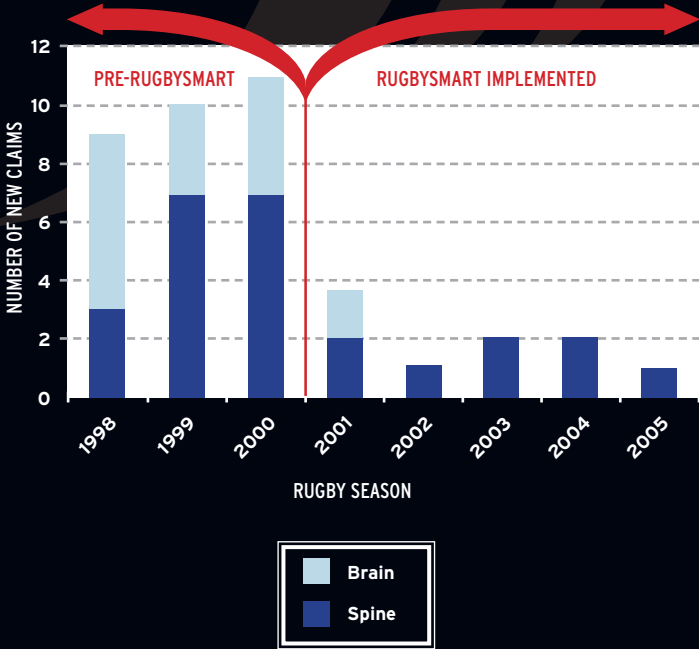


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THE NUMBER OF SERIOUS RUGBY INJURIES TO ACC



2006 RUGBYSMART

RugbySmart was developed jointly by the New Zealand Rugby Union and ACC. It's all about lifting team performance by ensuring players are physically and technically at their peak before they put their bodies on the line.

Here's a great reason to read this booklet and put these points into action. Every year since RugbySmart started we've seen significant drops in rugby-related injury claims. Rugby playing numbers have grown 7% in 2005 and yet last year, claims dropped by a further 4%.

The news gets better when we look at key injury areas:

- Neck / spine and back decreased by 13%
- Knee, ankles and lower legs decreased by 4%
- Shoulders decreased by 7%
- Dental claims decreased by 7%



RUGBYSMART 10-POINT ACTION PLAN

RugbySmart is based around ACC SportSmart, the 10-point action plan for sports injury prevention. It's a comprehensive approach that is about keeping players where coaches and supporters want them: on the field, contributing to a winning team effort.

- ① Player Profiling
- ② Warm-Up, Cool-Down and Stretch
- ③ Physical Conditioning
- ④ Technique
- ⑤ Fair Play
- ⑥ Protective Equipment
- ⑦ Hydration and Nutrition
- ⑧ Injury Reporting
- ⑨ Environment
- ⑩ Injury Management





www.rugbysmart.co.nz

1 PLAYER PROFILING

Prevention is the best cure

Player Profiling is the process by which coaches assess players to make sure:

- Players have sufficient technical skill and ability for the grade at which they are playing
- Players are physically conditioned to meet the demands of the sport
- Players are not predisposed to serious injuries

Player Profiling gives a coach biographical details on a player (contact details, injuries, allergies, medical conditions, history of injury and recovery and performance statistics) that can be used as a base for comparison later in the season, particularly when injuries occur or are suspected.

Playing rugby means preparing well before the rugby season starts. Before pre-season training, every player should have his or her health and physical condition assessed. Some of the key factors to look for when profiling are:

- First-time players
- Players with any pre-existing injuries
- Players with a history of concussions
- Older front row players - they could need an x-ray to check that they have no degenerative conditions
- Front row forwards who have had a neck injury in the past

Player profile forms for all levels of the game can be found on www.rugbysmart.co.nz

2 WARM-UP, COOL-DOWN AND STRETCH

Warming-up before playing rugby or completing a physical conditioning session helps prepare the mind and the body. It enhances the performance of both games/sessions and reduces the risk of injury prevention. Equally important is cooling-down after the game or the physical conditioning session. This period allows the mind and body to 'chill out' and promotes better/faster recovery from what has just been completed.

Warm-up (15-25 minutes)

THE WARM-UP SHOULD CONSIST OF 3 KEY ELEMENTS

1 Aerobic exercise.

Players should complete 5 minutes of easy activity (such as jogging, skipping, lateral movements; use cardio gear if you are about to complete a gym session) to get started. Use the next 5-10 minutes to work through low intensity skill drills such as passing waves and quick hand drills (or appropriate activity for the session you are about to commence) to warm up the body and mind for the next stage. Over the next 5-10 minutes the intensity of the activity should progressively increase.

2 Dynamic stretching.

This involves warming your muscles up by gradually moving your limbs through the full range of motion they will be subject to during the game or training. Gradually increase the movement over a series of repetitions and do not force the muscles to stretch beyond their normal range. Repeat the following examples 8-10 times and distribute these movements throughout the warm-up:

2 WARM-UP, COOL-DOWN AND STRETCH

Leg swings: hip flexors and extensors, gluteals

Frontal - hold onto a solid object and balance on one leg. Swing the other leg forward and flex at hip and knee until thigh is at least parallel with the ground. Come up onto ball of foot on your trailing leg. Let leg swing back.

Lateral - hold onto a solid object and balance on one leg. Swing the other leg as far out from the body as possible and then return bringing it across the body as far as possible. Repeat for the other leg.



Hurdle step overs: adductors and abductors

Take a step forward by balancing on one leg and bring the opposite leg up and out to the side as high as possible as if stepping over an object such as a high hurdle. Step onto that leg and repeat for other leg.



Calf raises

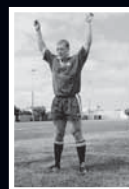
Position your body as if you were on the starting blocks of a running race. Raise your knees off the ground so that only your feet and hands are supporting your weight.

Start stretching your calf muscles by raising your heel off the ground onto the ball of your foot and then back again. Alternate between legs.



Upper body

Standing with a straight back, swing your arms to your right side (your left arm will swing across your chest). Then swing your arms back to the left side.



3 Position-specific exercises

Have your team-mates to do the sorts of exercises that will prepare you for your positional requirements (such as swerves, steps, one-on-one beating the Player (outside backs), passing and catching, running on to the ball, box kicks, line kicks (inside backs), wrestling for the ball, running arcs, linking up for short passes, getting down and up off the ground (loosies), lineouts, throws, lifting, one on one scrums (tight forwards).

You need to be prepared (warmed up) for the tasks you will have to perform.

2

WARM-UP, COOL-DOWN AND STRETCH

Cool-down (10-15 minutes)

Cooling down after the game and training increases the rate of recovery, so you can cope better with the upcoming games and physical conditioning sessions. It's also the best time to improve flexibility. Cooling down and stretching should last for 10 - 15 minutes and consist of:

- 1 Aerobic exercise**
Slow jogging or brisk walking around the field, or 'easy intensities' on cardio equipment, are among the best ways to cool down.
- 2 Static stretching**
Stretch for 10 minutes after the easy, aerobic exercise or distribute the stretches throughout the cooldown. If you want to achieve greater flexibility, hold the stretches for up to 60 seconds during the cool-down as this will help the muscles relax and reduce tension.
- 3 Recovery**
After any exercise, make sure your players rehydrate. Treat any soft tissue injuries with the R.I.C.E.D. procedure and avoid H.A.R.M - ful factors (see Injury Management section).

3 PHYSICAL CONDITIONING

The game has changed. Are you fit for rugby?

When it comes to Physical Conditioning the year can be broken down into four key phases:

- 1 Off-season (November-January; General Preparation)
- 2 Pre-season (February-March; Specific Preparation)
- 3 In-season (April-August; Maintenance)
- 4 Transition (September-October; Recovery)

Prior to each phase, www.rugbysmart.co.nz will be launching an online programme to help you get the most benefit from this phase. The focus of the training will change from phase to phase.



4

TECHNIQUE

The best technique is safe technique

“Players for whom correct technique has been practiced until it is a habit are not only at lower risk of injury – they are better players”

Wayne Smith – All Blacks Assistant Coach

TACKLING

The tackle is where most of the injuries in rugby now occur.

The first priority in tackling is to use leg power to drive the shoulder onto the ball carrier, before using the arms to wrap around the opponent.

THE KEY FACTORS IN THE TACKLE

- ① Sight target
- ② Position inside the ball carrier
- ③ Run in pre-tackle stance
- ④ Chin up
- ⑤ Eyes open
- ⑥ Back straight
- ⑦ Hands above hips
- ⑧ Go forward
- ⑨ Zero in on target
- ⑩ Drive with the legs to make firm contact with the shoulder on the target
- ⑪ Head behind ball carriers body
- ⑫ Lock on with the arms around the ball carrier
- ⑬ Continue power drive
- ⑭ Regain feet
- ⑮ Recover ball



4 TECHNIQUE

Smother tackles

- Smother tackles are not recommended for younger or less experienced players.
- Build player's skills progressively - players should not attempt the smother tackle unless they have mastered the basic tackle technique.
- The same steps apply as for any tackle (as outlined previously) except that contact is made between the waist and chest.
- The arms should be wrapped around the ball carrier's arms preventing the release of the ball.

Taking the ball into contact

The increases in injuries in the tackle are not just restricted to the tackler. Coaches should ensure that all players are aware of the correct technique for taking the ball into contact.

Key factors.

- ① Focus on contact zone
- ② Chin off chest
- ③ Eyes open
- ④ Ball in two hands
- ⑤ Low body position
- ⑥ Body before ball
- ⑦ Small steps on approach
- ⑧ Wide 'power' step into contact
- ⑨ Plant front foot close to defender's feet
- ⑩ Contact side on with hard parts of body: e.g. shoulder, hips
- ⑪ Maintain low stable base, chin off chest, eyes open
- ⑫ Transfer ball at appropriate time



SCRUMMAGING

The scrum is an important means of restarting play and gaining control of a game. Using correct technique will not only reduce the chance of injuries, but will ensure teams can compete safely in this crucial area of the game.

New Zealand Rugby recommends under 19 grades:
no more than 20 scrum machine scrums per week.

Top Grade club players:
no more than 50 scrum machine scrums per week.

The key points of scrummaging that all coaches, players and referees should know instinctively are:

Scrum - pre-engagement

- Prepare for engagement on the ref's call "crouch and hold"
- Front rows safe distance apart - crouched and bound
- Hips and shoulders are all square
- Bend at the knees and hips
- Shoulders above hips at all times
- Head up, chin off chest
- Back straight - spine in line
- Eyes focused on the target area
- Weight off the heels and on the balls of your feet
- If not in the correct position or feel unsafe shout: "NOT READY, REF".
- Never look away from your opponent once in the crouch position
- Engage only on the ref's call: "engage"

4 TECHNIQUE



Scrum - engagement

At least two-thirds of scrum training should be away from the scrum machines. One-on-one and three-on-three drills are excellent ways to build skills and improve techniques. Your RugbySmart DVD/video has a section dedicated to this.

- Drive from a low position up
- Loose-head binds onto the torso of the opposing tight head
- Tight-head binds onto the torso of the opposing loose-head
- Binding should be firm and held until the scrum is completed

Referees will want to speak to front row players and halfbacks before the game to discuss the engagement process, and to ensure all front row forwards are of sufficient experience and strength for the grade of game being played.



Incorrect technique in the contact phases of the game causes many rugby injuries - some serious.

New Zealand Rugby has a variety of resources available, including our Skills and Drills kit, web resources available at www.rugbysmart.co.nz and other support material available from your local rugby development officer.

5 FAIR PLAY

Keep the playing field level

One of the great things rugby teaches people is discipline. It's one of the qualities a coach can instill in players. Don't tolerate foul play - particularly anything like a stiff arm or other dangerous tackles, or off the ball thuggery. Referee abuse is unacceptable at any level of the sport.

Fair play means:

- Maintaining your dignity whether or not you are winning
- Respecting the opposition, the officials and the rules
- Staying calm no matter what happens

The referee is in charge at all times

If the game gets out of control, play can become reckless and dangerous - increasing the potential for injury. Play your part - play fair.

Support referees by respecting their decisions - remember many of them are volunteers.

“Referees are only human, they are out there trying to do their job, you can't get a game without them. So, although it can be frustrating at times, you've got to remember referees are doing their job and they are doing their best, so there is really no place for abuse, and abusing a ref is not going to change their decision. You've just got to respect that they are trying their best and if you do that, more often than not it will be okay”

Richie McCaw - All Black

6 PROTECTIVE EQUIPMENT

Protect your assets

Mouthguards

Mouthguards are compulsory in rugby. They help to reduce injuries to the teeth, lips, mouth and tongue, and help to reduce jaw fractures. There is no evidence that they decrease the risk of concussion.

Since mouthguards became compulsory in 1997 there's been a 47% reduction in rugby-related dental injury claims to ACC. Over half of all dental injuries happen at training. In 2003 the law was tightened to allow referees to enforce wearing of mouthguards and consequently there has been a further reduction of 7% last season.

Ensure your players wear mouthguards in activities involving collision or body contact, including during training.

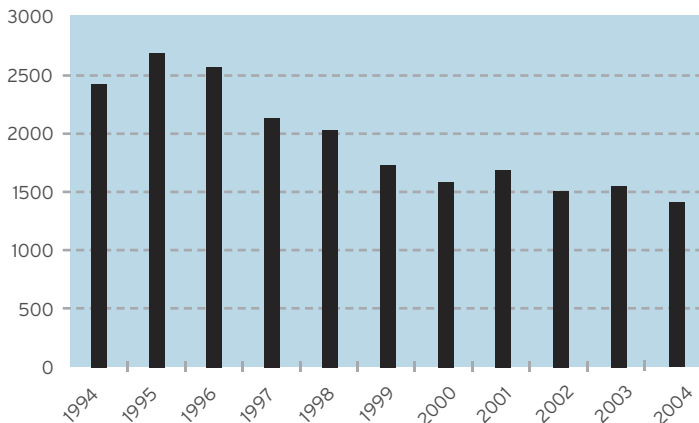
- Remember it is compulsory that players wear mouthguards during games
- Check your players have mouthguards - make the big call if they don't - no mouthguard, no play

A mouthguard needs to be replaced every season to ensure it provides the best protection.



6 PROTECTIVE EQUIPMENT

RUGBY DENTAL CLAIMS



■ Number of Claims

Padded equipment

Research evidence shows that lots of rugby injuries are 'minor' - bruises, bumps, cuts and lacerations. Padded equipment such as shoulder and chest/breast pads can help reduce the number of cuts and lacerations players sustain.

Padded equipment does not appear to protect players against severe injuries, and is not appropriate for allowing injured players to resume participation before they are fully recovered.

Headgear

- Headgear must be fitted properly and securely to prevent serious cuts to the scalp and ears
- Remember there is no evidence that headgear protects against concussion

Footwear

Make sure your players' boots are in good condition and that they use sprigs appropriate to the playing conditions. Players should not practice scrummaging, rucking or mauling in running shoes or cross-trainers.

7 HYDRATION & NUTRITION

You'll play better on the right fuel

Maintaining ideal hydration and nutrition levels requires attention before, during and after exercise. This helps reduce fatigue and ensures enough energy to play the game.

Hydration

Thirst is not a good indicator of fluid needs during rugby. You should ensure that players are aware of, and observe, the following hydration guidelines:

Players should:

- Pre-hydrate! Drink fluids before starting a training session or competition game

HALF A LITRE TWO HOURS BEFORE EXERCISE
500–600 ML

- Drink small amounts where possible throughout the game e.g. breaks in play, injury breaks, time-outs, rests and half time.

APPROXIMATELY 120–150ML
PER 10-15 MINS DURING EXERCISE.

- Increase fluid intake in hot and humid conditions
- Drink sports drinks (4-8% carbohydrate) during activities lasting longer than one hour



7 HYDRATION & NUTRITION



Avoid:

- Alcohol and caffeinated energy drinks immediately after exercise
- Sharing drink bottles between players so that flu, meningitis, hepatitis and other infections don't spread between players



Afterwards

← 1 LITRE PER HOUR FOR THREE HOURS

Players continue sweating after they stop exercising so they need to keep fluids up.

Nutrition

Equally important to hydration is the need to ensure players are eating the right foods to maintain sufficient energy levels. If players have any doubts about their food intake, if they are vegetarian or have low energy intakes, recommend that they talk to a dietician to make sure they are meeting all their energy requirements.

Players should try to:

- Ensure that over half the food intake comes from carbohydrate-based foods (potatoes, pasta, bread, rice, cereals, bananas)
- Increase the intake of carbohydrate foods a few days before playing
- Ensure the diet contains at least 15% protein (eggs, fish, meat, chicken, shakes) to help repair damage to body tissues after contact training and matches
- Supplements are exactly that: they don't replace a balanced diet
- Eat six smaller meals spaced through the day rather than three big ones
- Eat some protein and carbohydrates immediately following training to enhance recovery

Avoid:

- Foods high in fat before and during exercise



8

INJURY REPORTING

Looking after your mates

The NZRU is currently focusing on eliminating 'serious injuries' from the game. Serious injuries are those that have the potential to result in any type of permanent disablement to players. It is the responsibility of the team coach, manager, or designated 'Injury Officer' to ensure that any serious injuries are reported to your Provincial Union. If you are unsure whether the responsibility for completing the report lies with your team or the opposition, SEND ONE IN ANYWAY.

Please remember that the injury forms you complete and return help the NZRU plan strategies that will reduce the impact injuries have on your team. They also enable proper management of injuries, to ensure that seriously injured players are looked after as effectively as possible.

These injuries must be reported to your local union:

- Head or neck injury - transported directly to hospital or medical centre
- Any injury requiring hospital admission
- Any injury requiring 8 weeks off rugby

* You can download a copy on www.rugbysmart.co.nz



SERIOUS INJURY REPORT FORM TEAM MANAGEMENT REPORT/REFEREE REPORT

Serious injury reports must be completed for the following injuries:

- Any head or neck injury that requires the player to be transported directly from the ground to an emergency department, hospital or after hours medical centre
- Any injury that results in the admission of a player into hospital
- Any injury that is expected to prevent a player from playing for a period of 8 weeks or longer

Serious injury reports **must** be forwarded to the Provincial Union headquarters within **48 hours** of the injury coming to the notice of the referee or team management

INJURED PERSON

Surname: _____

Male

Female

Grade: _____

9 ENVIRONMENT

Eliminating hazards

Another of the many tasks of a coach is to check that the players have a safe environment. ACC and the NZRU have developed a health and safety checklist to assist you in identifying and eliminating hazards. This will help to reduce the number of injuries and should allow greater enjoyment for participants.

Assess and check:

- Playing surfaces
- Playing equipment
- Space surrounding field
- Training equipment
- Emergency procedures
- Weather conditions.

In cold weather conditions check:

- Players wear adequate clothing during warm-up and cool-down
- Clothing is not heavy or bulky
- Players wear polypropylene under the team uniform to reduce heat loss
- During wet and/or windy weather players wear waterproof or windproof tracksuits during training sessions and before and after a competition

10 INJURY MANAGEMENT

Get yourself in working order

Injury management involves identifying, treating and recovering from an injury. Players who return to play before they have fully recovered end up missing about three times as much play as they would have if they had completely healed before resuming play.

PHASES OF INJURY MANAGEMENT:

1 ACUTE

2 REHABILITATION

3 RETURN TO PLAY

PHASE 1 ACUTE

There are a few basic things that you can make sure happen immediately after an injury has occurred - this is called the acute phase. Coaches and players should be 100% familiar with these procedures.

Suspected spinal injury

In the event of a suspected spinal or other serious injury:

GET HELP FIRST, and GET IT FAST

Call 111 for an Ambulance

Don't move the player until qualified medical personnel arrive! A player may have suffered a severe neck injury, and yet still be able to move. If the spine is unstable, and they are moved, they run the risk of permanent paralysis. Referees and coaches should err on the side of caution and seek medical assistance in the event of any potentially serious injury.

FOR ALL OTHER INJURIES

If the injury disrupts play, get the player assessed on the field so you can decide whether to keep the player on or take them off.

> **Assessing the injury**

> **For effective assessment of an injury, remember T.O.T.A.P.S.**

> **Talk**

Ask the player what happened

Where does it hurt?

What kind of pain is it?

> **Observe**

Look at the affected area for redness or swelling.
Is the injured side different from the other side?

> **Touch**

Touch will indicate warmth for inflammation
- touch also assesses pain.

> **Active movement**

Ask the injured player to move the injured part without any help.

> **Passive movement**

If the player can move the injured part, carefully try to move it yourself through its full range of motion.

> **Skill test**

Did the active and passive movement produce pain?
If no, can the player stand and demonstrate some of the skills from the game? If an injury is identified, remove the player from the activity immediately.

10 INJURY MANAGEMENT

Sideline Concussion Check

Ask your coach or RDO for this great little resource that fits into your wallet. It provides all you need to manage a suspected concussion.



Who takes responsibility in your team if there's a serious injury?

Each team needs to appoint a person, present at the match, who is responsible for the immediate management of injured players. Preferably the same person should complete and return any serious injury report forms to their Provincial Union.





Treating the injury R.I.C.E.D.

A soft tissue injury such as a sprain, strain, or bruise should immediately be treated with the R.I.C.E.D. procedure:

> Rest

Rest reduces further damage.

Avoid as much movement of the injured part as possible to limit further injury.
Don't put any weight on the injured part.

> Ice

Ice cools the tissue and reduces pain, swelling and bleeding.

Onto the injured area place ice wrapped in a damp towel.

Apply ice for 20 minutes every two hours for the first 48 hours.

> Compression

Firm bandaging helps to reduce bleeding and swelling. Ensure that bandaging is not so tight that it cuts off circulation or causes tingling or pain past the bandage. Between ice treatments bandage the injury.

> Elevation

Elevate the injured area to stop bleeding and swelling.

For comfort and support raise the injured area on a pillow.

> Diagnosis

Consult a medical professional such as a doctor or physiotherapist especially if you are worried about the injury, or if the pain or swelling gets worse. Also seek treatment if the pain or swelling has not gone down significantly within 48 hours.

10 INJURY MANAGEMENT

Avoid H.A.R.M.-ful factors

Once the injury has been diagnosed and treated, avoid the H.A.R.M.-ful factors for 72 hours:

> **Heat**

Heat increases the bleeding in the injured tissues. Avoid hot baths and showers, saunas, hot water bottles, heat packs and liniments.

> **Alcohol**

Avoid alcohol as it increases the bleeding and swelling around soft tissue injuries and delays healing. It can also mask the injury's pain and possible severity, which may result in the player not seeking treatment as early as they should. If a player has a suspected head injury alcohol **MUST** be avoided.

> **Running**

Running, or exercise of the injured part, will cause further damage. Do not resume exercise within 72 hours of the injury unless a medical professional clears the player.

> **Massage**

Massage causes an increase in bleeding and swelling and will prolong the rehabilitation process when done within 72 hours of the injury.



PHASE 2 REHABILITATION

Rehabilitation focuses on restoring the player's full functions and rugby-specific abilities to prevent re-injury and encourage their best possible performance. In this phase the player should be building up muscle strength around the injured area, working towards getting the full movement back in the joint, getting their balance back and keeping fit through activities like swimming and cycling. Once they are ready they need to gradually build in light rugby-specific skills and drills, extending themselves at training only as much as the injury allows.

The player needs support to:

- Restore strength
- Restore range of motion
- Restore co-ordination and control
- Restore balance
- Maintain fitness
- Build confidence
- Restore their ability to perform rugby specific skills

10 INJURY MANAGEMENT

PHASE 3 RETURN TO PLAY

DEMONSTRATION OF PRE-INJURY - PERFORMANCE LEVEL FOLLOWED BY RETURN TO PLAY

This is when the coach, doctor or physiotherapist puts a player through a set of tests to see if they are ready to get back out on the field.

These tests should be a combination of those you used for the fitness tests at the start of the season and rugby skills and moves that the player will have to make during a game - like side stepping and tackling.

You can use the Player Profiling information you recorded earlier in the year to see whether a player is ready to return to play based on a comparison of performance.

Remember - if your players continue playing with an injury they increase the chance of a further, more severe injury.

- Restore rugby-specific skills and techniques
e.g. jumping, throwing, kicking
- When the rugby-specific skills are done at the same level as they were before the injury, the player can return to the activity
- Don't play hurt!

“The best predictor of injury is recent injury. And the message from this is you don't play injured. You make sure you get an injury treated properly, fully recovered and then get back on the rugby field.”

Dr Graham Patterson - All Black doctor

The coach's first aid kit

- Surgical gloves
- Small towel
- Compression bandages
- Adhesive tape
- Band-aids, plasters
- Antiseptic solutions, eg Savlon.
- Eye wash
- Scissors (not with sharp points)
- A sling bandage
- Sterile gauze dressing
- Ice should be available as well

