## Single Wheelchair

#### 1. Wheelchair Setting

Wheelchair setting effects players' performance the most. Wheelchair should be perfectly fit to the player's body. It includes the height of the back support and the feet rest.

The length from the center of the wheelchair and the back support should be 13-15cms.

For example, WH1 - around 13cms. (If the turning force(rotatory power) is too strong, the player may lose center balance, and her/his body will not be able to follow it).

WH2 – around 15cms. (the longer the length between center and back support, the faster and better turning force (rotatory power) she/he will get).

The reason why Korean players have good core (center power) or why it looks stable is because the wheelchair is low. The lower the wheelchairs are, the more stable wheelchairs become.

For example, height of WH1 wheelchair – German player Thomas: It may seem advantageous because he can hit shuttle at higher position. Speed seem to be better too. However, you will be able to see collapse in is postures. WH1 Korean player Jung Man, Choi: His wheelchair is low and fits his body; looks more stable because the wheelchair is low)

#### 2. Core Training

Core training using ball and dumbbell (see pictures at the back)

#### 3. Ready Position

Naturally put the arms to the center of the wheelchair so that hands lightly touch middle part of the wheels. The importance of ready position is to put body weight to the front part. When hitting shuttle, WH1 players need to keep in mind that taking off their back from the back support may disturb balance and accuracy.

#### 4. Importance in Serve

Some players consider only the directions when doing serve. Serve in single game is very

important in para-badminton than able-bodied badminton. When players serve, do not look at the place they are going to hit the shuttle; instead, use wrist snaps. It would be good to practice serve by using target.

#### 5. Wheelchair Movement Training

- 1. One swing at the front, roll the wheelchair wheel once, and hold
- 2. One swing at the front, roll the wheelchair wheel twice, and hold
- 3. Practice same way diagonally for forehand and diagonally for backhand

#### 6. Wheelchair Timing Training

By using sponge, one person holds and one person hits the shuttle (clear swing, return)

#### 7. Used Shuttle Training

- Stay on short serve line, and hit clear
- Stay on short serve line, and hit drop
  - 1. Stay on short serve line, opponent hits shuttle high to back-boundary line, then hit clear hairpin drop
  - 2. Stay on short serve line, opponent hits shuttle high to back-boundary line, then hit drop hairpin clear
  - 3. For rookies, put a box near short serve line and try to hit the shuttle inside.

#### 8. Shuttle Training

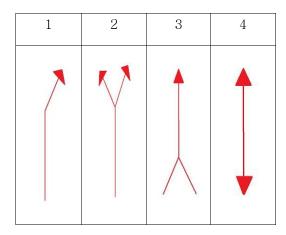
Swing back and then hairpin (one)

Swing back and then hairpin (two)

Swing back (two) hairpin (one)

One clear, one hairpin, one drop, one return

For example, put 3-4 persons into one group and exercise; it will be more effective.



# 9. Stroke System

Divide the group and exercise stroke

1	2	3	4
Drop	Clear	Drop	Drop
Haripin		Clear	Hairpin
			Clear

- On court, 2:1 stroke

# Sitting Abdominal Muscles Training

# 1. Sit-ups

#### 1-1. Straight Sit-ups



Beginning posture – tuck one's chin and hold the ball forward.



Profile of beginning posture.



Lift the ball straight up while exhaling.



Tilt the body backwards and maintain the posture with strength of one's abdominal muscle.

Number of times: 15 times x 3 sets or maintain the posture for 1 minutes (abdominal respiration)

## 1-2. Diagonal Sit-ups (left)



Beginning posture – tuck one's chin and hold the ball forward.



Profile of beginning posture.



Lift the ball upwards diagonally to the left while exhaling.



Tilt the body backwards and maintain the posture with strength of one's abdominal muscle.

Number of times: 15 times x 3 sets or maintain the posture for 1 minutes (abdominal respiration)

#### 1-3. Diagonal Sit-ups (right)



Beginning posture – tuck one's chin and hold the ball forward.



Profile of beginning posture.



Lift the ball upwards diagonally to the right while exhaling.



Tilt the body backwards and maintain the posture with strength of one's abdominal muscle.

Number of times: 15 times x 3 sets or maintain the posture for 1 minutes (abdominal respiration)

# 2. Russian Twist

#### 2-1. Left side



Beginning posture – tuck one's chin and hold the ball forward.



Profile of beginning posture.



Move the ball downwards diagonally to the left while exhaling.



Tilt the body backwards and maintain the posture with strength of one's abdominal muscle.

Number of times : 15 times x 3 sets or maintain the posture for 1 minutes (abdominal respiration)

#### 2-2. Right side



Beginning posture – tuck one's chin and hold the ball forward.



Profile of beginning posture.



Move the ball downwards diagonally to the right while exhaling.



Tilt the body backwards and maintain the posture with strength of one's abdominal muscle.

Number of times: 15 times x 3 sets or maintain the posture for 1 minutes (abdominal respiration)

# 3. Twist Down

## 3-1. Left side



Beginning posture - tuck one's chin and hold the dumb-bells forward.



Profile of beginning posture. Start while leaning backwards.



Move left arm backwards diagonally while exhaling.



Tilt the body backwards and maintain the posture with strength of one's abdominal muscle.

Number of times : 15 times x 3 sets or maintain the posture for 1 minutes (abdominal respiration)

#### 3-2. Right side



Beginning posture – tuck one's chin and hold the dumb-bells forward.



Profile of beginning posture. Start while leaning backwards.



Move right arm backwards diagonally while exhaling.



Tilt the body backwards and maintain the posture with strength of one's abdominal muscle.

Number of times: 15 times x 3 sets or maintain the posture for 1 minutes (abdominal respiration)

#### \* Please be aware that...

- 1. all abdominal muscle training should start by breathing in.
- 2. one should tuck one's chin and try not to use of neck muscle.
- 3. mixing different directions while training is more effective than doing one direction.

# 4. Abdominal Muscle Training using Band

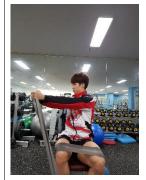
## 4-1. Horizontally



Beginning posture - tuck one's chin and hold the band.



Pull the band to the left side horizontally while exhaling.



Pull the band to the right side horizontally while exhaling.

Number of times: 15~20 times x 3 sets

## 4-2. Upwards



Beginning posture – tuck one's chin and hold the band.



Pull the band to the left side upwards while exhaling.



Pull the band to the right side upwards while exhaling.

Number of times : 15~20 times x 3 sets

#### 4-3. Downwards



Beginning posture - tuck one's chin and hold the band.



Pull the band to the left side downwards while exhaling.



Pull the band to the right side downwards while exhaling.

Number of times: 15~20 times x 3 sets