

Orienteering Strength and Conditioning Exercises

Write your own programme, vary it, adapt it, and use it.

Plan backwards from a competition with the week before a competition being a recovery week.

As a starter break into 4 week cycles with the last week being a recovery or rest week.

Increase intensity for 3 weeks.

Tie it in with your running schedule.

Make the warm up specific to orienteering.

RAMP warm up

RAISE

Heart Rate and temperature (of muscles) – run, high knee lift, drive arms, co-ordinate movements, increase cadence. 30secs.

ACTIVATE major muscles.

Forward, backward, sideways lunges – 5 of each. NB sideways keep feet flat.

MOBILISE

Standing walks with high knee lift and opening joint with knee out.

Heel kick hands.

Squat walks swinging legs out to side.

Hand walk out to press up then feet to hands.

YTWF arms, thumbs turned outward. May be standing or lying down.

POTENTIATE

Agility exercises - Short sprints, stops, starts, sidesteps with inside/outside leg, change of pace.

Example 10 minute warm up routine

WU routine	Sets	Rep	Weekly comments Plyo metric programme - body weight skips single and double leg work maximum 80 contacts some at start and some at end of each session.
running on spot	30secs		
fwd lunge left and right	1	5 each side	
side lunge/step left and right	1	5 each side	
skip (single leg hop)	30secs	L/R	
squat walk	30 ecs		
press up	1	10	
Walking Push Up - FWD + BWD	1	5	
Side bridge 15 secs each side	15 secs	L/R	
YTWL	1	5	
Over head squats 20kg bar	1	10	
Clean and snatch with 20 kg bar	2	7	

SETS, REPETITIONS, WEIGHT AND REST INTERVALS.

Depending on training targets sets reps and rests are really important.

RM means Repetition Maximum e.g. 1RM would be the maximum weight you could lift once only for a specific exercise.

Training Goal	Rest period length	Weight Sets and Reps
Strength	2-5 minutes	High weights (80-90% 1RM), 3-5 sets, 4-8 reps
Power: Single-effort event Multiple effort event	2-5 minutes	High weights (75-95% 1RM), 3-5 sets, 2-5 reps
Hypertrophy	30 seconds – 1.5 minutes	Low weights (50-75% 1RM), 3-5 sets, 10-20 reps
Muscular endurance	≤ 30 seconds	Low weights (50-75% 1RM), 3-5 sets, 10-20 reps

Example of Medium Heavy **Endurance** programme for one week, used for training for hill running.

30 secs rest permitted.

Supervised – Endurance session 1	Sets	Rep	V	RI / Pred load	Kg	VL
Snatch	4	10	40	MH	30	1200
Front Neck Push Press	3	10	30	MH	30	900
Clean	4	10	40	MH	40	1600
Behind neck press	3	10	30	MH	30	900
Stiff Leg Dead Lift - one leg	3	8	24	MH	40	960
Landmines	3	10	30	MH	0	0
Rollouts	3	10	30	MH	0	0
Nordics	3	5	15	MH	0	0
Totals	26	73	239		170	5560
Supervised - Endurance session 2	Sets	Rep	V	RI / Pred load	Kg	VL
Over head squats	4	10	40	MH	30	1200
Bench Press	3	10	30	MH	40	1200
Single leg back squat	3	10	30	MH	30	900
Chin (pull ups)	3	10	0	MH		0
Wipers	3	8	24	MH	0	0
Dynamic Plank	3	30	90	MH	0	0
Single arm dumbbell pulls	3	10	30	MH	0	0
Totals	22	88	234		100	3300

Example Medium Heavy Strength programme for one week, used for training for hill running.

2 minutes rest between sets. Note alternate exercise to reduce local muscle fatigue.

Supervised – Strength session 1	Sets	Rep	V	RI / Pred load	Kg	VL
Clean	3	5		VH	40	600
Behind neck press	3	5			40	600
Back Squat	3	5			60	900
Bench Press	3	5			50	750
SLDL - one leg	3	5			50	750
Landmines	3	8			30	720
Rollouts	3	10				0
Nordics	3	7				0
Totals	24	50	0		270	4320
Supervised – Strength session 2	Sets	Rep	V	RI / Pred load	Kg	VL
Snatch	3	5	15	MH	40	600
Front Press	3	5	15	MH	40	600
Front squat	3	5	15	MH	50	750
Neck of steel	3	5	0	MH	30	450
Single leg squat	3	5	15	MH	30	450
Dynamic planks	3	30	90		0	0
Rollouts	3	10	30		0	0
Nordics	3	5	8			0
Totals	24	70	188		190	2850

GYM exercises

Consider lower body then upper body and keep cycling through these to avoid fatigue of one major muscle group.

Most demanding first - Olympic lifts or squats..

Squats – use a broom handle, 10kg, 15kg or 20 kg bar at start. Add weight as experience is gained. Maintain good form. Variations of Overhead, Back and Front squat. Hand width variations.

- Feet wide apart to allow pelvis to drop through
- Toes turned slightly out
- Chest up
- Elbows tucked in and pushed forward
- Shoulders back – pinching between shoulder blades
- Push elbows under bar
- Squeeze glutes and hold breath on down
- Exhale on up
- Drive through a flat foot

Presses (double with barbells or single arms with dumbbells)

Press-ups

- Thumbs in line with nipples
- Maintain good scapula position – flat back
- Full extension on toes
- Strong plank position
- Hands turned slightly out like clock face 10 to 2

Consider regression if you cannot do a press up, go down on feet, press back up on knees.

Bench Presses

- Thumbs and bar in line with nipples
- Keep elbows in
- Scapula position
- Use feet, glutes and back

Pulls/pull ups – double or single arm

- Variety of hand positions
- Keep body quiet
- Scapula position is important
- Avoid full extension of elbow
- Change height of bar and hence body angle to make it easier

Other exercises – 2-3 sets

Russian twists (5-20 reps)

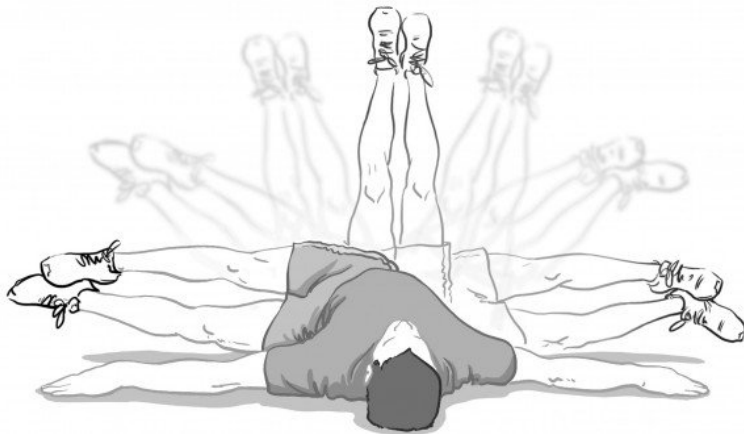
- sit with a 60° back angle relative to floor.
- Medicine ball twists.

Landmine 180's (5-20 reps)

- Position a bar into a landmine or securely anchor it in a corner.
- Raise the bar from the floor, taking it to shoulder height with both hands with your arms extended in front of you.
- Perform the movement by rotating the trunk and hips as you swing the weight all the way down to one side.

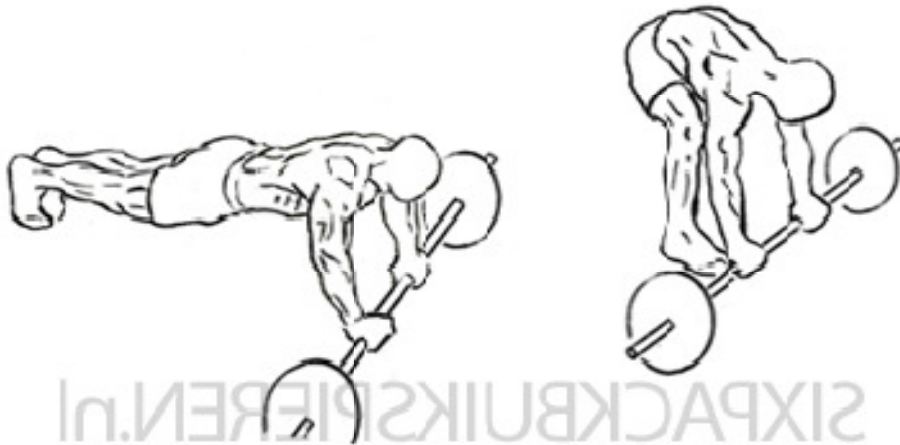
Wipers (5-20 reps)

- Lie on back
- Swing legs side to side
- Stop each swing a few centimetres off floor



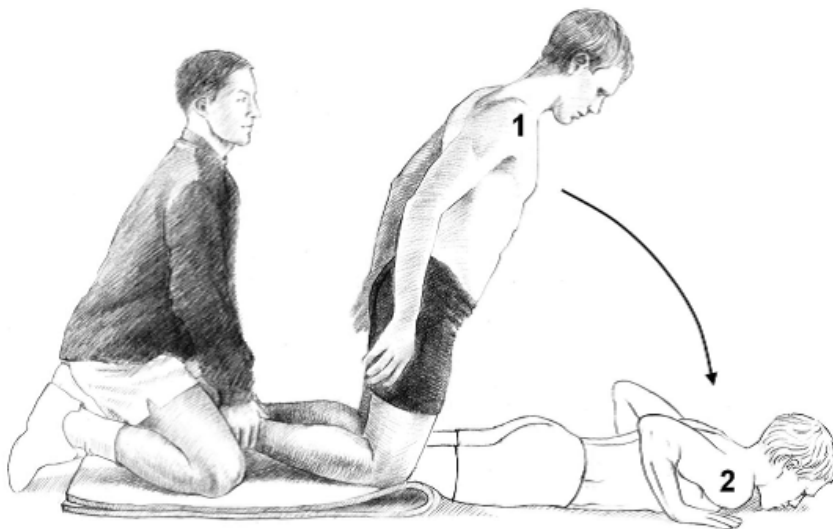
Barbell rollouts (5-10 reps)

- If possible do on feet not knees
- Consider using bands for support
- Maintain head/neck/spine alignment throughout



Nordics (5-10 reps)

- Holds for as long as possible in descent
- Maintain body alignment
- Put hands out early to catch fall
- If possible push back up with force
- If not possible to push back up



Nordic Hamstring Exercise Training Protocol

Week	Sessions Per Week	Sets and Reps
1	1	2 x 5
2	2	2 x 6
3	3	3 x 6-8
4	3	3 x 8-10
5-10	3	3 sets, 12-10-8 reps
10+	1	3 sets, 12-10-8 reps

Reproduced from Petersen et al. (2011)

Plyometrics (see article on plyometrics and distance running)

- Skips
- Hops
- Leaps
- Bounds
- Jumps one and two footed take-offs and landings
- Sidesteps
- Starts
- Stops
- Changes of direction

Starter programme

Exercise	Foot Contacts (Sets x Number of Contacts per Set)			
	Week 1	Week 2	Week 3	Week 4
Ankle Hops	2x8	3x8	3x8	3x8
Hop and Stick	3x6	3x6	3x8	3x8
Power Skip	2x6	3x6	3x8	2x8
Total Foot Contacts	46	60	72	64