

# SEATING GUIDELINES FOR CLASSES 1.0-1.5



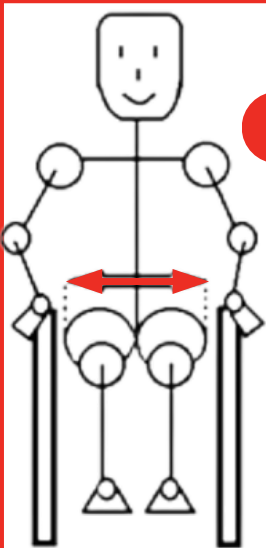
## Class 1.0 and 1.5 athletes generally:

- have limited ability to:
  - lean forward and return to upright without arm support
  - sustain the weight of the ball without leaning their upper back over the backrest
  - maintain balance in reaction to minimal contact
- tend to lose their balance when braking or pivoting hard
- are at risk of developing pressure sores

## Proper seating will allow the athlete to:

- move the trunk forward to lean into the first push using neck flexors
- move the shoulders back over backrest when handling the ball, braking, or pivoting hard
- start their push comfortably at 12 o'clock
- pick up a ball against the rear wheels
- prevent pressure sores

## STEP BY STEP



### 1 SEAT WIDTH

Ideal seat width can be found by trying different chairs or measuring sitting width.

There should be minimal space between the athlete and the side guards. Allow extra space if the athlete develops pressure sores at the sides of the hips.

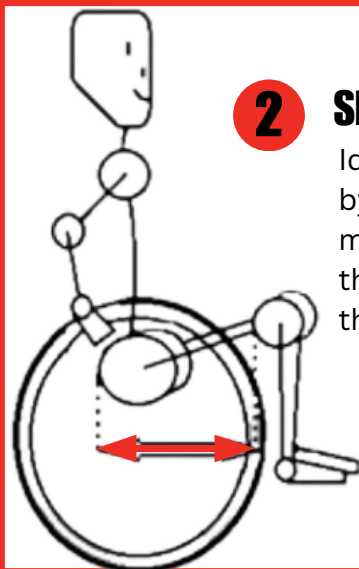
**TIP**

### 3 CUSHION

Several class 1.0 and 1.5 athletes can use a regular 2" (5 cm) foam cushion.

**TIP**

Some athletes may need a therapeutic cushion to help prevent pressure sores.



### 2 SEAT DEPTH

Ideal seat depth can be found by trying different chairs or measuring from the back of the pelvis to 2" (5 cm) behind the knee.

### 4 WHEEL SIZE

Recommended 24" (540mm) for women and 25" (559mm) for men.

**TIP**

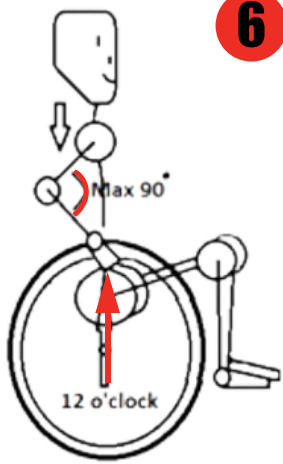
Smaller wheels make acceleration easier; larger wheels offer a higher top speed and can be a better anatomical fit for some players.

### 5 CAMBER

(angle of rear wheels in relation to the ground)  
Recommended 16° for class 1.0 and 1.5 athletes.

**TIP**

A wider base makes the wheelchair more responsive; a narrower base can fit into tighter spaces.



## 6 REAR SEAT HEIGHT

- athlete's fingertips should be close to the axles of the wheels
- athlete should be able to place hands at 12 o'clock without hiking their shoulders
- elbows should be bent at a maximum of 90°

No matter the seat height, the athlete should always be low enough to pick up a ball off the floor using the rear wheels.

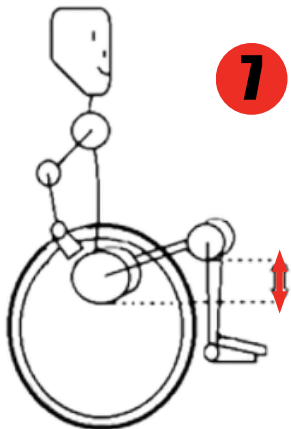
**TIP**

A lower rear seat height allows the athlete to:

- get up more easily from the floor after a fall
- lean more easily on wheels for support

A higher rear seat height allows the athlete to:

- reach higher up when catching or rebounding
- be closer to the basket when shooting



## 7 FRONT SEAT HEIGHT

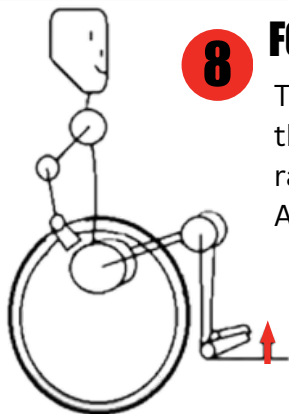
The maximum front seat height for class 1.0 and 1.5 athletes is 63 cm. Typically, class 1.0 athletes benefit from having their front seat height 3" higher than their rear seat height.

Lower placed knees:

- allow the athlete to reach further forward and pick up the ball more easily from the floor

Higher placed knees:

- provide stability in the forward plane
- ensure the athlete's pelvis does not slide forward

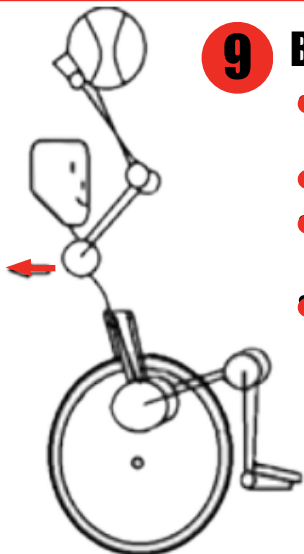


## 8 FOOT PLATE

The foot plate should be high enough to sustain the weight of the lower legs, yet low enough to not raise the thighs off the seat. Ankles should be positioned directly under knees.

**TIP**

If the athlete has very flexible ankles or tends to have spasms, the balls of the feet should be positioned higher than the heels.



## 9 BACKREST

- The backrest should be angled back slightly (~ 1" or 2.5cm as measured from the top).
- It should be loosened to allow the trunk to sit between the posts.
- It should not be higher than 1" (2.5 cm) below the lowest point of the shoulder blades to avoid restricting arm movement.
- It should not be angled so far back that the athlete cannot lean forward into the pushing action.

The backrest serves a critical function for class 1.0 and 1.5 athletes.

**TIP**

## 10 STRAPPING

- Feet may be strapped to the footrests.
- Knees should be kept together and secured with an over the knee strap.
- Pelvis should be secured to the chair using a ratchet strap positioned as near to the hips as possible.
- An abdominal strap will often be useful for class 1.0 athletes.

**TIP** Athletes who have significant spinal deformities may not be able to use an abdominal strap.

## 11 FRAME LENGTH

| Longer wheelchair frame                                                                                                   | Shorter wheelchair frame                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>● allows athlete to keep defenders farther away while shooting or passing</li></ul> | <ul style="list-style-type: none"><li>● lighter wheelchair</li><li>● can pivot within a tighter space</li></ul> |



## 12 ANTI-TIP CASTERS

- Class 1.0 and 1.5 athletes with 1 or 2 back wheels will benefit from additional stability when leaning back over their backrest to shoot, pass, or pressure a shooting opponent.
- The back wheels should be low enough to avoid rocking back and forth when leaning forward and back.
- They should be high enough to prevent the rear wheels from spinning.

## 13 SIDE TO SIDE ASYMMETRY

Several class 1.0 and 1.5 athletes are asymmetric at rest or while pushing and pivoting. This may be due to knee or hip contractures (lack of mobility), or pelvic asymmetry (one hip higher than the other).

### Possible solutions:

- Knee contracture: shorten seat depth
- Hip contracture: lower one knee
- Pelvic asymmetry: extra support under the lower hip, typically with a firm foam wedge

## 14 CENTER OF GRAVITY

Class 1.0 and 1.5 athletes typically benefit from a conservative COG (i.e. the weight of the player is positioned closer to the front than the rear).

| Less aggressive COG                                                                             | More aggressive COG                                                                         |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>● more stability when shooting and leaning back</li></ul> | <ul style="list-style-type: none"><li>● more speed</li><li>● more maneuverability</li></ul> |

Every athlete is different, and finding the right chair fit can require a lot of trial and error. Don't get discouraged if something doesn't work right away, get creative finding a solution!

Seating of athletes should follow the Wheelchair Basketball Canada Rule of Two Guidelines. For more information, visit [wheelchairbasketball.ca/the-sport/safe-sport](http://wheelchairbasketball.ca/the-sport/safe-sport)

