



Newcastle
University

SPORT & FITNESS CENTRE

Strength & Conditioning
Limited Equipment
Lockdown Guidance

Programme Outline

Training need not be overcomplicated. During this period, **we will focus on what we CAN do**. This document will help provide some structure to your training.

Nobody outgrows the basics. The bulk of our time will be spent training exercises that have stood the test of time; squats, push ups, rows, lunges etc.

“Consistency for mastery, variation for plateaus, randomness for fun”

Pat Flynn

As the weeks progress, we will thread the same exercises throughout the duration while varying their application subtly. There will be **Mobility, Strength & Power**, and **Endurance** sessions.

Training will be categorised into sections. Much like a cookbook where you are free to choose your recipe (session), you are in charge of the ingredients used (exercises). Just adhere to **movement quality and practise safe technique**.

Example Progression Variables

- Pick an exercise, look to increase **sets and/or reps** over time
- Manipulate **leverage** E.g. feet elevated push up
- Use **tempo**, timed lowering E.g. 3sec squat descent
- Use **pauses** at weak positions E.g. 1-3sec at the bottom of squat
- Work **single limb** E.g. single leg squats & lunges
- Group several exercises into a **circuit**

Most importantly, chase PHYSICAL qualities, NOT soreness.

Question the sessions - ‘Am I looking to **GAIN**, or adapt to **SUSTAIN??**’

To **GAIN** would involve getting stronger in a given movement by progressing to a harder one; it feels easier, more explosive, you shift more load. **SUSTAIN** would involve observing less fatigue in successive rounds; holding a level for longer, covering more distance, ultimately enduring and building capacity.

Warm Up – No Equipment Movement Circuit

Whatever you want to call it; warm-up series, movement prep, cardiac output circuit...

For some this is a ramped warm-up to 'RESET' areas of the body and will take 10-15 minutes before the meat and potatoes of any given session.

This can also double up as a continuous END circuit. Hit between 5-8 reps of each exercise with a **goal heart rate between 120-150 bpm.**

Rest 2-3 minutes, repeat x1-3 rounds.

<https://youtu.be/rbC8-rVedpo>

Strength & Power Session

The following link provides suggestions for **ZERO equipment Strength and Power** sessions based on body weight.

There are progressions and regressions for each exercise based on competency.

<https://youtu.be/VdUQFbt0PdM>

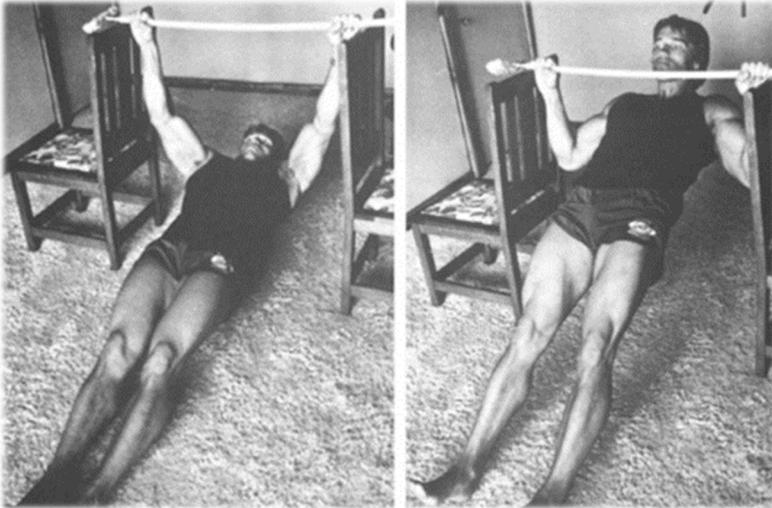
Session Order:

- Pick 1-2 exercises from the **Jump & Landing section** where you 'stick' the landing on a forgiving surface. Ideally pick one double and one single leg variation. Demonstrate control.
1-2 Sets of 3-5 Reps each E.g. Broad Jump and L & R Hop & Hold.
- THEN Pick any explosive **Jumping exercise** using only BW and repeat it continually without a 'stick'. E.g. Repeated Vertical Jump OR Burpee.
6-10 Sets of 3-5 Reps Use maximal effort!! Rest 60sec between sets.
- THEN Pick an exercise from every other section.
3-5 Sets of 4-6, or 6-8 or 8-10 Reps Whichever is challenging.

Strength & Power Session – ‘Pulling’ Movements

You will have noticed there are no PULLING movements in the video. With zero equipment it is difficult to create a pulling movement.

If you are resourceful you might be able to use household objects.



Inverted Row

Using a strong stick (broom) you can rest it across the back of two chairs.

Look to pull the bar to your chest.

Either an overhand or underhand grip is fine.

2-4 Sets of 4-6

***Make sure the setup is stable and safe before trying this exercise.**

For some a **bent knee variation is best to start with** (shown below), followed by straight legs (shown above), then finally elevated feet on a box.



Alternatively **various weight water bottles** serve perfectly as substitute dumbbells, for **Bent Over Row** variations.

Select the optimum Set & Rep range to chase appropriate work and progress accordingly.



Strength & Power Session

In an ideal scenario you'd look to select exercises hitting the following **movement patterns; Squat, Hinge, Push, Pull, Rotate or Brace** in each session.

As described above, you can plug the holes of a bodyweight only programme by being resourceful.



For those of you that own **STRENGTH BANDS** you can select exercises from the video below to complement the ZERO equipment session.

Setup with caution. Typically the easiest portion of the lift becomes as difficult as the hardest using a band.

<https://youtu.be/2hW9YsjjNPE>

Strength Progression Variables

Below are **examples of how to progress** sessions. That OR, add a rucksack full of books.

Record your training, this informs future direction...



	Week 1-2	Week 3-4	Week 5-6
Same Exercise	2-4 x (4-6)	2-4 x (6-8)	2-4 x (8-10)

Look to increase the reps...

Same Exercise and Reps	2-4 x (4-6)	2-4 x (4-6)	2-4 x (4-6)
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Manipulate Tempo

3 sec Lower

Pause Bottom

Explode Up

Same Exercise and Reps	2-4 x (4-6)	2-4 x (4-6)	2-4 x (4-6)
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Modified Leverage

Incline Push Up

Floor Push Up

Feet Elevated Push Up



Endurance Session

Using any of the exercises mentioned so far, we can **create a circuit** adhering to purposeful work to rest ratios.

- **Pick 8 exercises** from within this booklet and/or any exercises that have *not* been mentioned...

Work either:

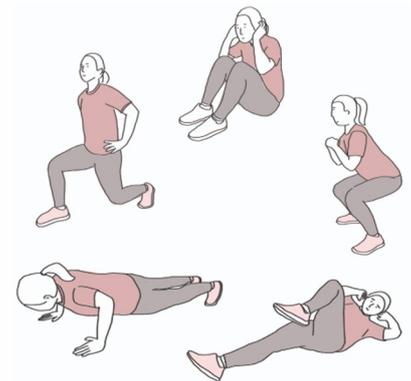
- **3-5 rounds of (8x30sec continuous) 2mins rest**
OR
- **2-4 rounds of (8x40s on: 20s off) 2mins rest**
Session Effort = 6-8/10

E.g. Circuit 1 - 8x30sec continuous

- 1) Wrist Friendly Burpee
- 2) Glute Bridge March
- 3) BW Squats (brisk)
- 4) Dive Bomber Push Up
- 5) Explosive High Knee (L)
- 6) Thoracic Flow
- 7) Explosive High Knee (R)
- 8) Wall Walk Handstand

E.g. Circuit 2 - 8x40s on : 20s off

- 1) Broad Jump (there & back)
- 2) X-Band Walks (there and back)
- 3) Floor Push Up
- 4) Banded 'A' Skip
- 5) Split Squat (L) with rucksack
- 6) Dynamic Blackburn
- 7) Split Squat (R) with rucksack
- 8) Hamstring Walkouts



Conditioning – if you're unfit, you can end strength session with a 'finisher' to condition the body to tolerate progressively tougher sessions. Pick one.

***Bodyweight Blitz:** massive benefits can be gained with just body weight.

30sec Squat Jumps

30sec Star Jumps

30sec Mountain Climbers

30sec Push Ups (easier progressions – feet, knees, against the wall)

= total 2mins work

Rest 1 minute. Repeat x3-5

***Tabatas:** a very intense and simple work to rest ratio of **20sec ON : 10sec OFF**. Repeated x8 = total of 4mins work.

This protocol achieves improvements even in well trained athletes, as well as novices. You can get creative with it and mix and match exercises. However, the chosen exercise(s) must be full body in nature to reap the benefits.

Good pairings are:

Squat Jumps alternated with 10m shuttles

DB Thrusters alternated with MB Slams etc.

Front Squat into Overhead Press using an empty Oly bar (or weight plate in front), alternated with KB Swings

= total 4mins work

***Intervals 15:15's**

Run 7/10 (not sprinting) for 15 sec, resting for 15 sec, repeat for 10, 15 or 20 times. **The last run should cover the same distance as the first.**

15 on : 15 off x10

= total time 5mins

15 on : 15 off x10 – Rest 2 minutes – Repeat x10

= total time 12mins

15 on : 15 off x15

= total time 7m 30s

15 on : 15 off x20

= total time 10mins

Aerobic options (AE1-AE4) Make notes of speeds/levels used for future sessions.
“If you’re not assessing, you’re just guessing”

AE01 Run/Cycle/Row/X-Trainer 4x4min

Warm up & dynamic stretch

Run/Cycle/Row or X-trainer for:

4min HARD – cover as much distance as possible (7-8/10 effort)

3min passive recovery

Repeat x4

Total time: 28min

AE02 Run/Cycle/Row/X-Trainer 5x2min (x2)

Warm up & dynamic stretch

Run/Cycle/Row or X-Trainer for:

2min HARD (7-8/10 effort)

1min passive recovery

Complete 5 sets then repeat on a different cardio machine

Total time: 30mins

AE03 30sec Hard, 30sec Easy

Warm up & dynamic stretch

Run/Cycle/Row or X-Trainer for:

30sec HARD; 30sec WALK

Repeat x 10

4min passive recovery

30sec HARD; 30sec WALK

Repeat x 10

Total time: 24min

AE04 Gerschler Fartlek

Suitable for getting fit VERY quickly when combined with steady running.

Warm up & dynamic stretch

Run HARD for 30 seconds, jog/walk 90 seconds. Repeat with 15 second decreases in recovery jog e.g. 30-90, 30-75, 30-60, 30-45, 30-30, 30-15 and 30-15-30

So on a stop watch it should look like:

0:00 – 0:30 sec work hard,

2:00 – 2:30 work hard,

3:45 – 4:15 work hard,

5:15 – 5:45 work hard,

6:30 – 7:00 work hard,

7:30 – 8:00 work hard,

8:15 – 8:45 work hard. Repeat x2-3.

Total time 30-40mins

Foam Rolling Examples

- Find tissue 'hotspots' and spend time there until it eases off...
- If you can bend a joint while on a hotspot, to lengthen and shorten the muscle tissue, even better.

