Module
in
PATHFit 1 (MIDTERM)
Physical Activities Toward Health and Fitness 1 (Movement Competency)

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UNIT 3
Breathing and Bracing, Exercise Variables and Principles

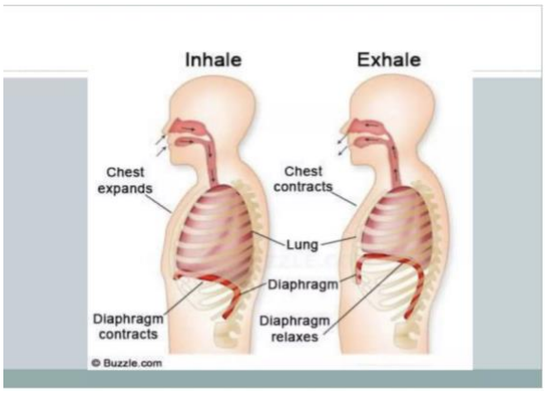
Breathing and Bracing

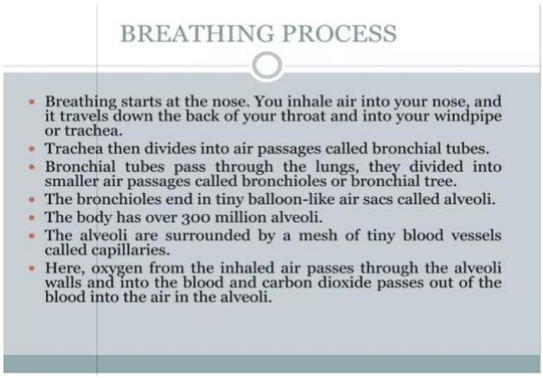
Breathing

The process that moves air in and out of the lungs is called breathing or pulmonary ventilations. It is one of the processes that deliver oxygen to where it is needed in the body and remove carbon dioxide.

Organs that involved in Breathing:

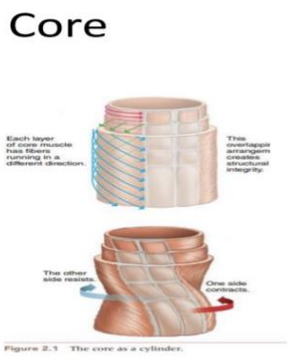
- Nose
- Trachea
- Bronchi
- Bronchioles
- Lungs
- Muscles along with diaphragm

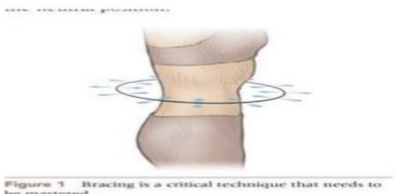




Bracing

Bracing is the process of creating and raising 360 degrees of intra-abdominal pressure to engage the core's muscles and keep the spine in the ideal posture when moving or being exposed to stress.





Exercise Variables

Exercise variables help us understand the current routine and its effects. Individuals may be unaware of or have not considered the variables that influence exercise and, ultimately, results. Many factors influence your training, but understanding the variables in particular can help you achieve better fitness results. Your understanding of the exercise variables will assist you in making the most of your exercise efforts.

1: ***Exercise selection*** The different exercises or lifts you perform in a workout, which determines which muscles you train in that session
2: ***Exercise order*** The order in which you perform the exercises in an workout
3: ***Sets*** The number of times you perform a group of reps (short for repetitions)
4: ***Reps*** The number of times you perform an exercise without stopping for rest
5: ***Tempo*** The speed at which you perform each rep
6: ***Rest*** The time you have to recover between sets and and between exercises
7: ***Weight*** The amount of resistance you lift for each set

Principles Of Exercise

The exercise principles outline the criteria that guide all training. Each principle allows us to critique some element of a person's training. When a person's training follows the principles well it is most likely to be successful. Following is a list of the principles and their definitions.

PRINCIPLES OF EXERCISE	DEFINITION
Principle of Specificity (MIMIC THE MOVEMENT)	Any change or adaptation in the body's muscles, organs and systems will be very specific to the type of training undertaken.
Principle of overload (Experiencing beyond expected)	To bring about any adaptation the body will have to work a little harder than it is used to.
Principle of Reversibility (Used it or lose it)	Improvements in fitness can be maintained by regular exercise and activity. If training stops the benefits gained will gradually decline.
Principle of Adaptability/Variety (Add diversity to training)	For optimal adaptation and to avoid stagnation, overuse, and injury the exercise stimulus must be varied (this does not simply mean changing exercises all the time).
Principle of Individuality (Different strokes to different folks)	There are many factors that will affect an individual training potential Age Gender Body type Heredity Muscle fibre type Range of motion Strength Cardiovascular fitness

Principle of Recovery time	Rest and recovery time is essential to prevent overtraining.
FITT Principle **F-REQUENCY** **I-NTENSITY** **T-IME** **T-YPE**	 How often the activities will be performed. How hard the activities will be. How long the activities will be performed. The specific activities that will be performed e.g. strength, endurance, walking, running, pilates.

Phases Of Exercise

Warm-up

Preparing your body for the activity of the conditioning part of your workout. Warming up before exercise allows your body to adjust gradually to the increased demand on your heart, muscles, breathing, and circulation. Warmups also increase your body temperature slowly, improves flexibility and protects against injury and muscle soreness.

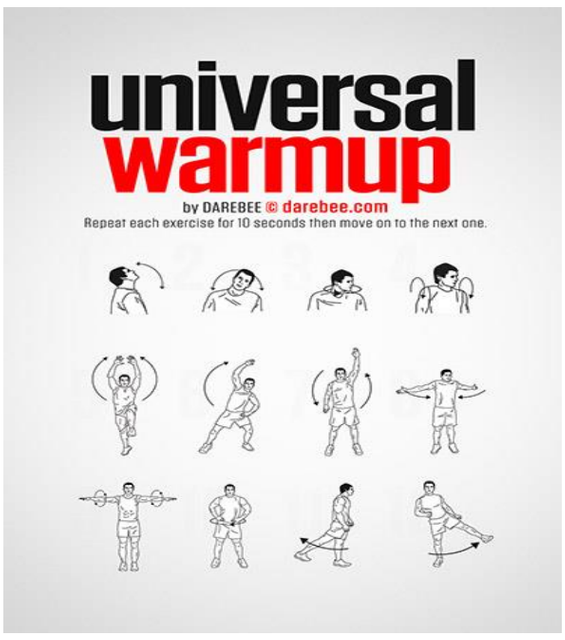
Conditioning (or the activity/exercise itself)

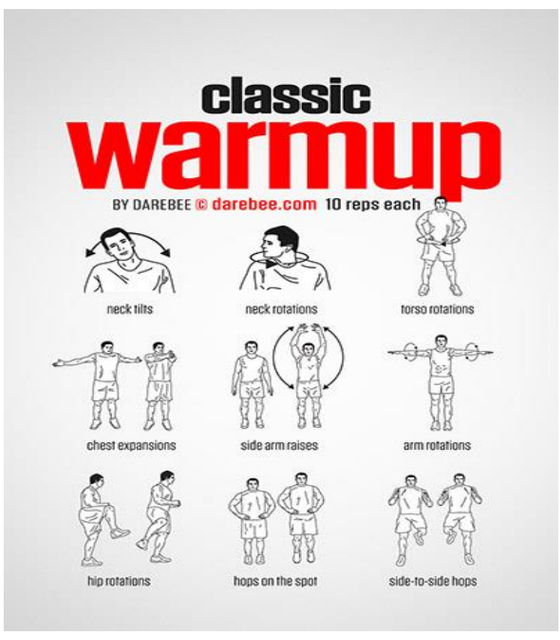
It is when you perform the exercise that produces fitness benefits: calorie burning, building endurance, or muscle strengthening. Examples of exercises: aerobic exercise, lift free-weights, swimming, circuit training on weight machines, high-intensity sports.

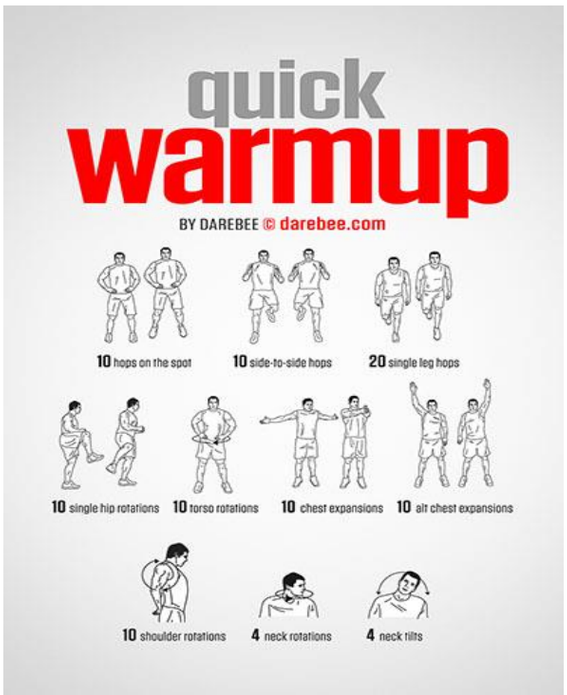
Cooldown

Cool down is bringing the body back to its relaxed state gradually from a super active state. Tapering down the muscle movement before completely stopping the heavy workouts help the body to cope better with the changes that take place in the metabolism and muscles used during the workout.

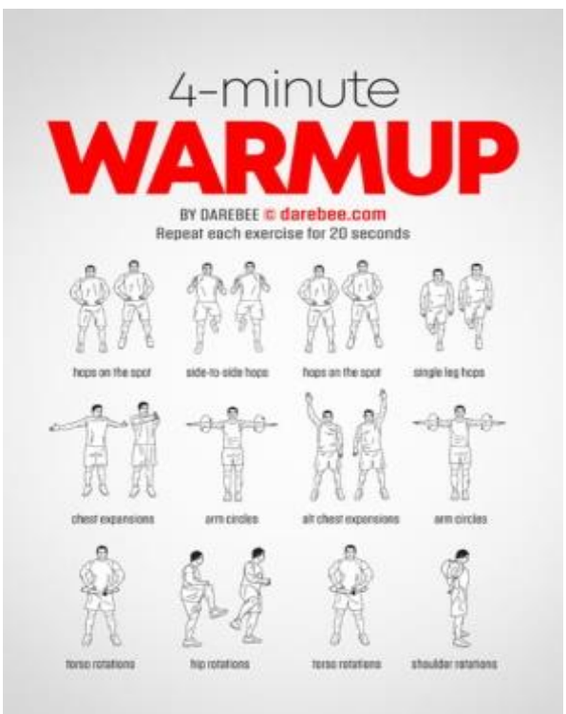
Here is a selection of ready warm-ups:






quick
warmup
BY DAREBEE © darebee.com
10 hops on the spot
10 side-to-side hops
20 single leg hops
10 single hip rotations
10 torso rotations
10 chest expansions
10 alt chest expansions
10 shoulder rotations
4 neck rotations
4 neck tilts


2-minute
WARMUP
BY DAREBEE © darebee.com
Repeat each exercise for 10 seconds
hops on the spot
side-to-side hops single leg
hops on the spot
side-to-side hops feet together
alt back expansions
chest expansions
arm cirles (wide)
arm circles
hops on the spot
side-to-side hops single leg
hip rotations
torso rotations


4-minute
WARMUP
BY DAREBEE © darebee.com
Repeat each exercise for 20 seconds
hops on the spot
side-to-side hops
hops on the spot
single leg hops
chest expansions
arm circles
alt chest expansions
arm circles
torso rotations
hip rotations
torso rotations
shoulder rotations