FUNCTIONAL DRY LAND TRAINING FOR SWIMMING

RANDY WELLS: MS, CSCS*D, NASE SPEED & POWER SPECIALIST, USAW, NATIONAL BOARD CERTIFIED TEACHER, USA TRACK AND FIELD.

randy.wells@usd253.net
PURPOSE OF THIS PRESENTATION

• SHARE SOME TRAINING METHODS AND IDEAS
• UNDERSTAND FUNCTIONAL TRAINING FOR A COMPETITIVE SWIMMER
• DEFINE LAPS SYSTEM (CREDIT SANTANA/GRIF)
• TO GIVE YOU NEW IDEAS AND WORKOUTS YOU CAN USE RIGHT AWAY.
What do we know?

• Sprint Swimming Research has demonstrated that resistance training improves:
  • Stroke Rate
  • Distance Traveled per stroke
  • Both would lead to increased performance in distance and sprint swimmers.
World’s Best Athletes: WHY? POSTURE AND STIFFNESS

- 0 to >100km/hr in 3 sec
- Jump >20 times body length
- Lift and carry 20x body weight
FUNCTION IN THE WATER

• WE KNOW IN THE WATER THERE ARE NO GROUND CONTACT FORCES; EXCEPT FOR TWO TIMES (START AND FLIP TURN)
• CORE STIFFNESS IS THE KEY TO TRANSFER
• ALL IS ANCHORED TO THE CORE
  — (EVERYTHING PULLS ON THE CORE)
TAKE HOME MESSAGE

• IF YOU HAVE A RASH OF SHOULDER INJURIES IT IS MOST LIKELY DUE TO A WEAK SPINE.

• WHY? IF THE LATS CANNOT PULL ON THE SPINE LIKE IT SHOULD, DUE TO A WEAK SPINE THE SHOULDER PICKS UP THE BRUNT OF THE LOAD, SO YOU HAVE CHRONIC SHOULDER ISSUES.

• THE FIX: STRENGTHEN THE SPINE/STIFFNESS

• WEAK IN THE CORE AND SPINE = LOSS OF ALIGNMENT, & PULL AND KICK POWER
LAPS SYSTEM

• Four Essential Components:
  – Lower Body Power-hams, glutes, quads
  – Alignment and Core Rotation
  – Pull and Push Power
  – Shoulder Stability

Goal: the goal is to be stronger and more explosive in the water while decreasing the risk of injury.
TECHNIQUE

• LOWER BODY IS THE DIFFERENCE MAKER IN BREASTSTROKES /BUTTERFLY, LEG STRENGTH IS CRITICAL FOR KICKS.

• WHY? IF THE LEGS DIE THE HIPS SINK AND DROP, WHICH CREATES MUCH MORE RESISTANCE IN THE WATER.

• FREESTYLE AND BACKSTROKE: UPPER BODY MORE DOMINANT (PUSHING AND PULLING)
MY TOP 4

• IF YOU HAD ONLY TIME OR SPACE TO DO FOUR EXERCISES THESE WOULD BE THE ONES.
  – REACHING LUNGES
  – T-ROTATIONAL PUSH UP
  – 1 ARM STAGGERED BAND PULLS
  – BAND EXTENSIONS (A)
  – Could be done almost anywhere , little equipment
Functional Dry Land Training for Swimming: Exercises To try

• LOWER BODY:

• Swim Start Jumps- 2 types, parallel stance, or track Start

  – 1. Parallel Stance-hands touch even with toes pause, then explode and reach up, 2 second hold on all jumps, (eliminates stretch reflex)
Functional Dry Land Training For Swimmers - Lower Body

- 2. Track Start - toe to heel relation 1 foot forward, touch, explode up reach up
3. Split Squat Lunges: “opening up the hips is critical to developing more Power”, open up the hip flexors are critical, back leg knee must be behind the hip, can progress to split jumps
Lower Body

4. Anterior Reaches: fundamental movement for the lower body, teaches to hinge at the hip.

A) Staggered Stance-rt foot forward left foot toe to heel, left hand touches rt foot, come up to stop sign position

B) Single leg, balance on one leg
LOWER BODY

5. Triple Threat Hams:
6. One Legged Kick Drags: in swimming powerful kicks are important, the main muscles are the hip flexors, must train them to be explosive and powerful, *** Develops a Powerful kick, train the hip flexors under a load
Alignment and Core

• Core-my definition of core is armpit to ankles, on the anterior and posterior side of the body, keep in mind force is transferred through the entire body, can be no weak links (core= torso is a flexible strong chain link fence).

• Dynamax Wall Series 1: perform each of the exercises for 15 seconds, with a partner works best, try to get 35-40 reps in 15 seconds with a 12-14 pound ball, move fast progress from light to heavy, each touch on the wall counts as 1 touch
Functional Dry Land Training for Swimming: Core

- Side to Sides-keep elbows wide so do not hit vs. a wall, nothing touches the wall except the ball
- Diagonals: reach above the right shoulder go diagonally across the body to the left hip and repeat, each touch is 1 rep. Repeat to other side.
- Woodchop: reach above to right shoulder, down between the legs, “hip hinge”, back above the left shoulder back between legs, each touch is 1 rep.
Functional Dry Land Training for Swimmers: Core

• Square: Up right, down right, Up left Down left, Up right
• Dynamax Series 2: 3 cycles nonstop of the following equals one set, between you and a partner do as many cycles as you can in 4 minutes.
• Start on back ball overhead, knee punch and crunch and touch, back overhead, knee punch other leg back overhead to floor, touch floor between the legs back overhead an come off the floor throwing to your partner, perform 10 ballistic punches and repeat the cycle two more times before you switch
Functional Dry Land Training for Swimming: Core

• Stability ball roll out to pike
• Stability ball dead bug –contralateral 10-12 reps+ Stability Ball Single leg side Touches 10-12 reps+ In and outs 10-12 reps+ Hold and knee drive pause 2-3 seconds alternating legs 10-12 reps

*****this is very challenging, not a six pack but if you want abdominal and trunk strength this will do it.
BUG SERIES CORE

DEAD BUG: CONTRALATERAL

TOE TOUCHES

IN AND OUTS

KNEE HOLDS-2-3 seconds
Alignment and Core

Ropes: get shoulder stability and core at the same time.

Dble Slams: shoulders and hips

In and Outs-shoulders core

Alternating Rope Slam

Squat and Lunge
Alignment and Core-rotation

• Stability Ball Log Roll: progress slow, see the shirt wrinkle, progress to leg scissors

Bosu Ball Streamline Prone hold-strengthens
The low back and glutes. Progress 10-20-30 secs.
Can do supine as well
ALIGNMENT /CORE: LOG Roll AND TWISTERS
ALIGNMENT AND CORE: BOSU HOLD
Alignment and Core

Planks—my new favorite star planks

Push up, lift up one leg, lift up one arm, contralateral, great shoulder and core stability
PUSH/PULL: goal is to have explosive lats.

- Swimmers-fingers shoulders to pockets, hinge at hip, can reach up higher
- Alternating swimmers, both up rt down/ up, then lft down and up
- Single Arm, same leg is forward, ie. rt arm, rt leg forward
SWIMMERS

SWIMMERS: SINGLE ARM

SWIMMERS: SINGLE ARM ALTERNATE

SWIMMERS: DOUBARM
Push /PULL

- XT (suspension system) Triple Threat Back
- 3 cycles = 90-105 reps
- Y’s: make sure you pull with straight arms, keep the wrists rigid do not let them flex, complete 10-15 reps, then move the feet 6-12 inches closer to the anchor point,
- Wide Grip Rows-10-15 reps then move feet 6-12 inches closer to the anchor point,
- Underhand close grip rows-10-15 reps, feet almost directly under anchor point, rest and repeat
XT TRIPLE THREAT BACK

Y'S     WIDE GRIP ROWS     CLOSE GRIP UNDERHAND
PUSH/PULL

- Overhead Med Ball Slam-great for lats and core
- Rainbow slam-rotation
- Stability Ball Rollout: progression wall, to ground, “stronger longer”
Functional Dry land Training for Swimming: Push Pull

- Metabolic Back: 3-4 cycles, progress, progress, progress or regress
- 20 rows, 20 alternating rows, 20 swimmers, 10 slams
- This can be u go I go or can be for set time periods/intervals.
Functional Dry Land Training for Swimmers: Shoulder Stability

• 3 Position Shoulder Stability, 5 reps each position 2-3 cycles.
• Palms up lateral raise to palms up horizontal fly to palms up front raise and then retrace the path.
• Thumbs up lateral raise to thumbs up horizontal fly to thumbs up front raise and then retrace the path.
• Palms down lateral raise to palms down horizontal fly to palms down front raise and then retrace the path. Like this sequence on a stability ball.
SHOULDER STABILITY

• T-Push ups-this is a 3 for 1, core, shoulders and core rotation. Progression from plank and T roll (legs split) to a push up and T-rotate as 1 unit
• Free Style Rope Prone: lying on a bench-30 foot rope works best
• Backstroke Rope Supine: incline a bench up just a little
SHOULDER STABILITY
MINI CIRCUIT / CIRCUIT EXAMPLES

• 20 Athletes, 10 stations, 2 athletes at @ station, 30 seconds, 15 rest, 3 rounds total,
1. Med Ball Squats (lb) 2. Stability Ball Log Roll (acr)
3. Overhead Slams (pp) 4. FLEXIBAR (ss)
5. Jump Squats (lb) 6. 1 Arm Rope Slams (ss)
7. Band Swimmers (pp) 8. T-Push Up (ss)
CIRCUIT 2

1) RDL’S (LB)- 5 reps
2) Track Start Long Jumps (LBP)- 3 reps
3) T Rotation Pushup (SS) -12 reps per
4) Stability Ball Twisters (ACR)- 20 reps
START AND TURN
CIRCUIT #3

1) 1 Leg Bridge Stability Ball or T threat hams
2) Jump Squat with staggered Track Start
3) Med Ball Lunge
4) Split Jumps
STROKE POWER CIRCUIT #4
(lats/upper back)

4 Rounds, 30/15

1) Bent Over Band Row
2) 2 Arm Band Swimmers
3) Overhead Med Ball Slam
4) Stability Ball Roll Out
Lower Body: Mini Circuit: #5

1) Parallel Squat-5 reps
2) Hurdle Jumps-5 reps
3) 1 Arm Band Swimmers
4) Stability Ball Rollout
CIRCUIT #6

• REACHING LUNGES
• 3 POINT PLANKS
• MB SLAMS
• BAND EXTENSIONS
Circuit #7

1) DB Lunges (LB)- 5 reps per leg
2) Split Jumps (LBP)- 5 reps per leg
3) XT Rows (PP) – 12 reps
4) Palloff Band Rotations (ACR)- 15 reps per side
5) Super Leg Crank- 24 squats, 24 lunges, 24 split jumps, 12 rocket jumps
CIRCUITS/EXAMPLES

Individual Athlete Mini Circuit: 30 seconds on 15 rest

1. (LB) Med ball Squat and Press
2. (ACR) Rope Slams
3. (PP) 1 Arm Band Swimmer
4. (SS) Flexibar
20 person Team Circuit 2

1) Single leg Hip kick- off box progress bwt to band
2) Stability Ball Hyper
3) DB Overhead Split Squat
4) Split Jumps-knee alignnent behind hip
5) BWT OVHD FRONTAL PLANE  single leg reach
6) Med Ball OVHD Slam
7) Band Swimmers
8) ABC CRUNCH OR BAND EXTENSIONS
9) Prone Bosu Hold-streamline
10) DB OVH PRESS AND CROSS PUNCH-unlock back Leg
RANDY WELLS BIO

• National Strength and Conditioning Association Certified Strength and Conditioning Specialist with Distinction (CSCS*D)
• National Association of Speed and Explosion Certified Speed and Power Specialist.
• United States Weightlifting Association Certified Olympic Lift and Sport Performance Specialist. (USAW Club Coach)
• USA Track and Field Level 1
• Randy Has been teaching and Coaching for 28 years, he has worked with a variety of athletes from JR. High to College Level.
• Named The High School Strength and Conditioning Professional of The Year in 2008 by the National Strength and Conditioning Association.
• THREE TIME 5A TRACK AND FIELD COACH OF THE YEAR
• Nationally Board Certified Teacher, MS in Physical Education, MS In Educational Administration