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Training Outside the “Box” Presented by Helen Vanderburg

Introduction

The pandemic has forever changed the fitness landscape and more than ever before our clients and potential new participants have invested in home equipment to maintain their fitness routine. However, equipment without programming and accountability will collect dust! In this workshop we will discuss how to bring your expertise to the home fitness participant and how to create fun, creative and effective workouts using bikes, treadmills, rower, weights, resistance bands and more! Learn how to program for clients to engage with you. This is an ideal workshop for one on one, as well as small group training via the internet to your clients. Once the doors to fitness facilities open again you can use these formats for group classes.

Programming for Home Fitness and Small Group Training Objectives

- Review of physiology and principle of training
- Discuss program strategies
- Identify consideration for training and programming
- Observe sample workout plans

Physiology and Principles of Training

How to design programs based on a strong physiological foundation

1. Energy Systems (ES) Training

TIME (SEC)	ENERGY SUPPLY	ENERGY SYSTEM
1-4	ATP	ANAEROBIC - ALACTATE
4-20	ADP+PCr	ANAEROBIC - ALACTATE
15-60	FAST GLYCOLOSIS	ANAEROBIC - LACTATE
60-180	FAST AND SLOW GLYCOLOSIS	ANAEROBIC/AEROBIC
180-240+	SLOW GLYCOLOSIS	AEROBIC – FFA/GLYCOGEN

2. Physiological Adaptations

Rating of Perceived Exertion and Metabolic Markers of the ACE IFT Model

Rating of Perceived Exertion (RPE)	Metabolic Markers	ACE IFT Model Phase – Cardiorespiratory Training	Energy Pathway	Length of Time at Intensity (estimated)*
0–4	Below VT1	Base	Aerobic respiration	Unlimited
5	VT1 (estimated)	Base–Fitness	Aerobic glycolysis	3–5 minutes
6	Above VT1 and below VT2	Fitness	Aerobic glycolysis, transitioning to anaerobic glycolysis	45 seconds to 3 minutes
7	OBLA (estimated)	Fitness–Performance	Anaerobic glycolysis	Less than 3 minutes
8–10	Above OBLA	Performance	Anaerobic glycolysis, transitioning to stored ATP	Less than 1 minute

* The length of time may vary greatly based on existing fitness level; the primary limiting factor is the accumulation of hydrogen ions. Monitor the breathing rate of

clients and class participants and ask for feedback based on the 0–10 RPE scale to identify the length of time that will work best for each particular workout.

3. Performance Qualities
 - Intensity
 - Performance
 - Recovery

Resistance Training Principles

REP SCHEME OPTIONS

Muscular fitness exists on a continuum heavier loads and fewer reps for power and strength, lighter loads and more reps for muscular endurance.

Below are the rep and set ranges and percentage of 1 RM associated with the following training goals

Power	Strength	Hypertrophy	Muscular Endurance
2-4 reps	2-8 reps	6-12 reps	>12-20 reps
2-6 sets	2-6 sets	3-6 sets	2-3 sets
>90%1RM	>80%1RM	70-90% 1RM	< 70% 1RM

Interval Training GUIDELINES

1-4 Seconds	Anaerobic	ATP (stored in muscle)
4-10 Seconds	Anaerobic	ATP + PCr
10-45 Seconds	Anaerobic	ATP + PCr + Muscle Glycogen
45-120 Seconds	Anaerobic, Lactic	Muscle Glycogen
120-240 Seconds	Aerobic + Anaerobic	Muscle Glycogen + Lactic Acid
240-600 Seconds	Aerobic	Muscle Glycogen + Fatty Acids + Amino Acids

Samples:

Protocol	Set 1	Recovery – Transition 1 min	Set 2
Tremblay 15/15 x 4	Reverse lunges/switch lunges		Reverse lunges/switch lunges
EMOM 2 exercises for Reps	Down Dog/Push Up		Crab reach/Tricep Dip
Tabata 20/10 x 4	Skaters		Skaters
EMOM 2 exercises for Reps	Inchworm to loaded Beast		Single leg hip bridge/Crunch
Copenhagen 30/20/10 x 2	Lateral Squats/pop squats/tuck jumps		Lateral Squats/pop squats/tuck jumps

Three Main Components of Fitness

1. Cardio:

Calisthenics
Stationary Bike
Rower
Treadmill

Variable: equipment, time, distance, intensity

2. Strength:

Free weights
Portable Equipment

Variable: equipment, reps, load, sets, time

3. Mobility:

Mode of Training
Equipment

Variable: mode of training (stretching, yoga, SMR techniques, Pilates)

Periodization

Deliberate manipulation of training variables to optimize performance, prevent overtraining and progress performance.

Variable:

- Client's goals
- Duration: Length of workouts
- Intensity: workout variations (reps, sets, interval times, tempo)
- Exercise selection
- Equipment selection
- Volume: # of times, total work performed

Three phases of periodization

Macrocycles

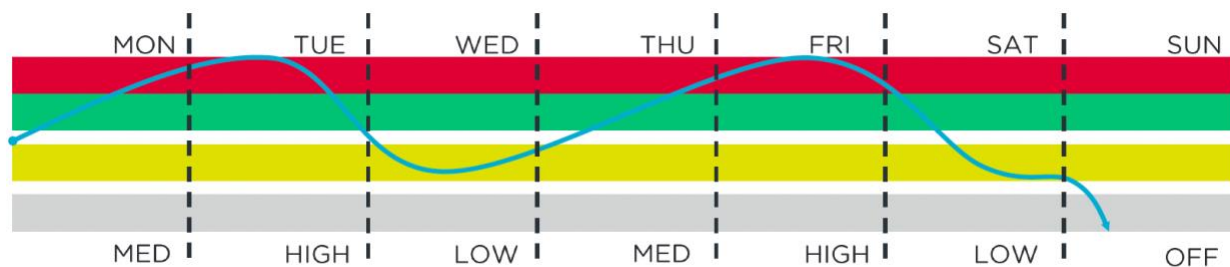
The big picture plan for the year or years

Mesocycles

Tend to be 4-6 weeks of progression followed by recovery

Microcycles

Short durations, weekly



Two Common Periodization Models

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1. Linear Periodization Model
 - Gradual accumulation of progressively challenging exercises over a period of time
 - Intensity increase Volume decreases
 - Volume increases Intensity decreases

2. Nonlinear (undulating) Periodization Model
 - Suited to general fitness clients
 - Switches among high, moderate and low intensity workouts over the course of a week
 - Allows for frequent changes

Sample: Two of each type of workouts/ week + one active recovery day (if time is a factor take them to one of each type of workout per week)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Active rest	HIIT	Steady State	Mobility	HIIT	Mobility	Steady state or HIIT
Walk	Strength/ power focus	Cardio	Yoga/Pilates/ Stretch	Strength focus	Yoga/Pilate/ stretch	Cardio focus

- Variables: Metabolic Fatigue, Mechanical Overload, Active Recovery

Sample Workouts

EMOM: on the minute 6 sets of exercise pairs

- Warm-up: 5-10 mins, light intensity exercise
- Mode: Bodyweight exercises
- Work: 6 exercise pairs at Hard to Very Hard RPE (15-17 on the 6-20 RPE scale)
 1. 20 touchdown jacks/ 10 ½ burpee
 2. 20 stationary lunge/ 10 squat to lunge
 3. 20 push-ups/ 10 froggers
 4. 20 air squats/ 10 squat jumps
 5. 20 plank jacks/ 10 high knee run
 6. 20 bicycle crunch/ 10 full curls-ups
- Rest interval: variable at Light RPE (11)
- Work/Rest Ratio: variable; complete 6 rounds of each

AMRAP: As many rounds as possible

- Warm-up: 5-10 mins, light intensity exercise
- Mode: Bodyweight exercises

- Work: 10 exercises 10 reps 10 mins
 1. 10 air squats
 2. 10 push-ups
 3. 10 jumping jacks
 4. 10 alternating rear lunges
 5. 10 switch lunges
 6. 10 climbers
 7. 10 commando planks
 8. 10 lateral lunges
 9. 10 squat jumps
 10. 10 full curls
- Rest interval: variable at Light RPE (11)
- Work/Rest Ratio: variable

Sprint Interval Training 30/30 INTERVAL WORKOUT:

- Warm-up: 5-10 mins, light intensity exercise
- Mode: treadmill, cycle ergometer, elliptical, rower etc.
- Work: 30 sec at Hard to Very Hard RPE (15-17 on the 6-20 RPE scale)
- Rest interval: 30 sec at Light RPE (11)
- Work/Rest Ratio: 1:1, complete 10 bouts

STEP Up 3/30 INTERVAL WORKOUT:

- Warm-up: 5-10 mins, light intensity exercise
- Mode: treadmill, cycle ergometer, elliptical, rower etc.
- Work: 30 sec at Hard to Very Hard RPE (15-17)
- After each interval increase the intensity variable (grade, resistance, speed, etc.)
- Rest interval: 30 sec at Light RPE (11)
- Work/Rest Ratio: 1:1, complete 10 bouts, finishing at 9% grade

HIIT + CV/ RESISTANCE WORKOUT

- Warm-up: Light 5 min cycle, Light
- CV Interval: 10 min intervals at race pace (15-17 on 6-20 RPE scale, “Hard to Very Hard”)
- Relief Interval: 5 min; self-select intensity cycle
- Resistance Training Circuit 5 exercise: 1 min each X2 (10mins)
- Repeat CV and Resistance Training Circuit

Comments: This is approximately a 60min workout with a 5min cool-down

ROW + RESISTANCE TRAINING WORKOUT:

- Warm-up: Light 5 min cycle, Light
- Work for 1 min each: Row (15-17 on 6-20 RPE scale, “Hard to Very Hard”)
 - Upper body
 - Lower body
 - Core

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- Relief Interval: 30 seconds active recovery (approx. 5 min rounds)
 - Repeat 4+ times varying the resistance training exercises
- Comments: This is approximately a 30min workout with a 5min cool-down

Notes:

Questions?

Thank you for attending.

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