

Planning gym-based exercise

Level 2 Gym-based programme
planning and preparation

Learning outcomes

By the end of this session you will be able to:

- Outline how to plan and adapt gym-based exercise to meet the needs of clients with different objectives
- Explain why it is important to agree goals and objectives for gym-based exercise with clients
- Identify a range of exercises and methods of training for individual clients
- Record programme plans in an appropriate format

Learning outcomes

By the end of this session you will be able to:

- Interpret individual client information to select exercises that will help clients to develop CV and muscular fitness, flexibility, motor skills and functional ability
- Suggest other activities available to complement their programme according to interests
- Identify the importance of reviewing programmes at regular intervals and setting review dates
- Plan how to minimise any risks relevant to the programme

Planning gym-based exercise

For physical fitness to improve, the body must be trained in an effective manner

It must be trained to the point of **overload**, followed by sufficient recovery time to allow adaptation to take place

Training is a slow and subtle process that cannot be rushed

Conducted safely and correctly, training leads to improved performance, as well as physiological and psychological changes

The importance of goal setting

It is important to agree goals and objectives for gym-based exercise with clients before any programming can go ahead

- Ensure goals are SMART
- Ensure goals encourage adherence
- Ensure you consider how you will provide customer care and support

The importance of planning

- Listen to clients during the consultation regarding their likes and dislikes
- Analyse all of the information given to you to identify client goals
- Choose the relevant exercises to support these goals
- Utilise knowledge of anatomy and physiology to select exercises that apply consideration to muscular balance and alignment

Overload principle

In order to make improvements, a body system must work at a level slightly higher than that to which it is accustomed

e.g. an individual whose cardiovascular fitness is low due to years of sedentary living can overload the heart, lungs and circulatory system simply by walking at a faster pace than normal. However, gradually, the heart gets stronger and the individual has to walk faster still to overload the heart

Overload principle

Overload is achieved by using the FITT principle

- **Frequency** – the number of sessions in a given period (how often)
- **Intensity** – the level of work performed during an activity session (how hard)
- **Time** – the duration of a given session (how long)
- **Type** – the choice of activity (running, weight training, stretching, etc)

Progressive principle

Overload should be increased gradually over time to keep achieving progress. This can be achieved by:

- **Repetitions** – increasing the number of repetitions
- **Resistance** – increasing resistance by using gravity, length of lever, external weight, body weight
- **Rate** – changing the speed of the exercise (e.g. slowing down muscular strength exercise or speeding up CV exercise to increase intensity)

Training variables	
Reps	Training frequency
Sets	Workout time
Rest	Exercise order
Workloads	Speed of movement
Intensity	Range of movement

Progressive principle

- **Rest** – decreasing the rest periods (between sets, exercises and training sessions)
- **Range** – increasing the range of movement applied to the exercise
- **Complexity** – using exercises with more complex movement patterns

Specificity

- Adaptations are specific to the type of training performed and the demands placed on the body
- Different forms of exercise produce different results
- Each sport or activity has its own particular muscular and movement characteristics
- For an individual's performance to improve in a particular sport or activity, training needs to be specific

Reversibility

- Training adaptations will gradually decline if training stops or a maintenance programme is not followed
- Some decline in fitness occurs naturally with the ageing process, especially between the ages of 50–70 years
- However, by remaining active much of this degeneration can be avoided

Adaptability and individuality

Adaptability - the ability of the body to cope with and adapt to specific training needs

Individuality - one size does not fit all. A training programme should be relevant and appropriate for the individual and their specific training requirements

Recovery time

- Rest is required for the body to recover from the training session and to allow adaptation to take place
- This includes the heart becoming stronger, the lungs becoming more efficient and the muscles becoming more toned, thereby improving fitness
- Without sufficient recovery time, improvements in fitness will not take place
- The exact amount of time will vary depending on the type of training session
- 24 to 48 hours rest is usually required

Plateau and regression

- Plateau occurs when continued adaptations no longer occur
- In order for further adaptations and responses to take place, some aspects of the training must change
- It is important to recognise when to regress a training programme. Clients who come back to training after illness, injury or a break will need to have their programme regressed to avoid overworking and possible further injury

Individuals may require modifications, adaptations and progression to different exercises and training methods to meet their needs. These include:

Individual
needs

Fitness
levels

Skill level

Experience

Injury or
disability

Medical
conditions

Environment

Warm-up

Consider the following:

- Type of warm-up (general or specific)
- Warm-up components:
 - Mobility
 - Pulse-raising
 - Preparation stretches
 - Re-warm (if necessary)
- Factors affecting a warm-up

Cardiovascular fitness

Select exercises to develop cardiovascular fitness

- Upright cycle
- Recumbent cycle
- Treadmill
- Stepper
- Rowing machine
- Elliptical trainer
- Cross trainer



Resistance machines

Select exercises to develop muscular fitness

- Seated chest press
- Seated row
- Shoulder press
- Lat pull down
- Bench press/
seated chest press
- Pec dec



Resistance machines

Select exercises to develop muscular fitness

- Triceps press/
triceps pushdown
- Biceps curl
- Leg press
- Seated adductor
- Seated abductor
- Leg extension



Resistance machines

Select exercises to develop muscular fitness

- Leg curl
- Ab machine
- Lower back machine



Free weights

Select exercises to develop muscular fitness

- Front raise
- Single arm row
- Bent arm pullover
- Shoulder press
- Lateral raise
- Upright row



Free weights

Select exercises to develop muscular fitness

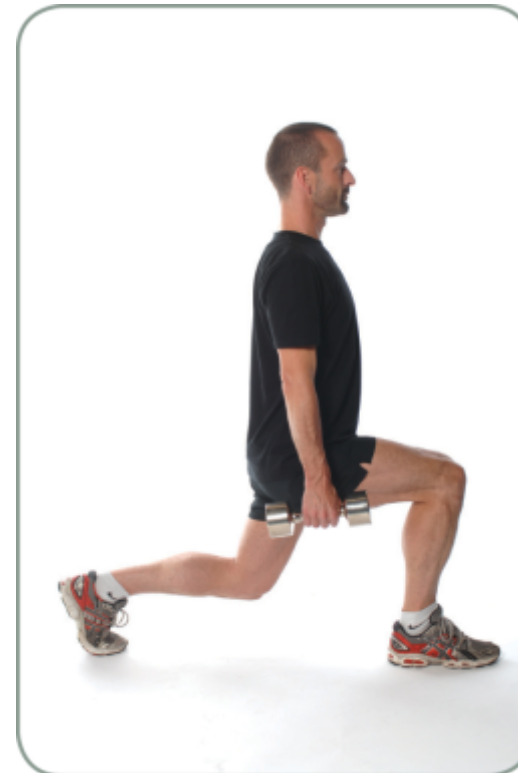
- Bench press
- Flyes
- Prone flyes
- Supine triceps press
- Single arm triceps press
- Biceps curl



Free weights

Select exercises to develop muscular fitness

- Lunge
- Dead lift
- Squat



Body weight exercises

Select exercises to develop muscular fitness

- Chins
- Press up
- Lunge
- Squat
- Abdominal curl
- Oblique twist
- Back raise



Flexibility

Select stretches to maintain or develop flexibility

- Hamstrings
- Quadriceps
- Adductors
- Abductors
- Hip flexors
- Gastrocnemius
- Soleus



Flexibility

Select stretches to maintain or develop flexibility

- Pectorals
- Trapezius
- Obliques
- Deltoids
- Triceps
- Erector Spinae



Flexibility

Select exercises to develop flexibility. Consider:

- Which muscles need to be stretched?
- When muscles need to be stretched?
- Types of stretches appropriate to the session



Flexibility

Select exercises to develop flexibility. Consider:

- Static stretching
- Mobilisation of joints
- Preparatory stretches (during the warm up - static/dynamic)
- Post-workout stretches (maintenance and developmental)

Motor skills

Choose exercises that will improve:

- Balance
- Power
- Speed
- Reaction time
- Coordination
- Agility

These may be in the cardiovascular, resistance or flexibility sections

Other activities to compliment a gym-based programme

- Group exercise classes
- Swimming
- Challenges and events
- Personal training/coaching
- Sports massage
- Clubs (running, walking etc.)
- Health and wellbeing service
- Social activities

Cool-down

Consider the following:

- Cool down components:
 - Pulse-lowering (or re-warm if required)
 - Post-workout stretching
 - Maintenance stretches
 - Developmental stretches
- Factors affecting a cool down

Reps and resistance for specific goals

Goal	Repetitions	Resistance
Muscular strength	1–8	V. Heavy 80–100% of 1RM
Muscular fitness (strength & endurance)	8–12	Heavy 60–80% of 1RM
Muscular endurance	12–25	Moderate 40–60% of 1RM

Cardiovascular training methods

- Continuous training
 - Continuous short
 - Continuous long (Long slow distance or LSD)
- Interval training
- Fartlek
- HIIT
- Cross training

Resistance training methods

- Single set training
- Circuit resistance training
- Basic sets
- Delorme and Watkins 10 RM system
- Berger 6 RM system
- Pyramid systems
- Super-setting

Functional exercise

- Movement patterns
- Muscle actions
- Components of fitness required for activities of daily living

Timing and sequences

Plan realistic timings and sequences appropriate to:

- Fitness level
- Environment
- Type of session
- Duration of session
- Programme goals

Programme cards

- Formats may vary from gym to gym
- Ensure that the programme card is easy for the client to understand
- The planned exercises should be clear
- Explain the key points of an exercise using written/diagrammatic explanations where appropriate
- Avoid jargon and abbreviations

Reviewing programmes

- Plan in regular reviews
- Allows for amendments to be made
- Shows any progression towards goals
- Motivates client

Programme cards

- Include a warm-up (including stretches if appropriate)
- Include resistance exercises, detailing:
 - Reps
 - Sets
 - Rest
 - Resistance
- Include cardiovascular training, detailing:
 - Rate (RPM/SPM/KPH/MPH)
 - Level
 - Resistance
 - Duration
- Include a cool-down with stretching (including maintenance and development stretches)

Risk management

- Check PARQ and any recent changes (e.g. illness, injury)
- Carry out environment and equipment risk assessments
- Prepare the environment and equipment
- Ensure everything is clean and hygienic
- Monitor clients' performance
- Consider any client weaknesses and previous injuries
- Use appropriate methods of monitoring intensity (e.g. talk test, RPE, heart rate monitoring)
- Recognise and respond to signs of over exertion
- Ensure you are aware of emergency procedures