



# The Do Jang Instructor's Role in Concussion Prevention, Detection, and Return to Play

By

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# We have all seen concussion....



*Sport-related concussion is a traumatic brain injury caused by a direct blow to the head, neck or body resulting in an impulsive force being transmitted to the brain that occurs in sports and exercise-related activities. This initiates a neurotransmitter and metabolic cascade, with possible axonal injury, blood flow change and inflammation affecting the brain. Symptoms and signs may present immediately, or evolve over minutes or hours, and commonly resolve within days, but may be prolonged.*

# RECOGNIZE:



A Few examples of signs you may observe in your athlete

Staggering

Vacant Stare

Unable to Focus

Uncoordinated movements

Slowed down movements

Nausea

AND OTHERS!!



- **What to do if you suspect a concussion**
- **In all suspected cases of concussion, the person should stop the activity right away.** Continuing increases their risk of more severe, longer-lasting concussion symptoms, as well as increases their risk of other injury.
- Anyone with a suspected concussion should be checked out by a medical doctor.
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# CRT6™



## Concussion Recognition Tool

### To Help Identify Concussion in Children, Adolescents and Adults

#### What is the Concussion Recognition Tool?

A concussion is a brain injury. The Concussion Recognition Tool 6 (CRT6) is to be used by non-medically trained individuals for the identification and immediate management of suspected concussion. It is not designed to diagnose concussion.

#### Recognise and Remove

##### Red Flags: CALL AN AMBULANCE

If **ANY** of the following signs are observed or complaints are reported after an impact to the head or body the athlete should be immediately removed from play/game/activity and transported for urgent medical care by a healthcare professional (HCP):

- Neck pain or tenderness
- Seizure, 'fits', or convulsion
- Loss of vision or double vision
- Loss of consciousness
- Increased confusion or deteriorating conscious state (becoming less responsive, drowsy)
- Weakness or numbness/tingling in more than one arm or leg
- Repeated Vomiting
- Severe or increasing headache
- Increasingly restless, agitated or combative
- Visible deformity of the skull

#### Remember

- In all cases, the basic principles of first aid should be followed: assess danger at the scene, check airway, breathing, circulation; look for reduced awareness of surroundings or slowness or difficulty answering questions.
- Do not attempt to move the athlete (other than required for airway support) unless trained to do so.
- Do not remove helmet (if present) or other equipment.
- Assume a possible spinal cord injury in all cases of head injury.
- Athletes with known physical or developmental disabilities should have a lower threshold for removal from play.

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#### If there are no Red Flags, identification of possible concussion should proceed as follows:

Concussion should be suspected after an impact to the head or body when the athlete seems different than usual. Such changes include the presence of **any one or more** of the following: visible clues of concussion, signs and symptoms (such as headache or unsteadiness), impaired brain function (e.g. confusion), or unusual behaviour.



### 1: Visible Clues of Suspected Concussion

Visible clues that suggest concussion include:

- Loss of consciousness or responsiveness
- Lying motionless on the playing surface
- Falling unprotected to the playing surface
- Disorientation or confusion, staring or limited responsiveness, or an inability to respond appropriately to questions
- Dazed, blank, or vacant look
- Seizure, fits, or convulsions
- Slow to get up after a direct or indirect hit to the head
- Unsteady on feet / balance problems or falling over / poor coordination / wobbly
- Facial injury

### 2: Symptoms of Suspected Concussion

Physical Symptoms	Changes in Emotions
Headache	More emotional
"Pressure in head"	More Irritable
Balance problems	Sadness
Nausea or vomiting	Nervous or anxious
Drowsiness	
Dizziness	
Blurred vision	
More sensitive to light	
More sensitive to noise	
Fatigue or low energy	
"Don't feel right"	
Neck Pain	

Changes in Thinking
Difficulty concentrating
Difficulty remembering
Feeling slowed down
Feeling like "in a fog"

**Remember,** symptoms may develop over minutes or hours following a head injury.

### 3: Awareness

(Modify each question appropriately for each sport and age of athlete)

Failure to answer any of these questions correctly may suggest a concussion:

- "Where are we today?"
- "What event were you doing?"
- "Who scored last in this game?"
- "What team did you play last week/game?"
- "Did your team win the last game?"

**Any athlete with a suspected concussion should be - IMMEDIATELY REMOVED FROM PRACTICE OR PLAY and should NOT RETURN TO ANY ACTIVITY WITH RISK OF HEAD CONTACT, FALL OR COLLISION, including SPORT ACTIVITY until ASSESSED MEDICALLY, even if the symptoms resolve.**

Athletes with suspected concussion should **NOT**:

- Be left alone initially (at least for the first 3 hours). Worsening of symptoms should lead to immediate medical attention.
- Be sent home by themselves. They need to be with a responsible adult.
- Drink alcohol, use recreational drugs or drugs not prescribed by their HCP
- Drive a motor vehicle until cleared to do so by a healthcare professional

# RED FLAGS URGENT MEDICAL HELP



- **Red flags**
- Neck pain or tenderness
- Double vision
- Weakness or tingling in arms or legs
- Severe or increasing headache
- Seizure or convulsion
- Loss of consciousness (knocked out)
- Deteriorating conscious state
- Vomiting more than once
- Increasingly restless, agitated or combative
- Growing confusion





# DO JANG PREVENTION

- **KYORUGI**
- Head gear , mouth guard every practice
- **SUPERVISION!!!**
- **HEIGHT & WT** match ups

## **FREESTYLE POOMSEE & DEMO TEAMS PRACTICE**

**SUPERVISION for ACROBATICS!!**

**BEFORE ACROBATICS PRACTICE**

**Remove HAZARDS ( broken boards, equipment)**

**ASSIGN:**

**SPOTTERS for ACROBATIC sections**

**PLAN SEQUENCES to AVOID COLLISIONS**

**CHECK position of PROTECTIVE MATS**

**AND**

**CRASH MATS for Practice**

**REVIEW “ RECOGNIZE and REMOVE ”with leadership team**

# RETURN TO ACTIVITY: get a MD assessment

- ADULTS: recovery from acute concussion ON AVERAGE 10-14 days
- YOUTH and CHILDREN ON AVERAGE 10-15 days

## FIRST 24 to 48 HOURS

Individuals can return to light-intensity physical activity (PA), such as walking that does not more than mildly exacerbate symptoms, during the initial 24–48 hours following a concussion.<sup>30</sup>

During a competition or event do not ask the concussed athlete to video, keep score, coach, or referee

Ideally remove from noise and intense light

# RETURN TO LEARN BEFORE RETURN TO SPORT

Step	Mental activity	Activity at each step	Goal
1	Daily activities that do not result in more than a mild exacerbation* of symptoms related to the current concussion	Typical activities during the day (eg, reading) while minimising screen time. Start with 5–15 min at a time and increase gradually.	Gradual return to typical activities
2	School activities	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work
3	Return to school part time	Gradual introduction of schoolwork. May need to start with a partial school day or with greater access to rest breaks during the day.	Increase academic activities
4	Return to school full time	Gradually progress in school activities until a full day can be tolerated without more than mild* symptom exacerbation.	Return to full academic activities and catch up on missed work

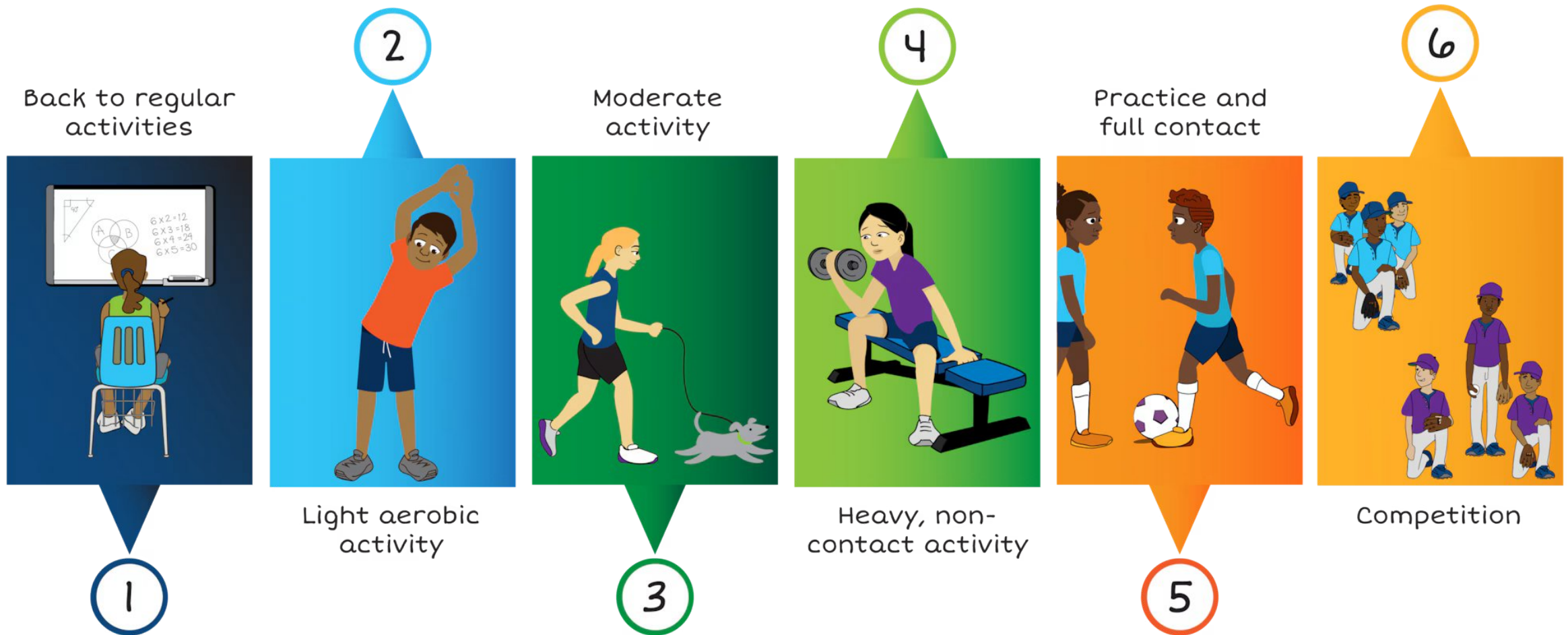
# RETURN TO LEARN

## **Return-to-learn (RTL) strategy**

- Following an initial period of relative rest (24–48 hours following an injury at Step 1), athletes can begin a gradual and incremental increase in their cognitive load. Progression through the strategy for students should be slowed when there is more than a mild and brief symptom exacerbation.**
- \*Mild and brief exacerbation of symptoms is defined as an increase of no more than 2 points on a 0–10 point scale (with 0 representing no symptoms and 10 the worst symptoms imaginable) for less than an hour when compared with the baseline value reported prior to cognitive activity.**



# RETURN TO SPORT: Health care supervised



# TAEKWONDO PROGRESSIVE EXERCISE CONCUSSION RTP

- PROVIDED ATHLETE IS SAFE TO PROGRESS  
STEP 2 LIGHT AEOROBIC EXERCISE:
- Participate in light jogging warm up NO JUMPING
- POOMSE SELECT simple PATTERNS: no jumping, no 360 kicks performed at half speed first
- “AIR kicks” in standing or walking pace

# STEP 3 (provided no symptoms)

- MODERATE ACTIVITY
- More difficult POOMSE patterns
- TARGET KICKING (paddles where there is less jarring on the athlete)
- TEAM POOMSE participates in sequences minus acrobatics
- LIGHT STRENGTH & CONDITIONING participation



# STEP 4 : provided no symptoms

- NON-CONTACT INTENSE EXERCISE
- For Sparring : kicking sequences, use of all types of targets includes rotational kicks
- POOMSE: everything but acrobatics
- STRENGTH & CONDITIONING: everything NON –CONTACT (no grappling, self defense)





# BEFORE STEP 5

- MEDICAL CLEARANCE REQUIRED
- MEDICAL DOCTOR PREFERRABLY Family Doc or SPORT Doc who knows the athlete
- Ideally the physician writes
- “May return to full contact sport”

# STEP 5 Full contact practice

- In warm up add “judo roll” for the athlete this is a good test of their balance, and neck stability at this stage.
- If they get symptoms with “Judo roll” stop
- SPARRING: in Dojang first with a partner who has good control
- POOMSE: spotter for flips, cartwheels, look for symptoms and technique



# STEP 6 INTO COMPETITION

- You can simulate this in training sessions easily if there is no event coming up



# CAUTION: PERSISTENT POST CONCUSSION SYMPTOMS (PPCS)

- PPCS: symptoms continue for a month or more
- This athlete need specialized medical care
- Wide variance in reported rates of PPCS in pediatric patients diagnosed with sport related concussion (SRC)
- 1.5 to 15% of pediatric patients with SRC will develop PPCS !!!!
- THAT IS ABOUT 1-2 in EVERY 10 CONCUSSED ATHLETES!!!!



# PPCS: you will see this !!

- As a Do Jang Instructor BE AWARE of this CONDITION
- If you athlete is just “Not right” after concussion this may be what is happening
- SOME SIGNS of PPCS
- Can not focus during class, (compared to pre-injury)
- Can not do techniques as well as before
- ( especially rotational, acrobatics)
- Complains of headaches , migraines neck pain well after injury
- Doing poorly in school

# QUESTIONS & DISCUSSION



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