

Do the Wave!

Physical Fitness

and

Assistive Technology

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Definitions

- Exercise: bodily or mental exertion, especially for the sake of training or improvement of health.
 - Sounds clinical and objective structured.
- Fitness: A state of general mental and physical well-being.
 - A lifestyle choice that does not end.

Secondary Conditions & Persons with Disabilities

- ↓ balance, strength, endurance, flexibility
- Obesity
- High Blood Pressure
- Social Isolation/Depression
- Pressure Sores
- Spasticity
- Infections
- Osteoporosis

Why are we not fit?

- Nutritional Changes
 - hypercaloric meals
 - fast food
- Lifestyle Changes
 - fast paced
 - physical activity - saving technological conveniences
 - video games, TV, computer
- Exercise Changes
 - less walking/exercise
 - poor community design
 - less PE / PA in schools

Where to get fit?

- Fitness Centers/Gyms
- Vocational Rehabilitation Sites
- Recreation Centers/Districts
- Parks
- Beaches
- Neighborhood/Backyard
- In Your Home

Walking/Pushing

- Vary Locations
- Push-Assist wheels
- Gloves



Trainer



Hatcher Gardens - Spartanburg



Beidler Forest -
Low Country



Beach Mat – Myrtle Beach

Cycling

- Vary Locations
- Push-Assist wheels
- Gloves
- Handcycle



Tennis

- Tennis wheelchair
 - Single front caster
 - Anti tippers
 - Straps
 - Cushions
-
- Organized in Charleston & Columbia



Baseball

- Straps
- Paved
- Miracle League organized in Greenville & Charleston



Basketball

- Basketball wheelchair
- Single or dual rear caster
- Anti tippers
- Straps to stay in chair
- Abdominal bands - balance
- Gloves
- Organized in CWBC (Spartanburg, Greenville, Columbia, Charleston, Augusta, Charlotte)



Swimming

- Flotation devices: arms, torso, ankles
- Pool lift
- Zero Entry (ramp) & aquatic w/c
- Steps
- Hand fins
- Benefits:
 - great cardio
 - decrease weight bearing
 - less stress to joints
 - fluid range of motion



Weight Machines

- Wheelchair accessible (universal): removable/swing away seats
- Transfer requirements
- Ankle/Wrist cuffs for limited grasp
- Grasping Mitts
- Lifting Hooks
- Abdominal Straps
- Warm up first!
- Do the exercise slow & proper
- Strengthen back & core muscles



Seat Removal vs. Transfer



Chest Press



Shoulder Press



Rowing Machine



Bicep Curl



Lat Pulldown



Shoulder Press



Cable Crossover



Versatility

Back/Tricep



Chest



Bicep



Free Weights

- Small increments
- Wrist cuffs/weights
- Form is critical
- Benefits
 - Strengthen back and core muscles for stability
 - Used at gym or at home

Cardio

- Nu step – strap feet in or leave down
- Arm ergometer - at gym or at home
- Warm Up first
- Modified Grip tools



Other Activities

- Dance

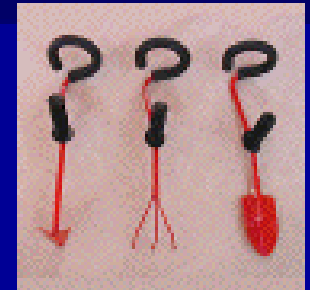


- Track and Field
 - SEWSA Games in Myrtle Beach in April



Other Activities

- Gardening
 - Raised gardening beds or inside the house
 - Modified grip tools
- Fishing
 - Adaptive holders
- Bowling



Therabands & Videos

- Therabands

- Different resistances
- Plus: Use from the wheelchair
- Plus: Portable

- Exercise Videos

- Cardio and Strength
- NCPAD

Contraindications / Important Considerations

- Pressure Sores
 - Transfers
 - Sitting on other surfaces such as weight machines
- Spasticity
 - Stretch spastic muscle groups
- Orthostatic Hypotension/Venous Pooling
 - Drop in blood pressure that occurs in upright postures
- Thermoregulation
 - Lack of temp regulation
- Autonomic Dysreflexia
 - Sudden rise in blood pressure
- Carpal Tunnel Syndrome
- Rotator Cuff Strain / Shoulder Impingement

Resources

- **SC Disability and Health Project**, catherine.graham@palmettohealth.org
- **National Center on Physical Activity and Disability**, www.ncpad.org
- **National Center on Accessibility**, www.ncaonline.org
- **ADA Technical Assistance Program**, www.adata.org
- **Form 8826 - Disabled Access Credit**, www.irs.gov
- **Access to Recreation**, www.AccessTR.com
- **Recreation Dynamics-Mobi Mat beach mat**, www.recreationdynamics.com
- **National Center on Accessibility (NCA)**, www.ncaonline.org
- **Architectural and Transportation Barriers Compliance Board (Access Board)**, www.access-board.gov