, alertness, reactivity, and accuracy. Throwing spears at wild game or moving logs to build shelter may no longer be vital to our hunting and habitation needs, but these skills have practical applications in certain types of professions, ranging from firefighters and military to construction work and farming. Additionally, they have an important role in many of the structured games we play for recreation and fitness. Throwing and catching are an effective means to teach people to utilize the legs, hips, and midsection appropriately for producing powerful motions, changes of direction, and safe deceleration of forces.

Practice of throwing and catching skills also contribute to increased ability to produce power in combative situations, especially striking, as well as improved health and mobility of the back and hips. Feeling better, playing better, and better defending one’s self are all potential outcomes of well-developed throwing and catching skills. Last, but not least, the potential range of interaction between individuals as they throw and catch make these skills some of the most cooperative ones.

THROWING TECHNIQUES

Front Swing Throw (2 hands)

Practical application: This technique is used when an object is too challenging, grip wise, to be thrown with one hand only, or when it needs to be tossed away without the need for distance or accuracy. Since the object is kept relatively close to the ground and doesn’t have to be lifted up prior to the throw, the front swing throw allows the trainee to toss away multiple objects faster than they could with the use of a chest or overhead throw. Last, a transition to the front swing throw after a front swing catch or even a chest catch is fast and effective.

Description: Plant the feet a little wider than shoulder width. Holding the object at hip height, hinge forward from the hips keeping the back flat and lengthened, relaxed arms, holding the object above ground with the shoulders above the object.
From this postural set up, start the sequence by initiating motion by pulling the weight under the hips and immediately driving the hips forward. Let your arms swing the object forward and back between the legs with more amplitude as gravity pulls it down with more speed and the hips drive forward with more explosiveness.

As the object passes just under the buttocks, engage the glutes and hamstrings, drive the hips forward extending the torso upright and causing the arms to swing forward. The back will remain as flat as possible and the arms as relaxed as possible during the whole sequence. After establishing this momentum from the hip drive, release the object as the arms, in full extension, are swinging forward with the proper amplitude, force and direction, ensuring an ideal trajectory towards the intended target.

**Rotational Swing Throw (2 hands)**

*Practical application:* This technique is used to throw objects rapidly aside after picking them up or after catching them, or to throw them to the side while moving forward. The use of the swing throw, however, is not suitable for use with objects that are too heavy.

*Description:* From a split stance, hold the object at hip height. Engage and brace the midsection while simultaneously creating tension in the posterior chain as the body weight is shifted backwards. From the hips, twist the body to the side of the foot planted behind you.

The forward momentum will be generated by simultaneously driving through the rear leg and shifting body weight into the forward, leading leg while rotating the rear hip and shoulder around to the front. Release the object as the arms, in full extension, swing forward with the proper amplitude, force and direction, ensuring an ideal trajectory towards the intended target.

**Chest Throw (2 hands)**

*Practical application:* This technique is primarily used to thrust objects onto or over something with greater accuracy than other types of throws. Since this technique allows the catcher to maintain a straight and upright posture and bend the legs, it is relatively easy to travel or continue moving while catching, if necessary.
Description: Begin in a square or split stance with both feet pointed forward. Grasp the object from both sides and hold it at chest height with arms bent and pressed against the sides of the torso.

Dip with the legs and brace and engage the midsection. While fully extending the legs, lean forward while still bracing the midsection. As the end range of motion is reached, extend both arms forcefully, as if pushing the object away, to project the object forward. Release the object as the arms move into full extension, using appropriate force and direction, ensuring an ideal trajectory towards the intended target.

Catching Techniques Front Swing Catch
Practical application: This technique is usually used when an object is too far from the body or too challenging to be caught at chest level. The front swing catch can significantly reduce the speed of an object and its impact, in order to avoid damaging the object or the surface on which it lands, and without hitting the body. It is very effective for catching objects with a pronounced elliptical, or even vertical trajectory.

Description: The trainee may need to move in the direction of the object with both arms extended, reaching a distance at which the object can be grasped while maintaining arms in full extension. Plant the feet a little wider than shoulder width. After the hands have met the object on both sides or slightly underneath it and have secured the object in a firm grasp, begin the sequence by hinging backward from the hips, letting the torso lean fully forward while keeping the back flat and the arms extended. Absorb the weight of the object on its way down until the elbows come into contact with the inside of the thighs. The object can be maintained above the ground, or it can be released onto the ground.

Rotational Swing Catch
Practical application: This technique is an effective way to catch an object with a trajectory that is low, using a technique that is horizontal and fast, and also minimizes the risk that the object will make contact with the body. Because of the greater range of motion that is attainable with this technique, it affords smoother catches. However, it can be challenging and unsafe as the weight of the object increases. It can also be used to deviate the trajectory of an object.
**Description:** Reach out to grasp the object and start directing its path just slightly to the outside of the hip by pulling it in or pushing it out, while shifting the body weight onto the rear leg and rotating the hips to absorb the load. This is the exact opposite of the rotational swing throw.

**Chest Catch**

*Practical application:* This technique is used when an object's trajectory is high or traveling upward, or when it is traveling straight towards the body without the possibility for the catcher to step aside fast enough to move out of the line of throw. Since this technique allows the catcher to maintain straight and upright posture, it is relatively easy to travel or move while throwing, if necessary. It can also be used to deviate the trajectory of an object.

*Description:* Reach out to grasp the object, arms slightly bent and relaxed, and elbows pointing down. Upon contact with the object start directing its path towards the chest by applying an increasing amount of tension in the arms,
while simultaneously allowing the legs and hips to flex to absorb the force from catching larger or faster objects.

**SAFETY**

MovNat is unique in many of the drills and techniques we practice. To the uneducated eye, some aspects of what we do may appear “dangerous” or “unsafe.” As you progress through the workshop, you will understand that this is not the case and that our training is safe when it is properly supervised.

It is essential to understand that injury prevention and safety in MovNat training rely on fundamental pillars. First, establish movement quality through the acquisition of techniques, the development of movement efficiency, and mindful practice. Second, ensure proper training progressions through individual programming.

While MovNat encourages people to move and train anywhere, it is essential that any decision of where to train clients always prioritizes safety over any other consideration. The “cool factor” or excitement is not the priority: safe movement practice is the priority.

**Risk vs. Danger Ratio**

The risk vs. danger ratio is always an important consideration when assigning drills to your clients. First, let’s define the terms. Second, we’ll review how they relate to each other.

**Risk:** The chance that you are unsuccessful in the completion of a particular physical action and potentially, become exposed to danger. For example: The risk of walking across a two-foot-wide beam, eight feet in length, is quite low because it is very wide. The risk of walking across a two-inch-wide beam, eight feet in length, is quite high, because it is very narrow.

**Danger:** The physical danger that is present if a given risk occurs. For example: the danger of falling off of a 2X4 which is placed on the ground is almost zero. The danger of falling off a 2X4 which is 10’ in the air is much higher.

**Ratio:** The relationship between risk and danger is generally inverse. The higher the risk of a task, the lower the danger should be. In MovNat training, we would gradually increase the risk of our tasks, while maintaining low danger.
PROGRAMMING

Introduction
We aim to achieve a high level of physical competence, which includes a near equalized skill set across our movement domains and conditioning (conditioning refers to ALL types of conditioning: strength, power, mobility, aerobic, etc). i. We want to develop movement skills and physical conditioning through increasing efficiency, adaptability, and confidence.

Programming should be determined by individual goals and weaknesses.

1. The idea is to have specific goals, while also developing, improving, or restoring, and then maintaining general capabilities. Hence, variety and variation are essential to progress. Variation relates to techniques, and variety relates to sequencing, intensity, volume, complexity, and frequency. Variety and variation should not be mistaken for randomization, as effective programming demands the presence of pattern. The point is to embrace variety and variation within the context of structured repetitiveness, i.e., pattern. Variety and variation in movements and training are imposed by the biological necessity of movement adaptability to contextual demands.

2. The weaknesses will be determined through a screen.
We train primarily through the practice of movement skills in order to acquire the most applicable physical conditioning and improve overall Physical Competence. Applying the SAID principle, we aim to drive specific physiological adaptations through the practice of simple and complex movement skills in relation to varied contextual demands. In a nutshell, in most cases we tend to train in ways that closely resemble how we will need to perform in practical situations. Sometimes you will have to break more complex movements down to smaller pieces.

a. We will use the pull-up as our example of what we are training. The pull-up is not the finality. In more conventional training methodologies, a pull-up is viewed as an end goal. However, in MovNat, a pull-up is only a piece of climbing. It follows the SAID principle: specific adaptations to imposed demands. Those who only train pull-ups have become specifically adapted to performing only pull-ups. A pull-up is a functional exercise, whereas climbing is a practical exercise. The difference is this: functional exercises theoretically prepare you for doing
something else, practical exercises have you practicing what you are training for! Functional exercises are not always practical, but practical exercises are always functional. This is what we mean by the pull-up is not the finality - climbing is the finality!

b. Now, when do we break these complex movements down into smaller pieces? There are two general situations when it becomes necessary: when it is necessary for a deconditioned person, we will regress movements to smaller and easier portions; and conversely, when a participant is well conditioned and has good competence of skills, we may be able to progress them further by isolating certain components of skills and conditioning.

c. While we are interested in creating increased complexities and increasing the number of skills our clients possess, we also must understand and remember the 80/20 rule: 80% of results come from 20% of the effort. i. 80/20. This is very important, especially for conditioning. Be it for strength, power, aerobic, etc., if we stick to the basic and most effective drills we get more results from fewer variants. ii. 80% of our time is spent perfecting and progressing the fundamentals. 20% of the time is spent introducing new variations (complexities) to drive further adaptation. iii. 80/20 rule for practical vs. non practical.

Training may involve exploring specific movements or postures that stem from particular systems, sports, traditions or cultures, but may lack practicality. Exploring such movements and postures contribute to our overall athleticism and movement culture, however, they cannot become the main subject of a systematic MovNat training. When non-practical drills become prevalent over the fundamentally practical or vital skills, the true goal of MovNat is neglected. No more than 20% of the training may be dedicated to non-practical movement modalities. If a more “non-practical” drill is one of your client’s goals, this is fine, and MovNat can support that goal through programming.

d. Most of MovNat training involves multi-joint movements with large ranges of motion, rather than isolation movements. This doesn’t mean isolation movements are not potentially useful, it’s just a different perspective; we don’t isolate muscles, but we may isolate practical movements. A very short, peripheral movement such as bending one’s arm repeatedly is something totally plausible in a real-life situation. We’re not looking after isolating a muscle, but about performing the way
that suits the situation best. If it requires an isolated movement, so be it.
e. Intense but brief workouts with adequate rest intervals between sessions should be a component of a program (when appropriate for the client). Intensity is the key to promoting hormonal drives and signaling cascades that are appropriate to a client’s goals. So important are these drives that one could say they are the real objective of the workout. The goal of the workout is to produce the appropriate level of intensity in a given exercise to elicit the desired physiological results and adaptations.
A workout that is overly long at a moderate to high intensity depletes the adaptive hormones and causes a surge in hormones such as cortisol. Intense exercise follows the law of diminishing returns, in that if you do too much intense work you stop seeing returns and actually may inhibit the benefits you would see from an appropriate duration. Additionally, you may also increase your risk for injury. The time between high intensity sessions should be filled with activity of intermediate and low intensity.

**COMBOS**
Combos are combinations of movements used used as a “field test” for your skills in MovNat training. Combo training is adaptive and therefore can be performed indoors or outdoors. Listed below are some sample combos that may give you a better idea of how to structure your own training.

**Combo 1**
Equipment: 1 pull-up bar, low branch, 1 heavy object (stone, medicine ball, kettlebell - weight depends on ability)
5 rounds of:
10x tuck swinging,
3x broad jump,
3x deadlift,
3x push press or chest throw
**Combo 2**
Equipment: An elevated platform (height depends on ability), 1 heavy object (weight depends on ability)

10 rounds of:
3x broad jump (distance depends on ability), movement while squatting for 10m,
sprint for 20m,
3x vertical jump up,
depth jump down,
2x stone or medicine ball rotational swing throw for distance

**Combo 3**
Equipment: 1 sandbag (weight depends on ability)

5 rounds of:
1 min. sandbag clean to push press,
1 min. active rest (ex. balancing),
1 min. carrying the sandbag (with movement variation if possible),
1 min. active rest

**Combo 4**
Equipment: 1 sandbag (weight depends on ability), 1 balancing surface (rail, log, beam, etc.)

15 minutes non-stop of: 50m crawl (any technique),
100m run/walk with a sandbag (position of the bag depends on ability: overhead, shoulder, chest or waist),
20m balancing
YOU ARE MEANT TO BE STRONG