Children and adolescents

Whilst the guidelines apply to all age groups particular care needs to be taken with children and adolescents due to the potential dangers associated with concussion in the developing brain. Children under ten years of age may display different concussion symptoms and should be assessed by a Medical Practitioner using diagnostic tools. As for adults, children (under 10 years) and adolescents (10 – 18 years) with suspected concussion MUST be referred to a Medical Practitioner immediately. Additionally, they may need specialist medical assessment. The Medical Practitioner responsible for the child's or adolescent's treatment will advise on the return to play process, however, a more conservative GRTP approach is recommended. It is appropriate to extend the amount of time of asymptomatic rest and /or the length of the graded exertion in children and adolescents.

Children and adolescents must not return to play without clearance from a Medical Practitioner.

Stage 2: Graduated Return to Play (GRTP)

Following a concussion or suspected concussion how does the Player return to play?

Following a concussion or suspected concussion the management of a GRTP should be undertaken on a case by case basis and with the full cooperation of the Player. This will be dependent on the time in which symptoms are resolved. It is important that concussion is managed so that there is physical and cognitive rest until there are no remaining symptoms. Activities that require concentration and attention should be avoided until symptoms have been absent for a minimum of 24 consecutive hours without medication that may mask the symptoms e.g. headache tablets, anti-depressant medication, sleeping medication, caffeine. The modifying factors in Table 2 should also be taken into consideration. The GRTP process which is managed by a Medical Practitioner is shown in Diagram 2.

When GRTP is managed by a Medical Practitioner

If a Medical Practitioner (with the assistance of a Healthcare Professional, as applicable) is managing the recovery of the Player it is possible for the Player to return to play after a minimum of six days having successfully followed and completed each stage of the GRTP protocol. The Medical Practitioner may observe the Player at each stage of the GRTP protocol but may also delegate the observation to a Healthcare Professional while remaining responsible for the management of the protocol. The GRTP applies to all situations including tournaments. An indicative minimum GRTP protocol is provided in Table 3. Provided that the Player with concussion or suspected concussion is, and remains, symptom free the Player may commence the GRTP.

Before a Player can restart exercise they must be symptom free for a period of 24 hours (Level 1) and then they may move to the next stage (Level 2). Under the GRTP protocol, the Player can proceed to the next stage if no symptoms of concussion (SCAT 2 provides the symptom checklist) are shown at the current stage (that is, both the periods of rest and exercise during that 24-hour period). This includes level 1 where the Player must experience a minimum of 24 consecutive symptom-free hours of rest prior to moving on to Level 2.

Where the Player completes each stage successfully without any symptoms the Player would take approximately one week to proceed through the full rehabilitation protocol. If any symptoms occur while progressing through the GRTP protocol, the Player must return to the previous stage and attempt to progress again after a minimum 24-hour period of rest has passed without the appearance of any symptoms.

After Level 4 the Player resumes full contact practice and the Medical Practitioner and the Player must first confirm that the Player can take part. Full contact practice equates to return to play for the purposes of concussion. However return to play itself shall not occur until Level 6 (**Table 3**).

Table 3: GRTP Protocol

Rehabilitation stage	Functional exercise at each stage of rehabilitation	Objective of each stage
1. No activity, minimum 24 hours following the injury where managed by a medical practitioner, otherwise minimum 14 days following the injury	Complete physical and cognitive rest without symptoms	Recovery
2. Light aerobic exercise during 24-hour period	Walking, swimming or stationary cycling keeping intensity, <70% maximum predicted heart rate. No resistance training. Symptom free during full 24-hour period.	Increase heart rate
3. Sport-specific exercise during 24-hour period	Running drills. No head impact activities. Symptom free during full 24-hour period.	Add movement
4. Non-contact training drills during 24-hour period	Progression to more complex training drills, e.g. passing drills. May start progressive resistance training. Symptom free during full 24-hour period.	Exercise, coordination, and cognitive load
5. Full Contact Practice	Following medical clearance participate in normal training activities	Restore confidence and assess functional skills by coaching staff
6. After 24 hours return to play	Player rehabilitated	Recovered

Diagram 2

Stage 2: Graduated Return to Play

For those where the GRTP protocol is managed by a Medical Practitioner

Where GRTP is NOT managed by a Medical Practitioner

There may be extreme situations where a Player does not have access to a Medical Practitioner to diagnose concussion or to manage the GRTP. In these situations if a Player has shown signs of concussion that Player must be treated as having suspected concussion and must not play until at least the 21st day after the incident and should follow the GRTP process outlined in Diagram 3. Other Players, coaches and administrators associated with the Player should insist on the guidelines being followed.

If a Player has been diagnosed with concussion by a Medical Practitioner but does not have access to a Medical Practitioner to manage the GRTP that Player must not play until at least the 21st day after the incident and should follow the GRTP process outlined in Diagram 3.

In the above situations the GRTP process may commence after a 14 day stand-down period from playing sport and/or training for sport and only if there are no symptoms of concussion.

Ideally the process should be managed and observed by someone familiar with the Player who could identify any abnormal signs displayed by the Player. Pocket SCAT 2 will assist the person managing the process.

Before a Player can restart exercise they must be symptom free for a period of 14 days (Level 1) and then they may move to the next stage (Level 2). Under the GRTP protocol, the Player can proceed to the next stage only if no symptoms of concussion (SCAT 2 provides the symptom checklist) are shown at the current stage (that is, both the periods of rest and exercise during that 24-hour period).

Where the Player completes each stage successfully without any symptoms the Player would take approximately one week to proceed through the full rehabilitation protocol from Level 1. If any symptoms occur while going through the GRTP protocol, the Player must return to the previous stage at which he/she did not experience any symptoms and attempt to progress again after a minimum 24-hour period of rest has passed without the reappearance of any symptoms.

After Level 4 the Player resumes full contact practice and the Medical Practitioner and the Player must confirm that the Player can take part. Full contact practice equates to return to play for the purposes of concussion. However return to play itself shall not occur until Level 6 (Table 3).

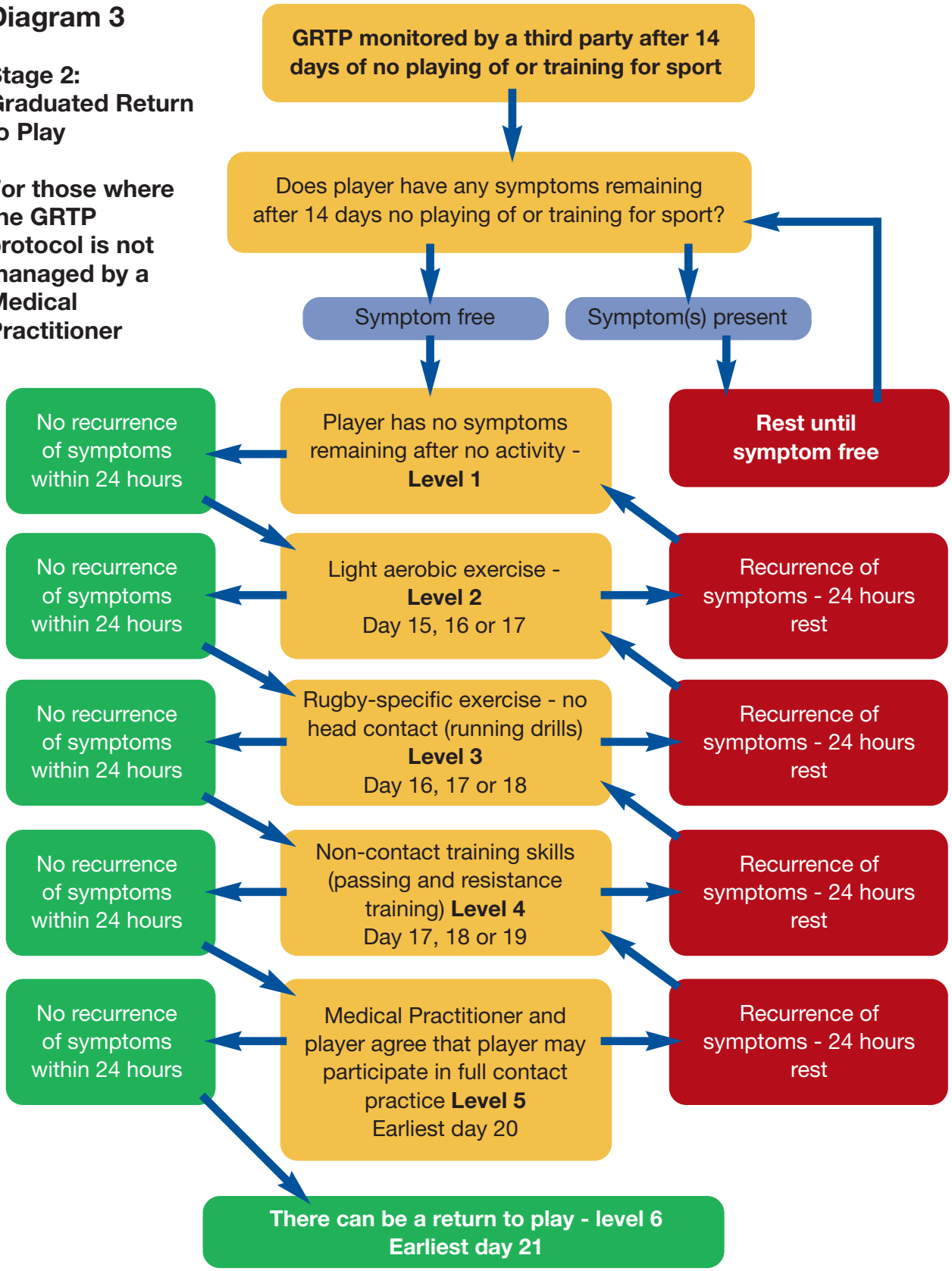
Clearance to return to play by a Medical Practitioner should always be sought. However, there may be occasions (which will be in extreme and rare situations) where a Player cannot access a Medical Practitioner to assess the Player for clearance to resume full contact practice. In these extreme and rare situations the Union having jurisdiction over the Player must put in place processes and mechanisms which will only permit Players to resume full contact practice when it is safe to do so. These processes and mechanisms may vary from Union to Union.

Adolescents and children must have clearance from a Medical Practitioner before they can return to play.

Diagram 3

Stage 2: Graduated Return to Play

For those where the GRTP protocol is not managed by a Medical Practitioner



It is recognised that Players will want to return to play as soon as possible following a concussion. Players, coaches, management, parents and teachers must exercise caution to:

a. Ensure that all symptoms have subsided;
b. Ensure that the GRTP protocol is followed; and
c. Ensure that the advice of Medical Practitioners (and where applicable Healthcare Professionals) is strictly adhered to.

In doing so, all concerned can reduce the risk to a Player's career longevity and long term health.

All involved in the process of concussion management (including those mentioned above) must be vigilant for the return of symptoms (including depression and other mental health issues) after a concussive incident even if the GRTP has been successfully completed. If symptoms re-occur the Player must consult a Medical Practitioner and those involved in the process of concussion management and/or aware of the return of symptoms should do all they can to ensure that the Player consults a Medical Practitioner as soon as possible.

Definitions

"GRTP" means graduated return to play.
"Healthcare Professional" means an appropriately-qualified and practising physiotherapist, nurse, osteopath, chiropractor, paramedic, athletic trainer (North America) who has been trained in the identification of concussion symptoms and the management of a concussed Player.
"Medical Practitioner" means a doctor of medicine.
"Player" means a player of the Game who is a non-contract Player or a contract Player.

IRB Concussion Guidelines – Issued 24 May 2011