An unstable (but controlled) environment where exercises are performed that causes the body to use its internal balance and stabilization mechanisms
Proprioceptively enriched environment

How quickly a muscle can generate force
Rate of force production

Ability of the body's stabilizing muscles to provide support for joints as well as maintain posture and balance during movement
Stabilization

Smaller divisions of training progressions that fall within the three building blocks of training
Phase of training

A state of lost physical fitness, which may include muscle imbalances, decreased flexibility, and/or a lack of core and joint stability
Deconditioned

Set of two exercises that are performed back to back without any rest time between them
Superset

The muscle that acts as the main source of motive movement
Prime mover

The cumulative neural input to the central nervous system from mechanoreceptors that sense position and limb movement
Proprioception

The ability of the body's nerves to effectively send messages to the body's muscles
Neuromuscular efficiency

Enhance stabilization strength and endurance while increasing prime mover strength.
Phase 2: Strength Endurance

Designed for individuals who have the goal of maximal muscle hypertrophy.
Phase 3: Hypertrophy

Works toward the goal of increasing maximal prime mover strength.
Phase 4: Maximal Strength

Enhances prime mover strength while also improving the rate of force production (how quickly a muscle can generate force).

Phase 5: Power

Neuromuscular Effiency
Ability of neuromusculur system to enable all muscles to efficiently work together in all plans of motion

Deconditioned
Stage of lost physical fitness, muscle imbalance, less flexibility and lack of core and joint stability

Phase Training
Smaller divisions of training progressions that fall within the 3 blocks of training

Prime Mover
The muscle that acts as initial and main source of motive power

Muscular Endurance
A muscles ability to contract for an extended period of time

Proprieception
The cumulative sensory input to nervous system from all mechanoreceptors that sense body positions and limb movement

Proprieceptively Enriched Environment
Unstable yet controlled physical situation in which exercises are performed that causes body to use it's internal balances and stabilization of mechanisms

Rate of Force
How quickly a muscle can generate force

Superset
Set of two exercises that are performed back to back without any rest time in between

Traditional Training Programs
Name 3 Planes of motion
Name 1 Plane of motion that is used the most
1. -Sagital Planes - forward motion
-Frontal Planes - anterior - side to side, rotation.
-Tranverse Planes - backward
2. Sagital Planes

3 Contractions
Name Contraction Sections
Isometric - lifting loads
Eccentric - lowering loads
Concentric - stabilizing the body to handle load.

OPT MODEL
Optimum Performance Training
Explain the model 3 building blocks, and brief description of whats in each block
Integrated program to suit any individual.
3 Building (SSP)
Blocks:Stability,Strength,Power
Phase1-Stabilization: Increase stab and endurance.Prop based. Increase being stable.Reps high.
Phase2-Strength Endurance:Strenth End,Hyprotrophy,max strength, w/superset. Tradition Exercise, and integrated exercise balance/strength
Phase3-Hypertrophy:building muscles. Must progress to this level
Phase4-Maximal Strength:max strength/lifing heavy loads.
Phase5-Power:speed/power, rate of force,maintaining prime mover strength. rate of force.

OPT MODEL Explain:
PH1-STABILIZATION - addresses muscular imbalances & attempts to improve the stabilization of joints and overall posture

STRENGTH:
PH2Enhances stabilization, PH3-increasing muscle size(hypertrophy)
PH4-maximal prime mover strength

PH5 -POWER - rate of force production, power training.

Explain NASM Cleint Template
Step1:Warm-up:a.foam roll.b.stretch.c. cardiovascular
Step2:a.core.b.balance.c.reactive
Step3:Resistance training section
Step4:Cool Down

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during the 1950's & 1960's gym members were?
Predominatly men:

- body builders (increased size)

- power lifters (strength)

- Olympic lifters (explosive strength)

- athletes (combination of all goals)

how did society view exercise in the 1970's?
it became more socially accepted

who were "experts" in the 1970's?
the person in the gym that had been training the longest, looked most fit, strongest

why was the typical helth-club member better prepared in the past compared to now?
- the work and home environment in the past was not as inundated with automation, personal computers, cell phones, etc.

- activity level of daily life was still somewhat brisk.

% of adults obese today?
33%

% of teenagers considered overweight?
16%

% of people older than 65 which have at least 1 chronic disease?
80%

% of people that have at least 2 chronic diseases?
50%

___ in 5 adults have doctor-diagnosed arthritis?
1

what is the leading cause of disability?
doctor-diagnosed arthritis

what is the leading causes of muscular dysfunction and ultimately injury?
in activity

what are the major forms of musculoskeletal degeneration seen in the adult population?
- lower back pain (80% of pop.)

- knee injuries

what are some chronic diseases?
- obesity (world wide epidemic)

- cancer

- cardiovascular disease

- arthritis

- diabetes

deconditoined:
a state of lost physical fitness, which may include muscle imbalances, decreased flexibility, and lack of core and joint stability.

Proprioception:
he cumulative sensory input to the central nervous system form all mechanoreceptors that sense body posture and limb movement.

Proprioceptively enriched:
an unstable (yet controlled) physical situation in which exercises are performed that causes the body to use its internal balance and stabilization mechanisms.

what are the forms of training that are incorportated in an integrated fashion as part of a progressive system:
- flexibility training

- cardiorespiratory training

- core training

- balance training

- reactive training

- speed

- agility

- quickness training

- resistance training

from the OPT model how does a client achieve optimal levels of physiological adaptations
- improves cardiorespiratory efficiency

- enhances beneficial endocrine and serum lipid adaptations

- increases metabolic efficiency

- increases tissue tensile strength

- increases bone desnity

from the OPT model how does a client achieve optimal levels of physical adaptations:
- decreases body fat

- increases lean body mass (muscles)

from the OPT model how does a client achieve optimal levels of performance adaptations:
- strength

- power

- endurance

- flexibility

- speed

- agility

- balance

The OPT model:

Phases of training:
smaller divisions of training progressions that fall with the three building blocks of training

what are the three levels of the OPT model?
1. stabilizaiton

2. strength

3. power

the stabilization level consist of how many and what phases?
1. stabilization endurance training

main focus of the stabilization endurance training phase:
the increase muscular endurance and stability while developing optimal communication between one's nerous system and muscular system (neuromuscular efficiency)

muscular endurance:
a muscle's ability to contract for an extended period of time.

neuromuscular efficiency:
the ability of the neuromuscular system to enable all muscles to efficiently work together in all planes of motion.

goal of stabilization endurance training?
to increase the client's ability to stabilize their joints and posture.

prime mover:
- the muscle that acts as the initial and main source of motion power.

how many and what phases are in the strength level?
1. strength and endurance trianing

2. hypertrophy training

3. maximal strength training

goal of strength endurance training:
to enhance stabilization endurance while increasing prime mover strength.

superset:
set of two exercises that are performed back to back, without any rest time between them.

example of supersets.

(usually one is more traditional strength exercise performed in a more stable environment, while the other one is a more integrated exercise performed in a less stable environment)

goal of hypertrophy training:
designed for individuals who have the goal of maximal muscle growth.

goal of maximal strength training:
- maximal prime mover strength by lifting heavy loads.

what does the power level emphasize?
the development of speed and power

goal behind the power phase/level?
the execution of a more traditional strength exercise superset with a power exercise of similar joint dynamics.

- enhance prime mover strength while also improving the rate of force production.

rate of force production:
how quickly a muscle can generate force.

example of supersets in the power phase:

Phase 1:

stabiliztion endurance training:
goals?
training strategies?

Phase 2:

strength Endurance Training:
goals?
training strategies?

phase 3:

hypertrophy training (optional phase, depending on clients goals)

goals?
training strategies?

Phase 4:

Maximum Strength Training (optional phase, depending on client goals)

goals?
training strategies?

Phase 5:

Power training:

goals?
training strategies?

true or false:
a proprioceptively enriched environment is one that challenges the internal balance and stabilization mechanism of the body
true

name the three building blocks of training?
1. stabilization

2. strength

3. power

in which building block does the phase of hypertrophy training belong?
phase 3 instrength level

which phase of training enhances prime mover strength and improves the rate of force production concurrently?
phase 5 the power training