

NORGES BANDYFORBUND



INJURY PREVENTION & STRENGTH TRAINING GUIDE

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INTRODUCTION

The following guide is written for athletes, coaches, and parents. It is for every age group and entry level, meaning young players, amateur players, and elite players. The guide contains the latest scientific knowledge in strength training and injury prevention and should enable the reader to plan his/ her own training. It is not just a single workout with different levels. Moreover, the guide contains the ingredients one needs to create an appropriate strength training routine in order to make sustainable progress. It should serve as a pathway for how strength training could be included holistically in an already existing floorball training routine.

Strength training should be part of a well-thought-out long-term development plan for an athlete. It increases performance on and off the field, decreases the risk of injuries, and improves the quality of life after an active player's career.

Besides the theories and principles, the guide is connected to a YouTube video library with 145 exercises of all categories. The videos include exercises with and without equipment and can be either regressed or progressed for each level. Each video contains some cues in the description box.

We wish you a good time while reading the guide, as well as good and effective training sessions!

DISCLAIMER

Using the following guide, including theory and exercises, you agree that you are doing so at your own risk. Never use exercises or progressions when you are unsure how to do them correctly. Just increase weights and difficulty if you have mastered the previous level. If you do not feel safe, reach out to a certified coach, personal trainer, sport scientist, physiotherapist, or doctor. All of them could guide you on your way to use this guide properly.



01

Benefits of Strength Training for Floorball

1.1 Benefits and Effects of Strength Training

1.2 Definition of an Injury

1.3 What could be expected by doing preventive programs?

1.4 SAID - Specific Adaptations to Imposed Demands

1.5 Importance of technique

1.1 Benefits and Effects of Strength Training

Strength training has various positive effects on an athlete's body and mind. The following list provides an overview of the benefits:

- Increased total body strength
- Increased lean muscle mass
- Decreased body fat
- Enhancement of bone density
- Nutrition for joint structures
- Better joint stability
- Strengthening of tendons, ligaments, fascia, and joint structures
- Improved metabolism and energy supply
- More efficient movement abilities
- Improved posture and fewer asymmetries
- Carry over to specific sport
- Decreased injury risk
- Improved physical and psychological performance
- Increased self-confidence
- Improvements in quickness/ speed
- Healthy effects on brain metabolism and psyche
- Exploring movement
- Better rehabilitation chances after injuries or illnesses
- Improved protection from external impacts and self-inflicted impacts

01

Benefits of Strength Training for Floorball

1.2 Definition of an Injury

An injury could be defined as damage to specific structures, like muscles, tendons, ligaments, and bones, that often impairs the intended function of the structure.

Furthermore, an injury is a sort of limitation, meaning the athlete can not give 100% on the field. An injury or limitation is not always shown by pain, but nevertheless, it should be addressed in order not to develop compensations and possible future problems.

Several reasons can cause injuries. Often injuries happen if the body has an interaction with an external object or person, but injuries could also occur because of acceleration, deceleration, changes of direction, the too high workload in a specific time period (= too much applied stress or overuse) or just when the athlete is not physically and mentally ready for the level and intensity of the game, activity or specific exercise.

It is important to understand that it is impossible to avoid injuries totally. Injury prevention in sports means reducing the likelihood of an injury before it happens. It is more about proactively dealing with specific and known risk factors in a specific sport.



01

Benefits of Strength Training for Floorball

1.3 What could be expected by doing preventive programs?

The evidence of several studies has shown that strength and injury prevention training programs can decrease the risk of injury by 75%. This already makes a big difference for an individual career of an athlete as well as for a team participating in a league or championship.

Another positive benefit is that well-trained athletes are more likely to recover faster from injuries.

Strength training programs are especially important for athletes in sports like floorball, soccer, or basketball, which include frequent jumps and landings, quick acceleration and deceleration, and changes of direction.

Besides reducing the risk of injury, the athlete's performance capability will improve, and the players will recover faster and handle the regular training stress better. In other words, floorball players can perform much longer on their highest floorball level without serious performance dropdowns during a game, championship, or season.

In conclusion, doing proper strength training leads to more resilient and stronger athletes. Fewer injuries and higher performance capabilities are essential factors for high-performing teams.

01

Benefits of Strength Training for Floorball

1.4 SAID - Specific Adaptations to Imposed Demands

The goal of strength training is to apply an appropriate amount of stress on the body, to which the body could adapt over time in the recovery process. If one trains X, he will improve X. But if an athlete trains certain exercises, it does not just affect his muscles but also his brain and the neuronal connections in the body.

It is crucial to get a feeling for what is too much stress on the body and what is too less stress to activate the wished adaptations. This is especially important in the different phases of a season, with pre-season, in-season, and off-season. One must always consider all stress factors in an athlete's life. It is not just about what one is doing in the strength training but also about how much time is spent on regular sport-specific training, how much stress one receives from work or education and how much time one has to recover properly. Furthermore, sleep and nutrition habits also greatly affect how a body deals with applied stress.

Strength training must be progressively planned while considering all these external factors to make long-term, holistic and sustainable adaptations.



01

Benefits of Strength Training for Floorball

1.5 Importance of technique

In general, one can claim that perfect exercise technique helps to avoid injuries or overuse of specific body structures. Especially training with weights is always limited by exercise technique. It is very important to never increase weight if it worsens one's technique. That is a sign that the athlete must continue and master the previous regression or weight. An athlete should learn and understand the basic principles and basic techniques of strength training during his career. Early learning of the correct technique is beneficial for long-term athlete development. In the case of insecurities or lack of knowledge, it is always recommended to reach out to professional strength & conditioning coaches, physiotherapists, or personal trainers.

Looking deeper into that topic and shifting away from generalizations and dogmas, every human body is unique. Be it different lengths of extremities or different sizes of upper bodies, which could result in slightly different optimal technique patterns. Furthermore, the individual mobility and flexibility capability, as well as one person's anatomy, favors some exercises over others. If it gets clear that one player has trouble with one specific exercise, it could be a wise option to use either a regression or another exercise of the same movement pattern. The goal of strength training programs is not to create better weightlifters but better athletes on the field and in everyday life. For example, if a coach realizes that one player has trouble with a traditional weighted Back Squat, then it could be an option to use Single Leg Split Squats instead.

In conclusion, there are per se no wrong movements because optimal movements could be different for every person. But that does not mean totally ignoring basic exercise technique principles. If a wrong movement develops through compensation, it is time to choose a regression first to come back stronger when approaching the exercise again.

02

Master the Basics

2.1 Master the Basics

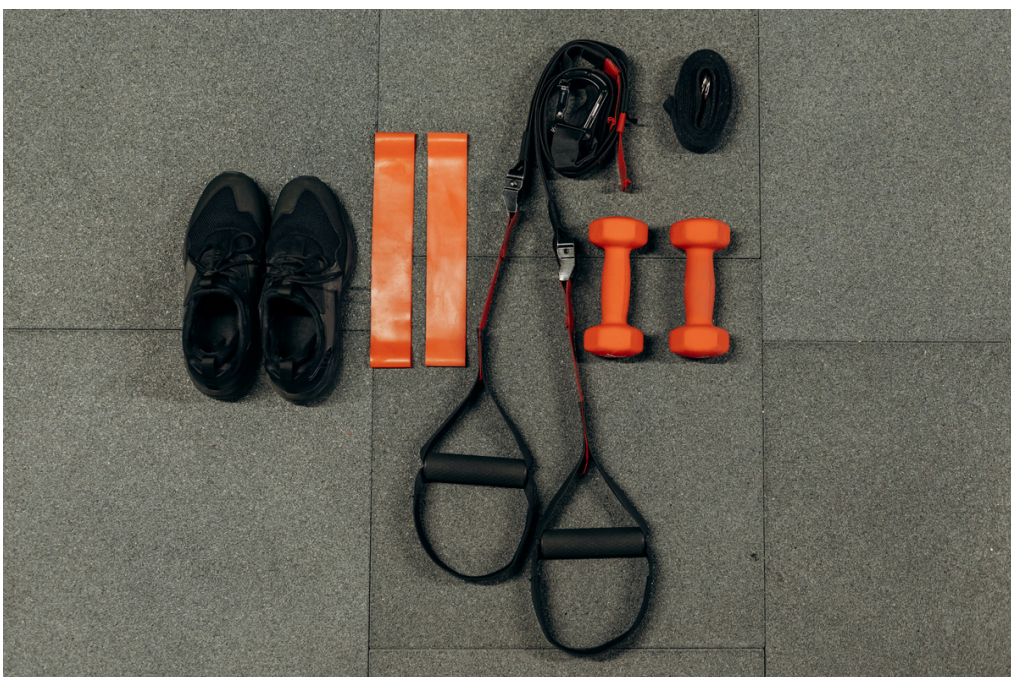
2.2 Goal 1 = Prime the Body for Performance + Reduce Injuries and Overuse Injuries

2.3 Goal 2 = Establish a holistic and well-working function and performance ability

2.4 Goal 3 = Increase Performance

2.1 Master the Basics

The goal of strength training as an athlete is not just simple linear performance progression. To conduct high-level performance-increasing strength training sessions, the basics must be mastered, and the foundation must be laid first. To make this more visible, it could be helpful to split the overall goal into three goals: Firstly, prime the body for performance and reduce injuries and overuse injuries, secondly, establish a holistic and well-working function and performance ability, and third, increase total performance



02

Master the Basics

2.2 Goal 1 = Prime the Body for Performance + Reduce Injuries and Overuse Injuries

Within this goal, establishing effective and efficient warm-up routines and activation exercises is necessary to prime the athlete's body for the following performance. Be it on the floorball field, in the strength training room, or outside before an endurance workout.

This also considers cool-down and recovery exercises that shift the body from performance mode to recovery mode.

2.3 Goal 2 = Establish a holistic and well-working function and performance ability

Within this goal, the athlete uses exercises to counteract muscular asymmetries and overuse of specific structures. The exercises should be chosen to create a muscular balance throughout the whole body. Furthermore, it is about working on highly developed muscular control during various movements. In this phase, the goal is to develop functional muscle mass and improve general movement capabilities.

2.4 Goal 3 = Increase Performance

Within this goal, the training is more strength and power-oriented and trains both the muscles and the central nervous system. It is about generating more power output in a shorter time, which is transferable to the field. Furthermore, endurance and conditioning training could be part of the training plan.

03 Target Groups and Age Groups

3.1 Youth Player/ Beginner

3.2 Recerational Player/ Intermediate

3.3 Eliteserien Player/ Advanced

3.1 Youth Player/ Beginner

Here the goal should be to learn the fundamental movement patterns and the basic exercise technique principles. The training creates a lifelong foundation for the athlete's development.

3.2 Recreational Player/ Intermediate

Here the focus should be on injury prevention and counteracting possible muscular overuses. This will improve performance and increase the overall life quality of the athletes.

3.3 Eliteserien Player/ Advanced

The focus should also be on injury prevention and maintaining a healthy body in order to be able to play long-term on the highest level. If the foundation is already set, the athletes can work specifically on increasing their performance. Additionally, it should enable the players to be still fit and healthy when retiring from the competitive sport. This creates more life quality for the individual athletes.

04 Training Methodologies

4.1 Training methodologies for different age groups/ levels

4.2 12-14 year olds/ Beginner

4.3 15-18 year olds/ Intermediate

4.4 18-21+ year olds/ Advanced

4.1 Training methodologies for different age groups/ levels

There are general recommendations for age-specific/ level-specific strength training, but it is important to always consider the individual athlete's development. The biological age and the actual development of the athlete can hugely vary in both directions.

Furthermore, training with one's body weight is often less stressful and taxing than training with weights. But keep in mind that a Pull Up could be more taxing than a Lat-Pull with 30-50% Bodyweight. The same could be seen at Push Ups vs. Bench Press with the bare barbell. Another critical point to consider is that Bodyweight exercises often use a closed chain in the upper body, while athletes in various sports often move in an open chain in the upper body. For example, hitting a tennis ball with a racket.

4.2 12-14 year olds/ Beginner

At this age/ level, the goal is to introduce and teach basic exercises in all variations of movements to young/ beginner athletes. Bodyweight exercises, lifting techniques, and machine exercises with light or no weight can be used. The goal is to teach them how a training session is set up. The volume is kept very low, and it must be monitored how the athletes can tolerate the stress of the exercises. In general, the focus at this age/ level can be on mastering the own body weight, but keep in mind the example mentioned above with Pull-Ups and the Machine-Lat-Pull.

04 Training Methodologies

4.3 15-18 year olds/ Intermediate

At this age, the goal is still to improve basic exercise techniques, but now it is time to progressive overload each exercise. The volume can be increased as well, and more advanced exercises could be introduced if the athletes have mastered the basics. It is also important to monitor the tolerance of the additional training stress.

4.4 18-21+ year olds/ Advanced

At this age/ level, the basics should be mastered, and the basic exercise technique principles should be known. Now it is about developing the athlete's capabilities to handle elite strength training. The training will contain more free weight exercises (if available). This depends, of course, on the individual athlete's history. If an athlete is not experienced with strength training, he or she must master the basics first. Try to avoid jumping over some levels. This will harm the long-term progress of the athlete.



05 Training Variables

5.1 Bucket Theory/Number of training sessions

5.2 Movement Patterns: Train movements instead of muscles

5.3 Eccentric, concentric and isometric movements

5.4 Which training split?

5.5 Sets and reps depending on the goal

5.6 Rest times during strength training

5.7 Recovery

5.8 Tapering

5.1 Bucket Theory/ Number of training sessions

You can imagine having different buckets. One is filled with floorball training, one with endurance training, one with strength training, one with floorball competitions, and one with mobility/ rest strategies. One optional bucket to think of would be all external stressors in an athlete's life, like school, university, jobs, relationships, nutritional routine, sleep, etc. If this bucket is overfilled, it will influence all other buckets, and then it could be better to leave out additional stressors in the form of strength training. Do not strive for perfection but for the optimum for each athlete. Now one must look at how much filled these buckets already are before the swap over, and it is too much of one activity. If the specific floorball bucket is already filled well, it is not necessary to add another floorball session. Better invest in an additional strength training session to create different stimuli for the athlete. The main goal is that all buckets are balanced, despite the specific sport bucket always being a little fuller.

05 Training Variables

Another point to think of is the entry level of each athlete. If one athlete never did strength training, it is not wise to let him play floorball three times and do four strength training sessions. One better starts with one or two strength training sessions and sees how the athlete handles the new stress on his body. It is necessary to create a balance between all buckets to get the positive effects of injury prevention and performance training. If it is too much, it could increase the risk, instead of preventing it.

Additionally, one could split the floorball season into three parts. Preseason, In-season, and Off-Season. In each part, it is possible to put more or less focus on strength and injury prevention training.



05 Training Variables

A general guide could be as follows (dependent on athlete level):

Sport Season	Strength & Conditioning Sessions/ week	% of Total Training
Preseason	3	50-60%
In-season	1-2	20-40%
Off-season	4-...	80-100%

The Preseason is optimal to get the athletes ready for the season. Normally, the amount of specific floorball training is already higher; therefore, three strength training sessions are enough. Here it should also be considered which energy systems are already filled by the specific training. If the athletes already sprint a lot in specific floorball sessions, they should lay the focus in the strength training on different things. This method should prevent overuse injuries.

In the In-season the athlete should already have a good base of strength and mobility, and it is more about maintenance and peak performance training. The stress from floorball, through training and games, is already higher; therefore, it is wise not to train too much in the strength room and neglect physical and mental recovery.

In the off-season, the athletes do not have specific floorball training, so they can focus on getting stronger and more resilient. They should work first on weaknesses that developed during the season, and the goal is to restore optimal body functioning. This means using mobility, strength, and energy system (endurance/conditioning) training.

05 Training Variables

5.2 Movement Patterns: Train movements instead of muscles

When playing floorball, athletes accelerate, decelerate, change direction, rotate their bodies while using their sticks, and must resist the impact of the other team's players. These actions do not just involve isolated muscle groups but instead need well-coordinated movements over different muscle chains. Furthermore, athletes are rarely on both feet while conducting a sport-specific action. Running, sprinting, and jumping involves a lot of single-leg movements, and this concept should be considered while choosing the right exercises. Functional training generally aims to balance pressing and pulling movements in the upper body and knee-dominant and hip-dominant leg movements. It makes more sense to think of movement training instead of muscle training. Though isolated muscle exercises could have a place in a program, they should not be the central part. The following list gives an overview of the basic movements that should be covered with different exercises.



05 Training Variables

5.2.1 Upper Body

It is essential to strive for a balanced strength between pulling and pushing exercises in the upper body. This could prevent shoulder injuries and imbalances. One can separate both pulling and pushing movements into vertical and horizontal movements.

1. Vertical/ Horizontal Pushing

Vertical pushing exercises would be exercises like a Shoulder Press with kettlebells or dumbbells. Horizontal pushing would be exercises like push-ups or bench press with dumbbells.

2. Vertical/ Horizontal Pulling

Vertical pulling exercises would be exercises like a pull-up, a chin-up, or lat-pulldowns. Horizontal pulling exercises would be exercises like ring rows, cable rows, and supported dumbbell rows.

5.2.2 Lower Body

1. Knee-dominant Movements

Knee-dominant exercises contain squat based movements. This means that there is simultaneous movement in the knees and the hips. This could be bilateral movements like a bodyweight squat or a weighted goblet squat or unilateral movements like a split squat, single leg squat, or lunges in all directions.

2. Hip-dominant Movements

Hip-dominant movements are conducted with a big hip movement (hinge back) and a minimal knee-bend. It could be separated into two categories: First, straight-leg hip extension exercises like Romanian deadlifts or unilateral single-leg Romanian deadlifts, and second, bent-leg hip extension exercises, like glute bridges and hip thrusts, both bilateral and unilateral versions.

05 Training Variables

5.2.3 Core

Core strength is often associated with the visual appearance of athletes. If someone has a six-pack, it is seen as a strong core. However, a six-pack has much more to do with the nutritional routine of athletes, and it does not define the effectiveness of the core muscle function. In general, visual muscles do not always translate to better functioning of muscles in specific sports. But which muscles are targeted when training the core?

- Rectus abdominis (=Top layer of the anterior abdominal muscles, from the ribs to the front of your pelvis)
- Internal and external obliques (=Lateral abdominal muscles)
- Transversus abdominis (=Deepest of the abdominal muscles, wrapping around the trunk)
- Multifidus (=Long narrow muscles on each side of the spinal column)
- Quadratus lumborum (=deepest muscle of the posterior abdominal wall)
- Erector spinae (=intermediate layer of the deep muscles of the back)
- Diaphragm (=separates the thoracic and abdominal cavities from each other. Primary muscle that is active in inspiration, allowing the lungs to expand)

All these muscles contribute to overall core strength. Therefore, a well-thought-out training program should include exercises that train these muscles.

Another important concept is the so-called "Anti" core training. Core training often contained exercises like sit-ups, crunches, or Russian twists. These exercises all create motion around the spinal column. Despite fatiguing the core muscles with these exercises, it does not train their intended function, which is to stabilize and work against extensive movement. The primary purpose of the core muscles is to support the spine, resist unwanted motion and assist in the transfer of force between the lower and the upper body.

05 Training Variables

Furthermore, core muscles work primarily as isometric and eccentric controllers of motion and just secondary as dynamic and concentric motion creators. If one thinks about floorball movements, the core has to stabilize, prevent unwanted motion, act as a force transmitter between the lower and upper body, and hardly ever has to flex or extend the core to shoot or handle the ball. The core exercises could be categorized by the movements they prevent rather than the movements they create.

1. Anti-Extension & Anti-Flexion

These exercises train the muscles that control the sagittal plane (when the body is moving primarily anteriorly and posteriorly) motions of the spine, rib cage, and pelvis. Examples would be a Plank, Bear Hold, Deadbug, or Ball Rollouts.

2. Anti-Rotation

These exercises train the muscles that control the transverse plane movements (rotational movements) of the spine, the rib cage, and pelvis. Exercises would be Plank Shoulder Taps, Bird Dog, and Paloff Press.

Anti-Extension: Plank



05 Training Variables

3. Anti-Lateral Flexion

These exercises train the muscles that control frontal plane (moving from side to side) movements of the spine, rib cage, and pelvis. Exercises would be Side Planks, Suitcase Carries, and Farmer Carries.

4. Flexing, Rotating and Extending

Despite training primarily, the Anti-Core Exercises, it is also recommended to use exercises involving all spine functions. To be resilient and to prevent injuries it is also recommended to flex, rotate, and extend the spine. Because if an athlete never moves his spine in these planes of motion, he or she is less variable to movements on the playing field. These movements should not be prioritized but could be used in a 3:1 ratio with the Anti-Core exercises. Examples would be Swiss ball Crunches, Hanging Knee Raises, MT Climbers, Floor Lying Superman, etc. The volume and weight do not have to be high; it is more about exploring all functions of the spine.

Anti-Lateral Flexion: Side Plank



05 Training Variables

5.3 Which training split or how to organise it?

First, one must decide how many training sessions are possible in a week. It depends on the time of the season as well as on external stress factors.

Strength-Sessions	Outcome
2 times / week	Good for maintaining general fitness and strength/ In-season
3 times / week	Progress and sustainable results / Pre-season
4 times / week	Dedicated and driven / Off-season

But one has to keep in mind that even one additional strength training session can lead to improvements and progression in untrained athletes. It may not be perfect, but it could be optimal depending on other stress factors and depending on how much the other buckets are already filled.

The next step would be to decide which training split is most appropriate.

Training one to three times per week makes a total body training split the best choice. That means that one trains for example on Monday, Wednesday, and Friday both upper and lower body movements. Or if there is an important match, just on Monday and Wednesday.

05 Training Variables

Mo	Tue	Wed	Thu	Fri	Sat	Sun
Day 1		Day 2		Day 3		

Mo	Tue	Wed	Thu	Fri	Sat	Sun
Day 1		Day 2			Match-Day	

Floorball sessions could be on the same day, for example, in the morning strength training, and in the evening specific floorball training. This also depends on how much the different buckets are already filled.



05 Training Variables

The goal would be to implement the most important movement patterns, do make sure the training is balanced. An example would be (without Warm-Up):

Movement Patterns included:

Plyometrics/ Power = P

Vertical Pushing = VP

Horizontal Pushing = HP

Vertical Pulling = VPL

Horizontal Pulling = HPL

Knee-Dominant = KD

Hip-Dominant = HD

Core = C

Day 1		Day 2	
A1:	Box Jumps (P)	A1:	Split Squat Jumps (P)
A2:	Skater Jumps (P)	A2:	Med Ball Chest Pass (P)
B1:	Pull Up (VPL)	B1:	Shoulder Press (VP)
B2:	Split Squats (KD)	B2:	Single Leg RDL (HD)
C1:	Bench Press (HP)	C1:	Ring Row (HPL)
C2:	RDL (HD)	C2:	Goblet Squat (KD)
D1:	Side Plank (C)	D1:	Plank (C)
D2:	Bird Dog (C)	D2:	Paloff Press (C)

05 Training Variables

If training four times per week, an upper and lower body split would be possible. That means training on the first day upper body movements, on the second day lower body movements, rest for a day, then again upper body movements, and then again lower body, followed by two days rest.

Mo	Tue	Wed	Thu	Fri	Sat	Sun
Upper	Lower	Rest	Upper	Lower	Rest	Rest

Stick for four to maximum eight weeks to a training cycle and change then the exercises. Either a new exercise or using a progression of the previous one. This will prevent the athlete from plateaus, and this keeps the training interesting. Remember the above-mentioned SAID principle: If one always does the same exercises with the same intensity, the stimulus will be too low for the wished adaptations.



05 Training Variables

5.4 Sets and reps depending on the goal/ age/ level

The following table shows a periodization model for a prepubescent child. But this model could also be used for beginners, regardless their age.

Periodization model for a prepubescent child/ Beginner		
Training phase	Sets	Repetitions
Base	3	10-15
Strength	3	6-10
Power	2-3	6-8
Peaking	1-2	6-8
Active Rest	Any physical activity: Running, Hiking, Biking, etc.	

Periodization model for an advanced athlete (Elite)			
Training phase	Sets	Repetitions	Intensity
Base	3-5	8-15	Low
Strength	3-5	2-6	High
Power	3-5	1-3	High
Peaking	1-3	1-3	Very High
Active Rest	Any physical activity: Running, Hiking, Biking, etc.		

05 Training Variables

5.5 Eccentric, concentric and isometric movements

One can separate any exercise into three movements. If we take a pull up for example, the pulling up is a concentric movement, the three-second hold in the top position is isometric, and the lowering down phase is eccentric.

Concentric action means exerting a certain level of force to overcome or lift an external resistance. This form of training is very important since overcoming strength is the basis for many sport actions.

The eccentric action of a muscle refers to a resisted lengthening of that muscle. That means a muscle exerting force while being lengthened. Normally, eccentric strength potential is higher than concentric one. This means that the overcoming movement prevents one from a complete overload in the eccentric phase. Eccentric training stress is an important stimulus for strength improvements. Additionally, eccentric movements could be used to learn an exercise and to get the necessary strength and nervous system adaptations. For example, if an athlete cannot do a proper pull-up, he or she can use eccentric pull-ups to learn the movement and progress over time. The same is working very well for Push Ups.



05 Training Variables

An isometric muscle action refers to exerting muscle strength/ muscle tension without producing an actual movement or a change in muscle length. It could also be called static movements. Isometric training could be simple as holding a weight at a certain position in the range of motion or it could be pushing or pulling against an immovable external resistance. Isometric muscle action leads to the greatest activation level. That means how many motor-units of a muscle are recruited. That means isometric training is powerful to improve the activation of motor units and neural drive, which could lead long term to a greater strength potential in dynamic movements.

Another advantage of doing isometric exercises, is the fact that it does not expend a lot of energy, that means it does not interfere with the rest of the training and in other words, one will recover more quickly.

A disadvantage is the fact, that the strength gains of isometric training occur mostly at the joint angles being worked.

To get the most benefits and to assure a varied training stimulus, it is recommended to combine eccentric, concentric and isometric muscle actions.



05 Training Variables

5.6 Rest times during strength training

It is important to consider rest times in strength training sessions in order to maximize the benefits of the different sets. The length of the rest time is dependent on the intended adaptations.

Furthermore, one could use supersets, where one alternates sets between two or three different muscle groups. Choose exercises that are noncompeting, and that target different movement patterns. For example, A1 is a Bench Press, then 1 minute rest, then A2 is a Row, followed by 1 minute rest. That means that the athlete has a rest of 2-3 minutes between sets of one exercise. Additionally, one could just put mobility exercises or isometric core exercises between major exercises.

If the goal is muscle growth and strength through compound lifts the rest could be quite long but should not be longer than 3 minutes. For lifts involving less tissue, for example isolated exercises like bicep curls, one can just rest 1-2 minutes.

For maximal strength training the rest could be between 3-5 minutes.

One can also use less rest, if the goal is to initiate a metabolic adaptation (muscle endurance). For example, circuit training would fall into this category.

05 Training Variables

5.7 Recovery

Recovery is one of the most important factors in training. This counts for injury prevention and strength training, endurance training, and sport-specific training. During a training session, one sets a stimulus to which the body has to adapt. Depending on the intensity and volume training produces a huge mechanic and oxidative stress. In the recovery process, physiological and neurological adaptations happen in the form of repairing processes. The better the internal and external conditions in this phase are, the more efficient the repairing process could run, which results in a good starting position for the next training session.

If the recovery is not optimal over an extended period, the body could react with compensations. This could lead to muscle stiffness, reduction, or stagnation of the strength development progress, decreased mobility, proneness to infections and injuries, changes in the autonomic nervous system, and therefore changes in the heart resting rate.

Athletes and coaches have to monitor how they feel after diverse training stresses (remember the different buckets), and should adapt their training sessions accordingly. There are technological tools to measure the state of recovery and the impact of the training sessions, but not every athlete will have access to it. Therefore, it could help to use a simple traffic light system.

Colour	Meaning	Effect
Green	Everything is perfect/ >80% (Stress of training is as estimated)	Keep going
Yellow	The training stress is intense, but the body and mind can still deal with it / >60-90% (Stress of training and from other buckets is a little bit more than expected)	Keep going but, concentrate on good recovery
Red	Feels both physically and mentally burned out/ tired, which could possibly result in injuries or infections <60% (Too much stress factors from training and from the outside)	Should highly consider a break/ rest day

05 Training Variables

The athlete could learn to self-reflect on how he feels and try to adapt his training sessions accordingly. This should happen in accordance with the coach.

5.7.1 Methods for recovery

Most important factors:

- Regular and enough sleep (7-9 hours/ night)
- Hydration
- Blood flow-enhancing activities
- High-quality food

One can distinguish between active and passive recovery.

Active recovery methods:

- Easy runs up to 20 minutes
- Easy swimming or running in water
- Cycling ergometer (not much resistance with 85-120 rotations/ minute)
- Passive-static stretching
- Mobility
- Foam Rolling, Flossing
- Interval training with low and moderate intensity
- Playful Cool Down with low intensity
- Meditation and autogenic training (mentally active)
- Video analysis (mentally active)

Passive recovery methods:

- Ice baths and hot and cold water to reduce inflammation processes
- Sauna
- Massage
- Povernaps
- Nutrition
- Hydration
- Meditation and autogenic training (body is passive)
- Reading books, listening to podcasts, etc. (recovery for the mind)

05 Training Variables

5.8 Tapering

Tapering means reducing the training load during a defined period of time with the goal to reduce the physiological and psychological stress of daily training (both strength training and specific training) prior to important competitions to have optimal performance on match day. In a team sport that has a league system, it is more difficult to plan, but one can still choose the most important competitions of the season. The goal of tapering is:

- To improve maximal power
- Maximal oxygen uptake
- Repeated sprint ability & change of direction speed

Tapering should also be used in the preseason's last one to two weeks to make sure to start the season fresh and recovered.

In general, training load consists of training intensity, volume, and frequency. By manipulating any of these three factors, the total load can be decreased.

Usually, the best choice is to reduce volume and keep the same or even higher intensity. The training volume could be reduced by 41-70 %. Furthermore, the duration of training sessions could be reduced. The optimal taper duration is between 8-14 days prior to match day. But this could vary individually. Here a coach should monitor the individual and self-perceived fatigue of an athlete. Does the athlete feels refreshed and fully energized?

One danger with tapering is losing the training-induced adaptations when insufficient training stimulus is induced for too long.

Example: Volume reduced by 50%. Therefore, less stress for the athlete, despite training still with high intensity (Table is on the next page).

05 Training Variables

3 weeks prior match: Power Phase			
Exercise	Sets	Reps	Weight
Split Squat Jumps	4	6/6	BW
Weight. Pull Up	4	3	85% 1RM

1 week prior match: Power Phase (Tapering)			
Exercise	Sets	Reps	Weight
Split Squat Jumps	2	6/6	BW
Weight. Pull Up	2	3	85% 1RM



06 How to build up a Session

6.1 Movement preparation

6.2 Activation

6.3 Plyometrics

6.4 Strength and Power

6.5 Endurance/ Energy systems

6.6 Recovery/ Mobility

6.1 Movement preparation

At the beginning of the training session, the athlete primes his body to be in the right state of performing. It begins with tissue work with the foam roller or foam roller ball and with active joint and tissue mobility exercises. Furthermore, everyone has his own weak spots on which one can now focus. Be it the ankles, hips, or thoracic spine.

6.2 Activation

Here small muscle groups get locally activated and the athlete conducts movements in the different planes of motion. This contains core exercises and bodyweight exercises with or without equipment. It gets the body ready for more explosive and power-orientated movements.

06 How to build up a Session

6.3 Plyometrics

In this phase of the training session, dynamic and explosive movements will be conducted. This activates the heart circulation system, increases the body temperature, and activates the central nervous system. It also serves to develop explosive power, which is essential for athletes. The focus is on short and intense movements with maximal attention. Plyometrics are done with medicine balls, own body weight, and lifting exercises. The sets are short and fast and are paired with active recovery methods. Training to full exhaustion should be totally avoided. Here one must separate clearly between beginners and professionals. For beginners and intermediates rope jumping, medicine ball throws, and coordination ladder drills are possibly enough, while elite athletes need more complex jumps and landings as well as medicine ball throws. For injury prevention, it could make sense to put these coordinative high-demanding exercises sometimes at the end of a session to create similar challenges as on the field. Most injuries happen when players are tired, and therefore it could help to set similar stimuli from time to time. But keep the volume and intensity low if using these exercises at the end of training.

6.4 Strength and Power

In this phase of the session, the athlete does the main exercises of the session and tries to include exercises from each movement pattern mentioned above. For example, one knee-dominant exercise, one hip-dominant, one pull, one push, and one core exercise. The exercises could and should vary between sessions. For example, in the first training, one could choose a vertical push exercise and in the second training a horizontal one. Here all is about mastering the exercises and getting stronger and more resilient on the way. The goal should be to improve in every session. Be it better technique, one more repetition, or more weight, to progressively overload the movement pattern over time.

06 How to build up a Session

6.5 Endurance/ Energy systems

Most team sports need fast and agile athletes. The assumption that athletes should do long-distance runs to improve their performance on the field is outdated. The systems of the body adapt to the stimuli one gives to them. That means if one does a lot of long-distance runs, one's body will adapt to this task. But it will not make one a fast and powerful floorball player on the field. In floorball, as in most team sports, the main elements are acceleration, deceleration, and changes of direction. Therefore, athletes that want to improve their endurance/ conditioning must train exactly these three elements.

To start with, it is wise to use tempo runs. Tempo runs are not a jog and not a sprint. It is a fast run, where one already must extend his hip, as it will be the case in athletic movements on the field.

One can choose a certain distance or do intervals. To start with, a positive rest would be recommended. That means 15 seconds tempo run, followed by 30 seconds of walking back. This could be repeated 4-6 times, and in every session, one interval could be added till one reaches 15 tempo runs. Then the next step could be to increase the interval time to 30 seconds running and 60 seconds walking 4-6 times. One can build this up again to 15 times. Then 30:45 and then 30:30.

Now the athlete should have a good base and it is time to add some changes of direction with the use of shuttle runs. Choose a distance between 15 to 25 meters and mark it with a cone. One can progress with the parameter of distance. That means if one runs 100 m (2x back and forth), rests twice the amount of time and repeats the same for 4-6 time. To further progress one can increase the repetitions or the distance.

06 How to build up a Session

The next level can be sprints over different distances. Start with short sprints of 10 meters and increase the distance till 40 meters. Sprinting is one of the most valuable training forms, because it prepares an athlete for the exact same stress, he or she experiences on the playing field. One can start with short sprints and build up from 5 to 10 reps and increase then the distance. Every sprint should be maximally fast, therefore the reps should not be too much. Between each sprint take a fully rest. Also plan some additional place to slowly decelerate because many hamstring injuries happen during this phase of the sprint.

Important things to consider:

With all mentioned methods, it is wise to use a heart rate monitor to know when one is ready to start again. This could vary for each athlete. But if it is not available, it is wise to work in the beginning with a ratio from 1:2 or even 1:3 (exercise: rest).

If a team/ athlete is in an in-season, it is most probable that there is already a lot of specific stress on the joints and muscle tissues (think of the above-mentioned buckets). Then it could be wise to choose other tools to get in an energy system/ endurance training. An athlete can use Air Bikes, bikes, rowing machines, or to get in some lateral movements a slide board. All these tools have less impact on the joints but can still raise the heart rate and improve the athlete's endurance. The slide board is a tool where the athlete uses an athletic position and trains at the same time his adductors and abductors, which could be useful for injury prevention. Furthermore, it is a tool that could be easily used in a team setting because nothing must be changed. If three athletes are in a team and they work with 15:30 intervals, they could perfectly switch between exercising and resting.

06 How to build up a Session

6.6 Recovery/ Mobility

In this phase it is recommended to use some of the under [5.7](#) mentioned active and passive recovery methods. One can do a short cool-down, to calm down and help the body to switch into the recovery process. It is also possible to add some specific mobility exercises, that improve an athletes individual weaknesses.



07 Different Tests

7.1 Different testing methods to set goals

7.1.1 Push Ups (Strength)

7.1.2 Pull Ups (Strength)

7.1.3 Ring Rows (Strength)

7.1.4 Split Squats with weights (Strength)

7.1.5 Kneeling Med Ball Chest Pass (Power)

7.1.6 Broad Jump (Power)

7.1.7 Sprint (Speed)

7.1.8 McGill's Torso Endurance Test Battery

7.1 Different testing methods to set goals

It could be beneficial to test the entry-level strength of an athlete and to retest after each training block. Just use these tests with healthy athletes. If the athletes suffer from injuries or had previous injuries, it may be wise to consult a doctor or physiotherapist to get a green light to take part in the tests. This could give valuable feedback to both the athletes and the coach. Furthermore, it could serve as a motivational boost for the athletes if they see improvements in strength, stability, and coordination. This could enhance self-confidence on and off the playing field.

07 Different Tests

The tests that are chosen in this guide, do not need a lot of equipment and, therefore, could be done nearly everywhere. Testing needs to be easy to implement and should give reliable data. Furthermore, for these tests, not much experience in strength training is needed, which increases safety. (If one would test upper body strength with maximal strength tests in bench pressing, the athlete needs to have previous lifting experience. Otherwise, such a test could lead to injuries.)

Results should be written down, and the exercises should be repeated after some weeks, in the same manner to be able to see possible improvements.

7.1.1 Push Ups (Strength)

Here the upper body push strength, muscle endurance, and core stability get measured.

How to do it:

- The starting position is a High Plank (straight line through the body)
- Lower yourself down for 3 seconds
- Touch an item with your chest (floorball ball)
- Press your body explosively but controlled up to the sky
- Hold the starting position for one second
- That is one repetition
- The body should stay in a line from head to toes
- Pull your shoulders away from your ears
- The athlete does the maximal number of push-ups he or she can do with the above-mentioned tempo (3-1-0-1) and with proper form. If one cannot hold the core position anymore (straight spine), or cannot push himself up anymore, the test is over

07 Different Tests

7.1.2 Pull Ups (Strength)

Here the vertical upper body pulling strength, as well as core stability, get measured. Pull Ups are really hard in the beginning and must be trained. Many athletes achieve after one year 10-15 (men) or 3-5 (women) pull ups.

How to do it:

- Hang with straight arms onto a bar
- The legs do not touch the floor
- The arms are completely straight
- Pull yourself up, till your chin is above the bar
- Your body stays in a straight line
- Your shoulders should be pulled back (not moving towards ears)
- Slowly lower yourself down, till your arms are straight again
- Start the next repetition
- Swinging or pulling your legs up is not allowed
- Do your maximal number of pull ups



07 Different Tests

7.1.3 Ring Rows (Strength)

Here the horizontal upper body pulling strength, as well as core stability get measured. One needs either a low bar, a sling trainer or gymnastic rings.

How to do it:

- The height of the rings/ bar/ sling trainer should be at hip height
- Grip the rings with your hands and build one straight line with your body
- Squeeze the core, as well as the glutes, to keep a straight line (Do not sack in in your hips)
- First, pull your scapula back with straight arms before starting to pull with your arms till your thumbs touch your chest (Imagine pulling towards your belly button; this prevents the shoulders from lifting up towards the ears)
- Keep the top position for one second
- Lower yourself slowly down
- That is one repetition
- Do your maximal number of rows with a proper form



07 Different Tests

7.1.4 Split Squats with Weights (Strength)

Here the strength of the lower limbs gets measured. One can also compare the left and the right side and see if there are big differences. The athlete should rest between testing the other side for 2-3 minutes.

How to do it:

- Grab an external weight (dumbbells, weight vest, plates)
- Get down in a half-kneeling position, the hip, the knee, the ankles are in a 90-degree position
- Push your front leg into the ground and push yourself up
- The weight is mostly distributed on the front leg, and the back leg helps to stabilize (70% front leg vs 30% back leg)
- Lower yourself down in a controlled manner, the knee of the back leg slightly touches the floor
- Squeeze your core and keep breathing in a controlled manner (breathe out when pushing up)
- Do 5 proper repetitions/ side
- Start with a weight you can lift 8-12 times and work your way up to a weight that is just possible for 5 controlled repetitions/ side
- Write down the used weight for both legs



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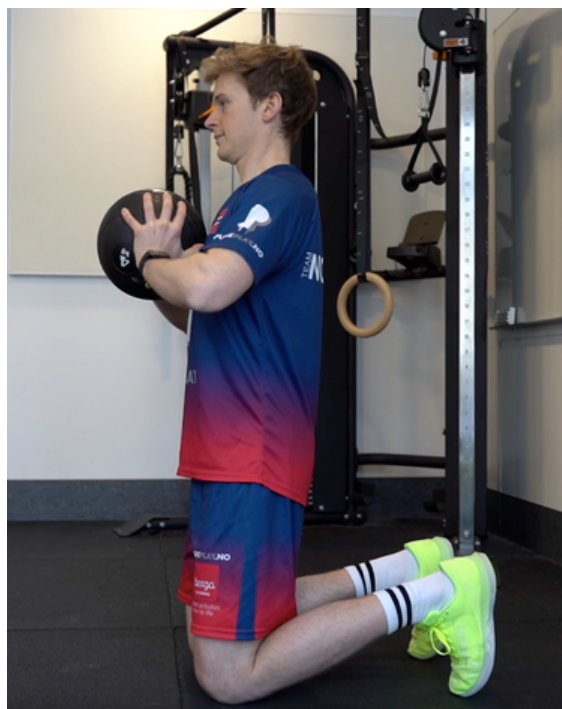
07 Different Tests

7.1.5 Kneeling Med Ball Chest Pass (Power)

Here the explosive power of the upper body gets measured. The athlete needs a medicine ball (1-4kg) and a measuring tape to be able to document the distance.

How to do it:

- Get in a kneeling position and squeeze your glutes
- The medicine ball is close to your body and touches your chest
- Keep a straight line in your body and throw the ball forward with maximal force
- Measure the thrown distance and write it down
- The athlete has three attempts
- Make sure that there is enough place, and nobody is in danger when throwing the ball



07 Different Tests

7.1.6 Broad Jump (Power)

Here the explosive power of the lower limbs gets tested. The athlete just needs a measuring tape.

How to do it:

- Stand parallel with your feet and hip wide apart
- Extend your body and reach up in the sky with your arms
- Swing them down, while squatting down and explosively jump as far forward as you can (use the momentum of your arms)
- Land safely in a squat position with proper landing mechanics
- Measure the length of the jump and write it down
- The athlete has three attempts

07 Different Tests

7.1.7 Sprint (Speed)

Here the speed of the athlete gets tested. The sprints can be from 10 to 40 meters long, and the time should be stopped. The athlete can have 2-3 attempts, with long enough rest in between.

How to do it:

- Mark a certain distance (10-40) on an athletics track or in the hall
- Let the athlete start himself/herself (otherwise, reaction time to an external signal plays a role)
- Stop the time with a sport watch or better with light barriers

07 Different Tests

7.1.7 McGill's Torso Endurance Test Battery

This test assesses the muscular endurance of the core and consists of three exercises.

- Trunk Flexor Endurance Test
- Trunk Lateral Endurance Test (Side Plank)
- Trunk Extensor Endurance Test

Trunk Flexor Endurance Test

The flexor endurance test is the first in the battery of three tests that assesses muscular endurance of the deep core muscles (i.e., transverse abdominis, quadratus lumborum, and erector spinae). It is a timed test involving a static, isometric contraction of the anterior muscles, stabilizing the spine until the individual exhibits fatigue and can no longer hold the assumed position. To conduct the test, a stopwatch and a board are needed.

How to do it:

- The starting position requires the athlete to be seated, with the hips and knees bent to 90 degrees, aligning the hips, knees, and second toe
- Instruct the athlete to fold his or her arms across the chest, touching each hand to the opposite shoulder, lean against a board positioned at a 60-degree incline, and keep the head in a neutral position
- It is important to ask the athlete to press the shoulders into the board and maintain this "open" position throughout the test after the board is removed
- Instruct the athlete to engage the abdominals to maintain a flat-to-neutral spine. The back should never be allowed to arch during the test
- The coach or the athletes can anchor the toes under a strap or manually stabilize the feet if necessary
- The goal of the test is to hold this 60-degree position for as long as possible without the help of the back support

07 Different Tests

- The test starts when the board is removed, and the athlete holds the same position just through his core
- The test is over when there is a noticeable change in the trunk position (not keeping a neutral spine or shoulders rounding forward)
- Write down the achieved time of holding the position

Trunk Lateral Endurance Test (Side Plank)

The trunk lateral endurance test, also called the side-plank test, assesses muscular endurance of the lateral core muscles (i.e., transverse abdominis, obliques, quadratus lumborum, and erector spinae). Similar to the trunk flexor endurance test, this timed test involves static, isometric contractions of the lateral muscles on each side of the trunk that stabilize the spine.

How to do it:

- The starting position requires the athlete to be on his or her side with extended legs, aligning the feet on top of each other or in a tandem position (heel-to-toe)
- Place the lower arm under the body and the upper arm on the side of the body
- Keep both legs extended and the sides of the feet on the floor. The elbow of the lower arm should be positioned directly under the shoulder with the forearm facing out (the forearm can be placed palm down for balance and support) and the upper arm should be resting along the side of the body or across the chest to the opposite shoulder
- The hips should be elevated off the mat and the body should be in straight alignment (i.e., head, neck, torso, hips, and legs). The torso should be supported only by the athlete's foot/feet and the elbow/forearm of the lower arm
- When the athlete is in a proper side plank position the test starts
- The test is over when there is a noticeable change in the trunk position (hips dropping downwards, or shifting backward or forward in order to maintain balance and stability)

07 Different Tests

- The goal of the test is to hold this position for as long as possible.
- Write down the measured time and repeat on the other side

Trunk Extensor Endurance Test

The trunk extensor endurance test is generally used to assess muscular endurance of the torso extensor muscles (i.e., erector spinae, longissimus, iliocostalis, and multifidi). This is a timed test involving a static, isometric contraction of the trunk extensor muscles that stabilize the spine. For this test, a bench or sturdy table, a strap and a stopwatch is needed.

How to do it:

- The starting position requires the athlete to be prone, positioning the iliac crests at the bench/ table edge while supporting the upper extremity on the arms, which are placed on the floor or on a riser
- While the athlete is supporting the weight of his or her upper body, anchor the athlete's lower legs to the table using a strap. If a strap is not used, the colleagues/ coach will have to use his or her own body weight to stabilize the athlete's legs
- Start the stopwatch as soon as the athlete assumes this position
- The goal of the test is to hold a horizontal, prone position for as long as possible. Once the athlete falls below horizontal, the test is terminated
- Write down the measured time

After completing the torso endurance tests, the key information is less about the achieved time and more about the ratios between the three tests. The ratios could be taken to see if the athlete has well-balanced core muscles or if he or she has to do some specific extra work. On the following page, one can see what ratios are advised to use for these three tests.

07 Different Tests

Trunk flexor endurance test:
Time to completion:____

Trunk lateral endurance test:
Right side time to completion:____ Left side time to completion:____

Trunk extensor endurance test:
Time to completion:____

Ratio of Comparison	Criteria for Good Relationship Between Muscles
Flexion:Extension	Ratio less than 1.0
Right-Side Plank:Left-Side Plank	Scores should be no greater than 0.05 from a balanced score of 1.0
Side Plank(each side):Extension	Ratio less than 0.75

Flexion:Extension Ratio:____ Rating: Good____ Poor____

Right-Side Plank:Left-Side Plank Ratio:____ Rating: Good____ Poor____

Side-Plank (each side):Extension Ratio:____ Rating: Good____ Poor____

08 Regressions and Progressions

8.1 Progressive overload

8.2 Push Up as an example

8.1 Progressive overload

It is necessary to always master an exercise with one's own bodyweight before loading it with weight. In almost all cases, weight does not make exercises easier. If one cannot conduct an exercise with strict technique, it is important to consider regressions. That means choosing more simple versions of the exercise and increase the strength to a certain point, where one can progress again to the previous version of the exercise.

To make constant progress, meaning getting stronger and more resilient, one always must make exercises more difficult. The body just adapts to stimuli that are a certain stress to it. To be prepared for the future, the body will try to start all possible processes to adapt to external challenges.

How can one make an exercise more difficult:

- Use strict technique (no sloppy repetitions)
- Increase repetitions
- Increase range of motion
- Use different tempi (increase the time under tension)
- Use different angles
- Start loading weight
- Increase weight

08 Regressions and Progressions

8.2 Push-Up as an example

- Learn the right technique or use regressions
- Increase the repetitions from 6 to 15 controlled push ups
- Use two elevated surfaces to place your hands on (Grips, yoga blocks, plates, etc.). Greater range of motion of shoulders, and more stretch on the chest muscles.
- Lower yourself down for 3 seconds, hold it 1 second, push up explosively and hold the upper position for 1 second. That would be a tempo of 3-1-0-1. One could increase the lowering time to 5 seconds, 5-1-0-1, to get more time under tension
- One could put the legs on a box, or lift one leg, while conducting the push ups
- One could add a 5kg plate on the back
- If the technique is still properly, the athlete can increase the weight, and increase the repetitions again, before using even more weight



09 Breathing in Training

9.1 Proper breathing technics while training

9.2 Breathing exercises

9.1 Proper breathing technics while training

Breathing patterns influence our mobility and stability in our body and therefore have a huge impact on our movements. The neurologist Karel Lewit stated that if breathing is not normalized, no other movement pattern can be. Breathing could be used as an indicator if a movement is efficient and how the exercise gets processed by the central nervous system. If one wants to improve his mobility, it is recommended to mind calm and regular breathing. Respect personal limits and do not try to force it.

Most important points:

- Calm and regular breathing
- Breathe in and out through the nose (absorbs more oxygen = better recovery)
- Reduce training intensity if breathing becomes shallow, restless, and pressed
- Direct the breath in the abdomen
- Use breathing exercises before and after the training
- Mental focus and awareness of how one is breathing
- Move with your breath (Bench Press: Lowering the weight down = Breath in, Pressing the weight up, Breath out through the mouth)

09 Breathing in Training

9.2 Breathing exercises

Pause breathing:

Breathe four seconds through the nose in, hold the breath for two-four seconds, and breathe 4 seconds out. Hold the break again two-four seconds and then breathe in for four seconds again. Repeat the cycle multiple times. Focus and concentrate just on your breath.

Calming down breath:

Breathing through the right nostril corresponds to the sympathetic nervous system, which activates the body for danger. Breathing through the left nostril corresponds to the parasympathetic nervous system, which relaxes the body. Hold your right nostril closed and breathe four to six seconds through your left nostril in. Hold both nostrils closed for four to 6 seconds and breathe just through the right nostril four to six seconds out. Close both nostrils again and hold your breath for four to six seconds, before breathing in through the left nostril again. Repeat the cycle multiple times.

Crocodile Breathing:

Lay down on the floor (eyes facing the floor) and position your hands underneath your forehead. Breathe in through the nose and breathe out through the mouth for three to five minutes. While breathing in, expand your abdomen against the floor, as well as expand your lower back and sides. Relax while breathing out.

10 Additional thoughts

10.1 Additional thoughts

10.1 Additional thoughts

- Try to use flat shoes, like barefoot shoes, or Vans, Converse while doing the exercises. One could also train barefoot or just in socks. This will activate and work your foot muscles much more than in closed shoes. Furthermore, it could be beneficial for gaining mobility in the ankles and in the feet and toes. Although when lifting heavy weights, it could be beneficial to use weightlifting shoes because of their higher stability. Furthermore, it could help to compensate for mobility deficits in the ankles. But with bodyweight exercises or low to moderate load exercises, it is recommended to use the above-mentioned tip.
- When doing new exercises, it could feel strange the first few times, and often our self-perception of how we are moving does not fit with how we actually move. Therefore, it could help to ask a training partner to give you feedback or, even better, film you while doing the exercise. If you are training alone, film yourself with your phone and a small tripod. This can help you immensely to improve your technique and performance.
- Document your training in a training diary or in an app, and add your exact used weights, repetitions, and recovery times. Through that, you can monitor your progress.



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11 Exercise Library

11.1 Exercise Library

11.1 Exercise Library

- The exercise library will contain all exercises that are available in the video library on YouTube. The exercises will be categorized as follows:
 - Warm-Up and Mobility (Bodyweight, Blackroll, Bands)
 - Tests (Bodyweight, Ball, Rings/ TRX, Pull-Up Bar)
 - Plyometrics (Bodyweight, Floorball Stick, Box)
 - Core (Bodyweight, Swiss Ball, Pull-Up Bar/ Rings)
 - Bodyweight (Bodyweight, Floorball Stick, Weightvest/ Plates)
 - Rings
 - Bands
 - Dumbbells/ Kettlebells
 - Barbell
- To be able to build up a training session well and to include all movement patterns, each exercise will be labeled by its movement pattern as follows:
 - Vertical Pushing = VP
 - Horizontal Pushing = HP
 - Vertical Pulling = VPL
 - Horizontal Pulling = HPL
 - Knee-Dominant = KD
 - Hip-Dominant = HD
 - Core = C
 - Anti-Extension & Anti-Flexion = AE/ AF
 - Anti-Rotation = AR
 - Anti-Lateral Flexion = ALF
 - Flexing = F
 - Rotating = R
 - Extending = E
 -
- Additionally, exercises will be ranked from 1 to 3, where 1 is the easiest version and 3 the most difficult one. (Possibly different for each athlete)

11

Exercise Library

Warm Up/ Mobility	Category
<u>90/90 Hip Stretch Dynamic</u>	/
<u>Spiderman Stretch</u>	/
<u>Straight-Leg Adductor Rocking</u>	/
<u>Half-Kneeling Hip Flexor Stretch</u>	/
<u>Floor Slide</u>	VP
<u>Cat and Cow</u>	F/E
<u>Scapula Push Up</u>	HP
<u>Scapula Pull Up</u>	VPL
<u>Hamstring Rock Back</u>	/
<u>The Worlds Greatest Stretch</u>	R
<u>T-Spine/ Shoulder Mobilisation</u>	E
<u>BAND/ STICK Shoulder Circles</u>	/
<u>Inchworm</u>	/
<u>Downward Dog</u>	VP
<u>Blackroll Hamstrings</u>	/
<u>Blackroll Glutes</u>	/
<u>Blackroll Upper Thigh</u>	/
<u>Blackroll Adductors</u>	/

Warm Up/ Mobility	Category
<u>Hip Circles</u>	/
<u>Jump Rope</u>	/
<u>Agility Ladder In-In-Out-Out</u>	/
<u>Agility Ladder Schuhplattler</u>	/
<u>Agility Ladder Two Contacts</u>	/
<u>Agility Ladder Side Steps</u>	/
<u>90/90 Hip Stretch</u>	/

Tests	Category
<u>Push Up with Tempo</u>	HP
<u>Ring Row</u>	HPL
<u>Pull Ups</u>	VPL
<u>Weighted Split Squat</u>	KD
<u>Kneeling Med Ball Chest Pass</u>	HP
<u>Broad Jump</u>	KD/HD
<u>Trunk Flexor Test</u>	AF
<u>Trunk Lateral Endurance</u>	ALF
<u>Trunk Extensor Endurance</u>	AE/AF

11

Exercise Library

Plyometrics	Category
<u>Line Hops Forward (1) / SL (3)</u>	/
<u>Line Hops Forward/ Backward (2)/ SL Forward/ Backward (3)</u>	/
<u>Reach and Stick (1)</u>	/
<u>Non Countermovement Linear Jump (2)</u>	/
<u>Continious Squat Jump (3)</u>	/
<u>Box Jump (2)</u>	/
<u>Lateral Jump (3)</u>	/
<u>Split Squat Jumps (2)</u>	/
<u>Lunge Scissor (3)</u>	/
<u>Hurdle Jump linear (2)</u>	/
<u>Single Leg Hurdle Jump linear (3)</u>	/
<u>Hurdle Jump lateral (3)</u>	/
<u>Hurdle Jump medial (3)</u>	/
<u>OH Med Ball Throw (2)</u>	/
<u>Broad Jump (2)</u>	/
<u>Jump Rope (1)</u>	/
<u>Explosive Step Up (3)</u>	/

Core	Category
<u>Front Plank (1)</u>	AE
<u>Loaded Front Plank (3)</u>	AE
<u>Stick Deadbug (1)</u>	AE
<u>Deadbug (2)</u>	AE
<u>Bear Hold (1)</u>	AE
<u>Bear Walk (2)</u>	AR
<u>Bear Shoulder Taps (3)</u>	AR
<u>Kneeling Side Plank (1)</u>	AR/ALF
<u>Side Plank (2)</u>	AR/ALF
<u>Short Copenhagen Plank (2)</u>	AR/ ALF
<u>Copenhagen Plank (3)</u>	AR/ALF
<u>Paloff Press (1)</u>	AR
<u>Suitcase Carry (2)</u>	ALF
<u>Farmer Carry (1)</u>	AE/AF
<u>Half-Kneeling Cable Lift (2)</u>	AF/AR/ALF
<u>Half-Kneeling Cable Chop (2)</u>	AF/AR/ALF
<u>Hanging Knee Raises (2)</u>	F/Hipfl.

11

Exercise Library

Core	Category
<u>L-Sit Leg Lifts (2)</u>	Hipflexor
<u>SB Ball Knee Tuck (2)</u>	AE/Hipfl.
<u>MTN Climber Slow (2)</u>	AR/AE
<u>AB Rollout (3)</u>	AE
<u>Bird Dog (1)</u>	AE/AR
<u>Hanging Leg Raises (3)</u>	F/Hipfl.

Bodyweight/ Legs	Category
<u>Squat with Miniband (1)</u>	KD
<u>Overhead Squat with Stick (2)</u>	KD
<u>Reverse Lunges (1)</u>	KD
<u>Forward Lunges (1)</u>	KD
<u>Side Lunges (1)</u>	KD
<u>Step Up (2)</u>	KD
<u>Split Squat (1)/Iso. Split Squat (1)</u>	KD
<u>Bulgarian Split Squat (2)</u>	KD
<u>Single Leg Squat on Box (3) / Single Leg Squat on Bench (3)</u>	KD
<u>Good Mornings (1)</u>	HD
<u>Wall Sit (1)</u>	KD

Bodyweight/ Legs	Category
<u>Hip Bridge (1)</u>	HD
<u>Isometric Hip Bridge (1)</u>	HD
<u>Elevated Hip Bridge (2)</u>	HD
<u>Gray Cook Hip Bridge (3)</u>	HD
<u>Romanian Deadlift with Stick (1)</u>	HD
<u>Single Leg RDL (2)</u>	HD
<u>Hamstring Curls with SB (1)</u>	HD
<u>Eccentric Hamstring Slides (1)</u>	HD
<u>Hamstring Slides (2)</u>	HD
<u>Nordic Hamstring Curls (3)</u>	HD
<u>Reverse Nordics (2)</u>	KD
<u>Clamshells (1)</u>	/
<u>Side Lying Hip Abduction (1)</u>	/
<u>Manual Ecc. Hip Abduction (2)</u>	/
<u>Calf Raises (1)</u>	/
<u>Seated Calf Raises (1)</u>	/
<u>Single Leg Calf Raises (2)</u>	/
<u>Heel Walk (1)</u>	/

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Exercise Library

Bodyweight/ Upper Body	Category
<u>Eccentric Push Ups (1)</u>	HP
<u>Push Ups (2)</u>	HP
<u>Isometric Push Up (2)</u>	HP
<u>Weighted Push Ups (3)</u>	HP
<u>Dips (3)</u>	HP
<u>Eccentric Chin Up (1)</u>	VPL
<u>Chin Up (2)</u>	VPL
<u>Isometric Pull Up (1)</u>	VPL
<u>Pull Up (2)</u>	VPL
<u>Weighted Eccentric Chin Up (2)</u>	VPL
<u>Weighted Pull Up (3)</u>	VPL
<u>Overhead Stick Press (1)</u>	VP
<u>Ring Row (1)</u>	HPL
<u>Scapula Push Ups (1)</u>	HP
<u>Scapula Pull Ups (1)</u>	VPL

Rings/ TRX	Category
<u>Ring Row</u>	HPL
<u>Single Arm Ring Row</u>	HPL
<u>Ring Biceps Curl</u>	/
<u>Ring Triceps</u>	/
<u>Ring Face Pulls</u>	HPL
<u>Ring Row with Rotation</u>	HPL
<u>Assisted Skater Squat</u>	KD

Bands	Category
<u>Shoulder Press</u>	VP
<u>Seated Row</u>	HPL
<u>Half-Kneeling Row</u>	HPL
<u>Half-Kneeling Push</u>	HP
<u>Good Morning</u>	HD
<u>Band Pull Aparts</u>	HPL
<u>Internal Rotation</u>	/
<u>External Rotation</u>	/
<u>External Rotation at 90 degrees</u>	/
<u>Neck Mobilisation</u>	/

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Exercise Library

Dumbbells/ Kettlebells	Category
<u>Goblet Squat (1)</u>	KD
<u>Goblet Lateral Squat (2)</u>	KD
<u>Hip Bridge (2)</u>	HD
<u>Split Squat (2)</u>	KD
<u>Bulgarian Split Squat (2)</u>	KD
<u>Romanian Deadlift (2)</u>	HD
<u>Single Leg RDL (3)</u>	HD
<u>Bench Press (2)</u>	HP
<u>Shoulder Press (2)</u>	VP
<u>Alt. Kettlebell Shoulder Press (2)</u>	VP
<u>Single Arm Row (2)</u>	HPL
<u>Biceps Curls (1)</u>	/
<u>Scaption/ Full Can (1)</u>	/
<u>Seated Calf Raises (1)</u>	/

Barbell	Category
<u>Back Squat (3)</u>	KD
<u>Deadlift (3)</u>	HD
<u>Romanian Deadlift (3)</u>	HD
<u>Reverse Lunges (3)</u>	KD
<u>Bench Press (3)</u>	HP
<u>Bent Over Row (3)</u>	HPL
<u>Shoulder Press (3)</u>	VP
<u>Hip-Thrust (3)</u>	HD

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PICTURES

IFF International Floorball Federation Flickr:
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Photos from Pexels: <https://www.pexels.com/de-de/>

Norges Bandyforbund: Photos and Videos

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