



Prioritising Health to Optimise Performance – a female perspective

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SmartHealth and FAH Literacy is an evolving project developed in partnership with Kylie Cox and Dr Melinda Parnell and supported by NetballSmart/ACC.



Michael Bradley photography

“Knowledge is Power”

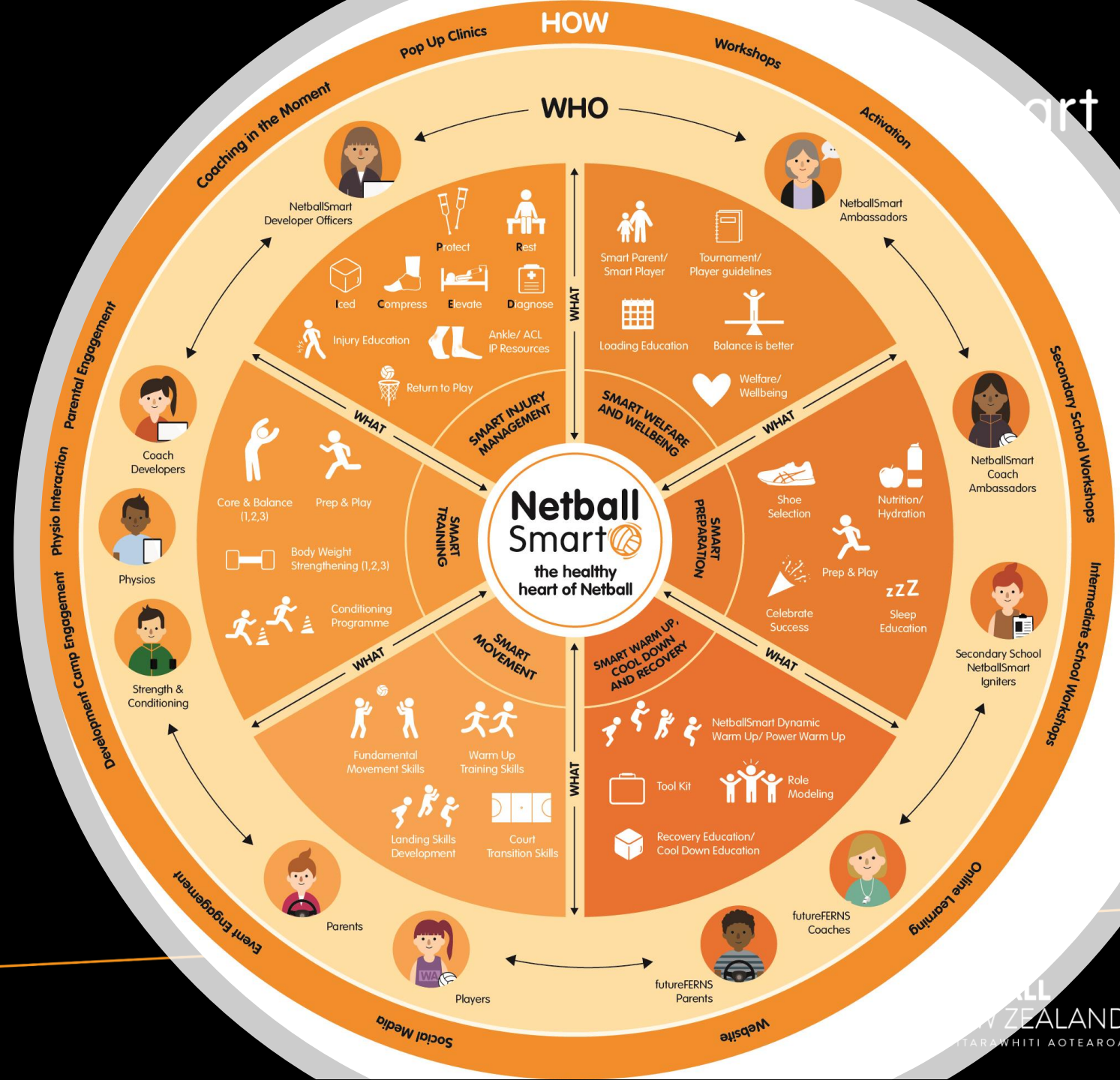
“Health Autonomy is Essential”

Female Athletic Health

Netball New Zealand and NetballSmart



NNZ HP FAH and NetballSmart Journey.



SMARTPlayer

Smart Player Well-being/Welfare

Smart Player Well-being/Welfare is ensuring there is a holistic awareness and approach to a player's health and wellbeing.

nciples. It helps
ries.

Smart Preparation

Smart Preparation prepares the mind and body before you step onto the court.

...m-up, cool
down and

SMARTParent

Smart Player Well-being/Welfare

Smart Player Well-being/Welfare is ensuring there is a holistic awareness and approach to a player's health and wellbeing.

Smart Injury Management

Smart Injury Management is ensuring injuries are identified, assessed and reported early.



“Do the best you can until you know better. Then, when you know better, do better.” Maya Angelou

Recommendations

- Amateur sport must develop resources for players / athletes, coaches, support staff and whanau to encompass knowledge on the role of the menstrual cycle as a barometer of health.
- Education includes a concentrated effort to educate players / athletes and coaches that missing menstruation should not be a “normal” consequence accepted in sporting environs.
- Nutritional education should address players / athletes, coaches and whanau understanding of low energy availability and the implications on multiple body systems as well as performance dysfunction.
- Education and services to players / athletes should be seen as a priority as they travel through their Netball journey. By the time netball players reach a performance / high performance level netball players will have grown their knowledge of the relationships of nutrition, sleep, recovery and injury management to health, well-being and performance.
- Injury prevention strategies do include other causes of time lost to sport (i.e., illness or injury arising from low energy availability, over-activity and / or under-recovery).
- Future resources should look at development and implementation of education programmes which create behavior change to support female athletic health (i.e., not just impart knowledge).
- NetballSmart will support developing a resource SmartHealth which encompasses all of the above elements.

Research

SMARTPlayer

SMARTParent

Smart Player Well-being/Welfare

Smart Player Well-being/Welfare is ensuring there is a holistic awareness and approach to a player's health and wellbeing.

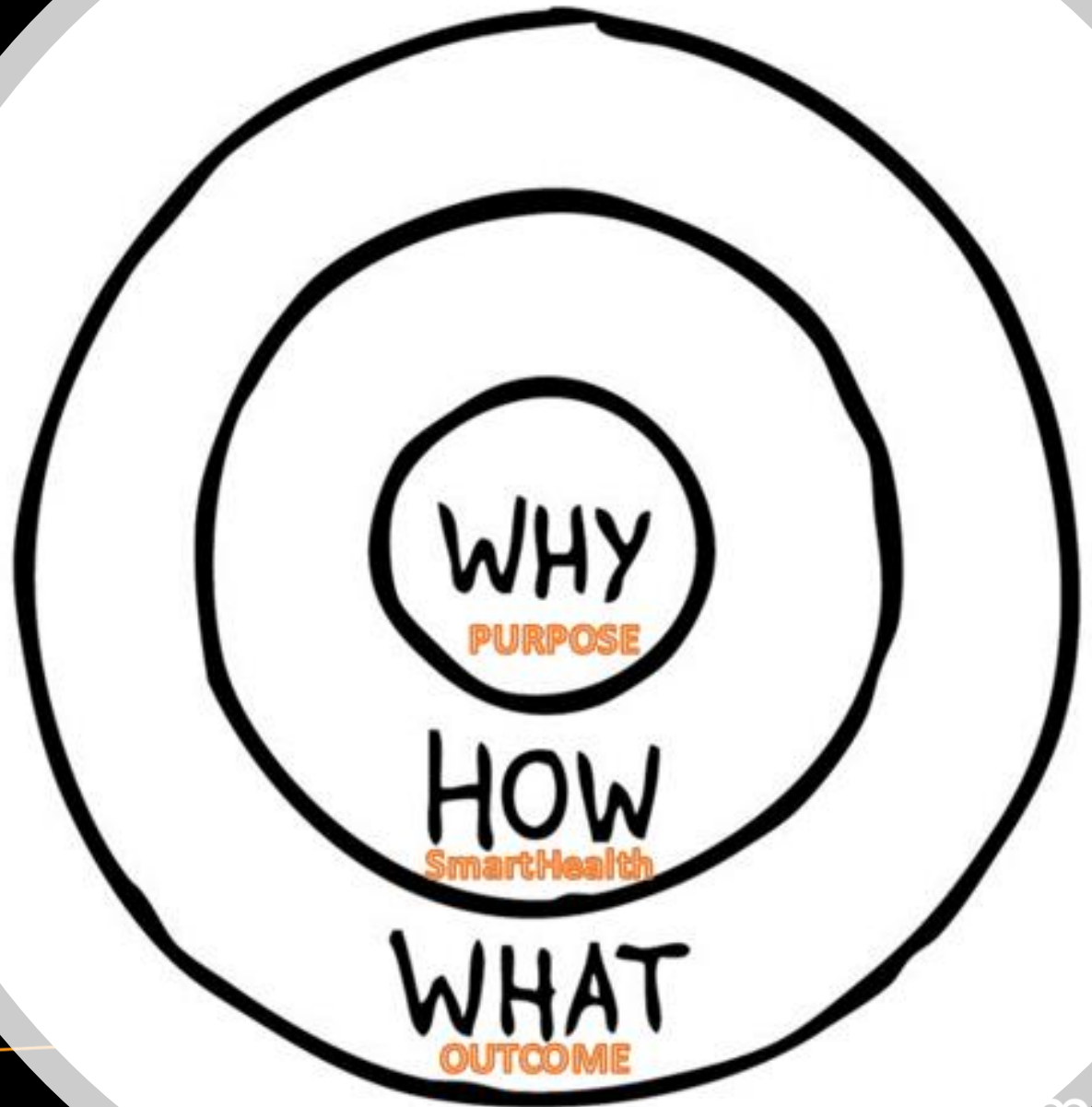


SMARTHealth

SmartHealth will increase female athlete health literacy (knowledge and competence) of female athletes and their support staff to empower the young female athletes to make conscious decisions re their health and wellbeing.

The “how” is the SmartHealth journey from community-based participant to pre Performance / Performance / High performance athlete (where appropriate).

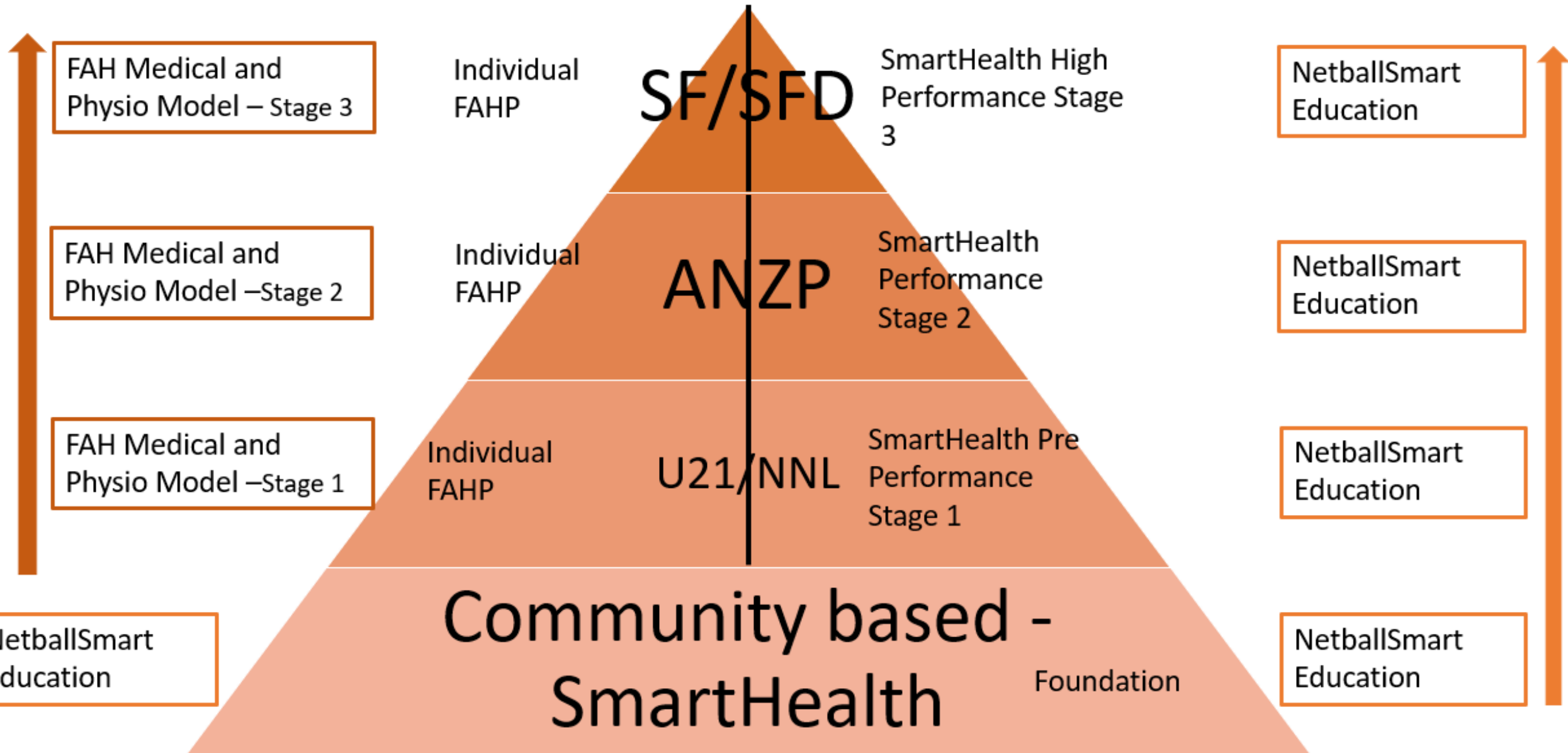
SmartHealth is the “vehicle” for FAH literacy (knowledge and competency) development (McGawley et al, 2023)



A netball player in a black and yellow uniform is captured mid-air, jumping to catch a ball. Her hair is flying, and she has a focused expression. The background shows other players in yellow and black uniforms on a netball court, with a crowd of spectators in the distance. The text "NetballSmart SmartHealth Strategy from Community to HP" is overlaid in white on the image.

NetballSmart SmartHealth Strategy from Community to HP

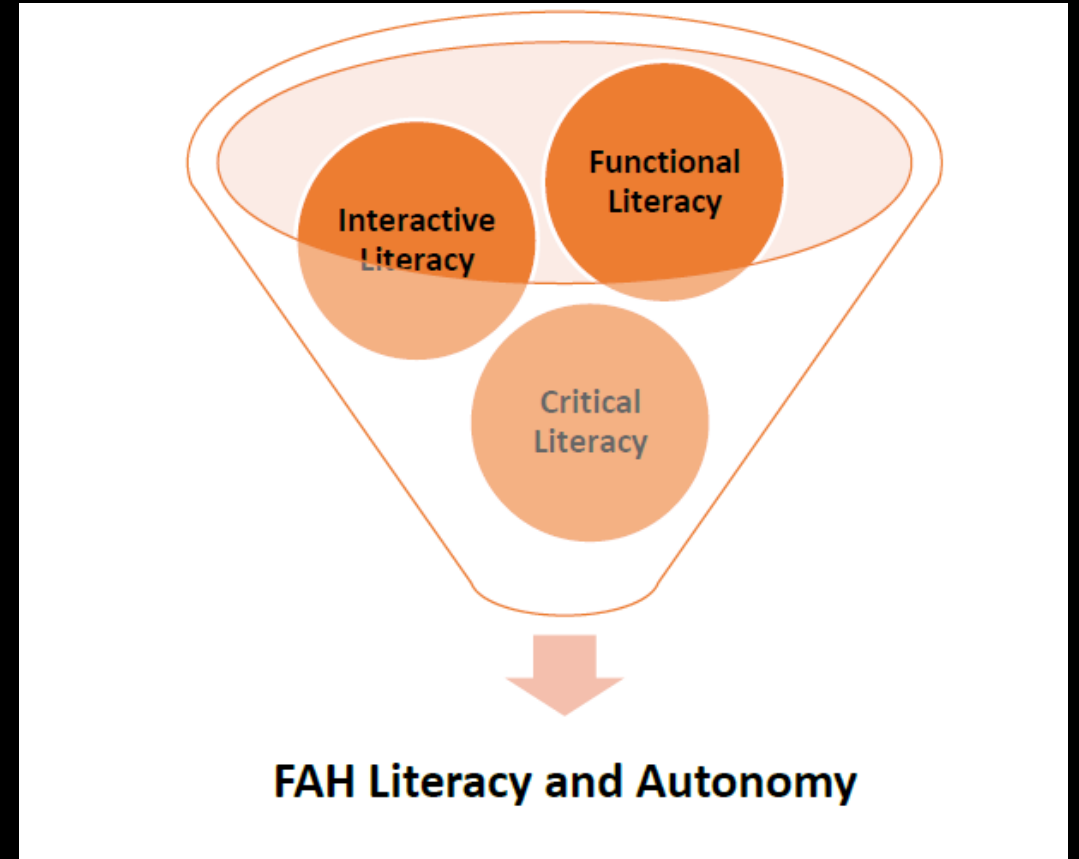
“Prioritising Health to Optimise Performance”



Female Athletic Health Literacy

“Knowledge is Power”

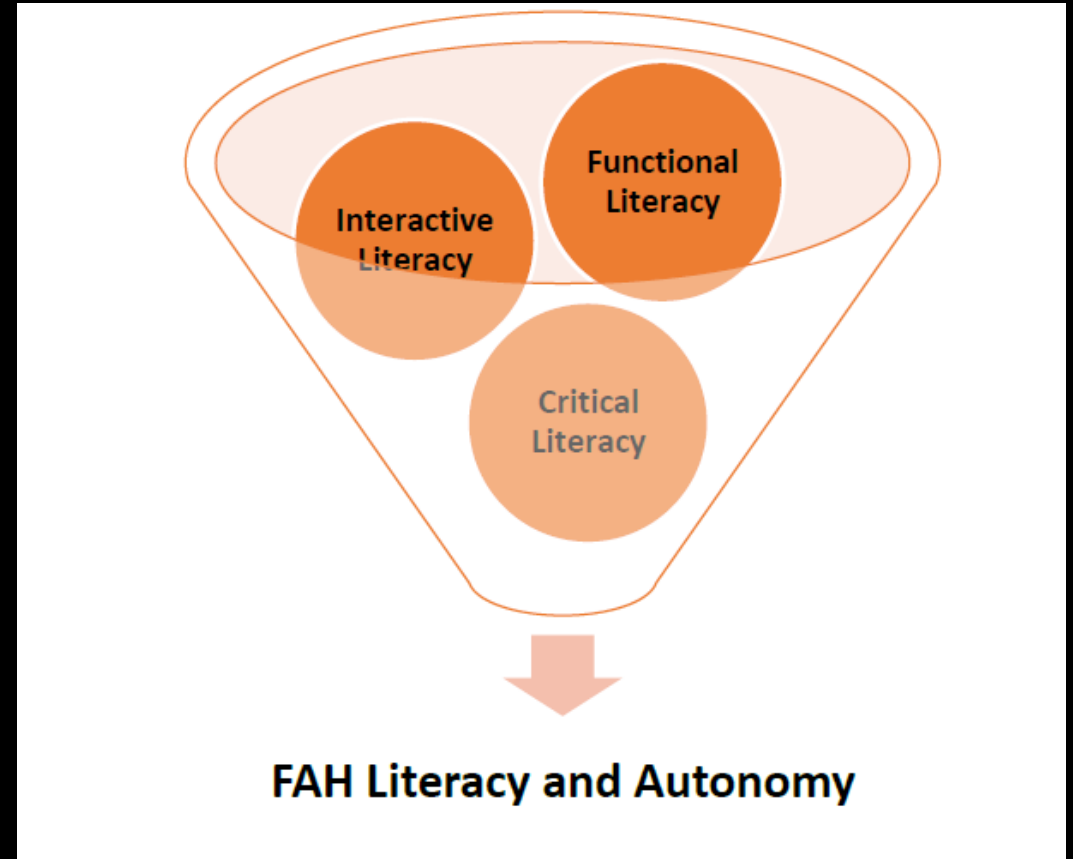
“Health Autonomy is Essential”



Female Athletic Health Literacy

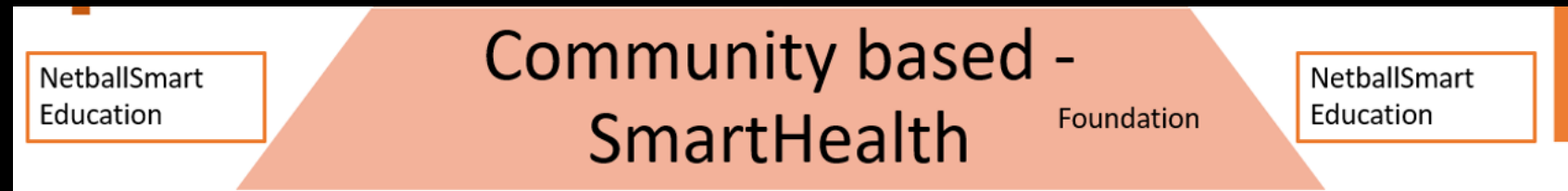
Female athlete health (FAH) literacy is comprised of 3 sequential literacy domains where an individual progresses as they acquire more knowledge and skills:

1. Functional literacy (SmartHealth Community)
 - Ability to find and access basic knowledge on FAH
2. Interactive literacy (SmartHealth Performance)
 - Ability to extract health FAH knowledge
 - Ability to apply FAH knowledge to an individuals health and performance (including management and behaviour)
 - Ability to engage and communicate FAH, effects and “menstrual rehab plan” between athlete and key support staff (coaches, Dr, nutrition physiotherapy, S&C etc)
3. Critical literacy (SmartHealth Autonomy)
Plus
 - Ability to analyse, extract, appraise and apply FAH knowledge within a sporting context and impact on health and performance



Female Athletic Health Literacy

1. Functional literacy (SmartHealth Community)
 - Ability to find and access basic knowledge on FAH



Resource Development

- Resources
- Workshops
- Physiotherapists

6 SmartHealth – 10 Key Messages for Healthy Players



Puberty is a time of physical, social and emotional change. It is temporary and normal.



Under-fuelling (food) and under-recovery (rest) leads to energy deficits (LEA). Prolonged LEA may cause RED-S with negative health and performance consequences.



Female players should work on simple strategies to improve movement control and landing mechanics during pubertal change.



Balance is important for the growing player. Ensure training has a variety of intensities. The body grows and strengthens as a result.



Understanding the menstrual cycle and the role it plays in health is important for players, as well as those who support her i.e., coach/whānau.



Recovery is vital for performance and health. Adolescents should have at least 8 hours sleep per night. Adolescents should have at least one rest day from all sport per week. Encourage mental downtime.



The total energy needs for adolescents are vast. Energy is needed for normal body functioning, social, academic and work needs, growth and development PLUS exercise. A higher food intake is normal.



Coaches, parents and whānau are encouraged to build awareness and understanding of mental health needs in adolescents.



Optimal nutrition is vital for energy, tissue repair, muscle growth and hormone balance. Ensure players eat before and after exercise. Plan additional snacks to meet total energy needs.



If players, coaches or whānau are concerned for the health of a player, please seek medical advice and support.

SMARTHEALTH IS HERE TO SUPPORT THE HEALTHY FEMALE NETBALL PLAYER. MORE DETAIL IS PROVIDED IN THE SMARTHEALTH HANDBOOK.



NetballSmart has a wide range of resources in support of the messages of SmartHealth:
www.Netballsmart.co.nz

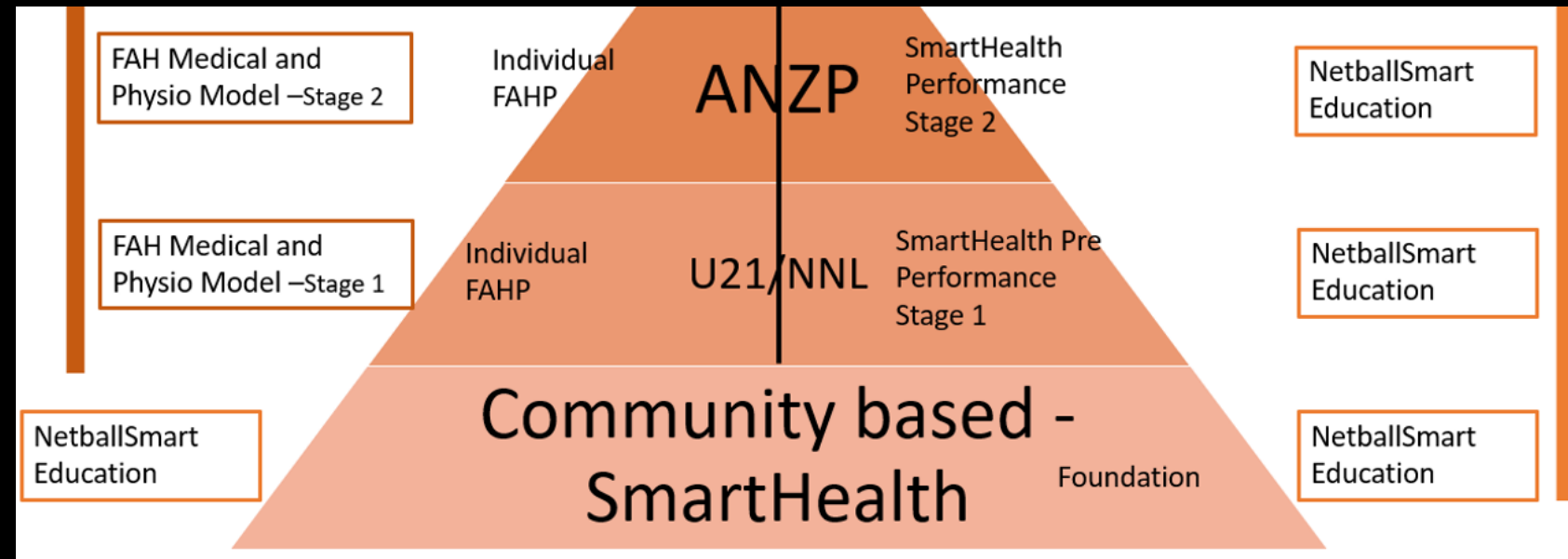


Female Athletic Health Literacy

2. Interactive literacy

(SmartHealth Performance)

- Ability to extract health FAH knowledge
- Ability to apply FAH knowledge to an individuals health and performance (including management and behaviour)
- Ability to engage and communicate FAH, effects and “menstrual rehab plan” between athlete and key support staff (coaches, Dr, nutrition physiotherapy, S&C etc)



SmartHealth Performance – Optimising health



Female athlete health is a balancing act between training stimulus, nutrition and recovery. This balancing act impacts our hormonal health. Hormones are our chemical messengers and send signals to receptors in the body to action and effect change. Changes in the body systems because of altered hormones are common in athletes and can happen quickly. Awareness of the warning signs means an athlete can put strategies in place to 're-balance". Failure to do so, may mean more serious health and performance issues.



Training stimulus refers to specific conditions created by the type of training that elicits a particular response from the body. It is the trigger that results in an adaptation. Training load is the cumulative amount of exercise you're doing, considering both duration and intensity (RPE). Whilst your training stimulus is largely dictated to you, your role as an athlete is to balance your training stimulus and load with equivalent nutrition and recovery. Without such strategies, adaptation may not occur, and health and performance may suffer.



Optimal nutrition is vital for all body systems to operate in harmony. As an elite athlete, periods of higher intensity training need to be supported with higher energy intakes. Prolonged or sustained periods of under-fuelling can cause health and performance issues. Some signs that you may be under-fuelling include prolonged fatigue, deterioration in performance, poor recovery, poor concentration, menstrual irregularity and recurrent injury or illness. Follow the guidelines of your team Nutritionist and seek individualised support if needed.



Recovery includes sleep, light active exercise, nutrition in and around exercise and mental downtime away from sport. Once again, periods of intense training or playing schedules require periods of greater and purposeful recovery alongside increased nutrition. Poor sleep is linked with injury risk, reduced recovery and poor mental health. Adaptations to training happen at rest, therefore it's a vital part of performance.

SmartHealth Performance

Hormonal Contraception 101



Understanding hormonal



Iron deficiency and Iron deficiency Anaemia



NetballSmart

Common issues and solutions

...in or cause pain. And you should never have to wear two bra's for adequate support, and a flawless fit, and your sports bra can be supportive and comfortable

<p>...spilling out sides/top</p> <p>Issue: Breast spilling out bottom</p> <p>Solution: Go down one or two underband sizes and ensure bra sits flush against your body, under your breasts</p>	<p>Issue: Bra digging in</p> <p>Solution: Increase your cup size until your breast tissue sits within the cup and the underwire follows the crease under your breast</p>
<p>...centre panel</p> <p>Issue: Bra digging in</p> <p>Solution: Increase your cup size until your breast tissue sits within the cup and the underwire follows the crease under your breast</p>	<p>Issue: Bra digging in</p> <p>Solution: Increase your cup size until your breast tissue sits within the cup and the underwire follows the crease under your breast</p>



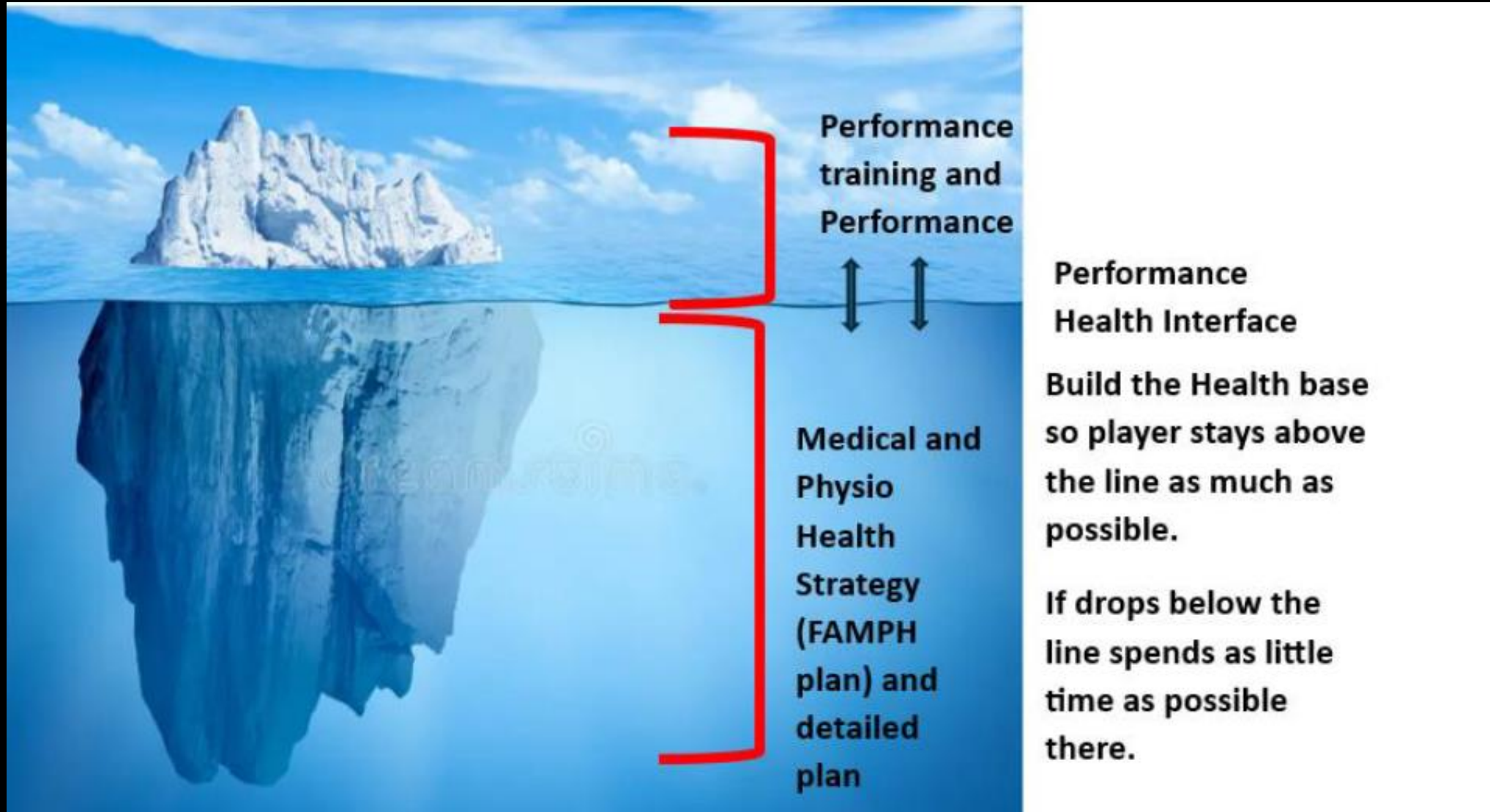
- Improved breathing frequency
- Reduced perception of work
- Changes in movement patterns
- Changes in muscle activity

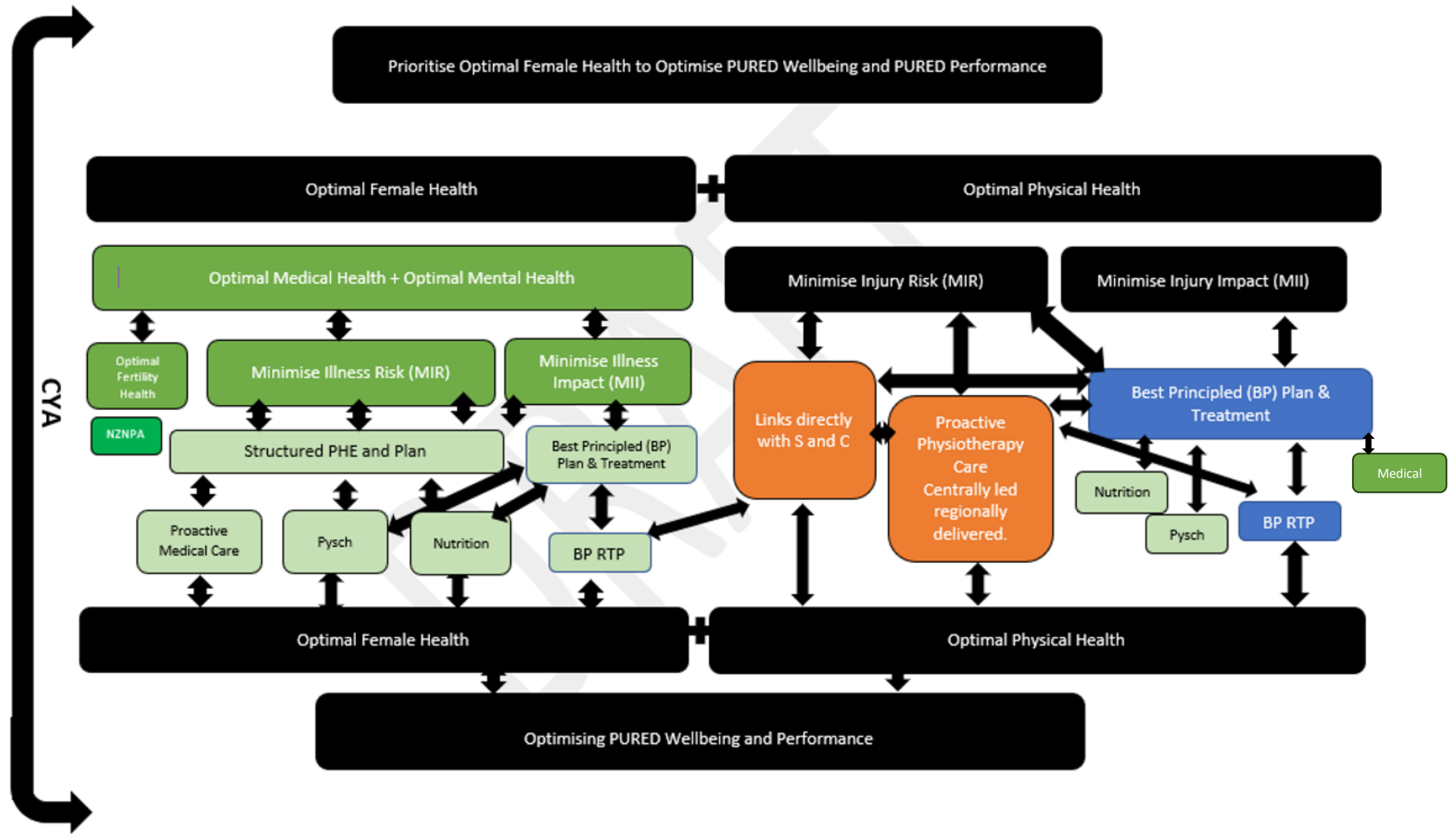
CHECK YOUR SIZE

<https://www.bra.edu.au>

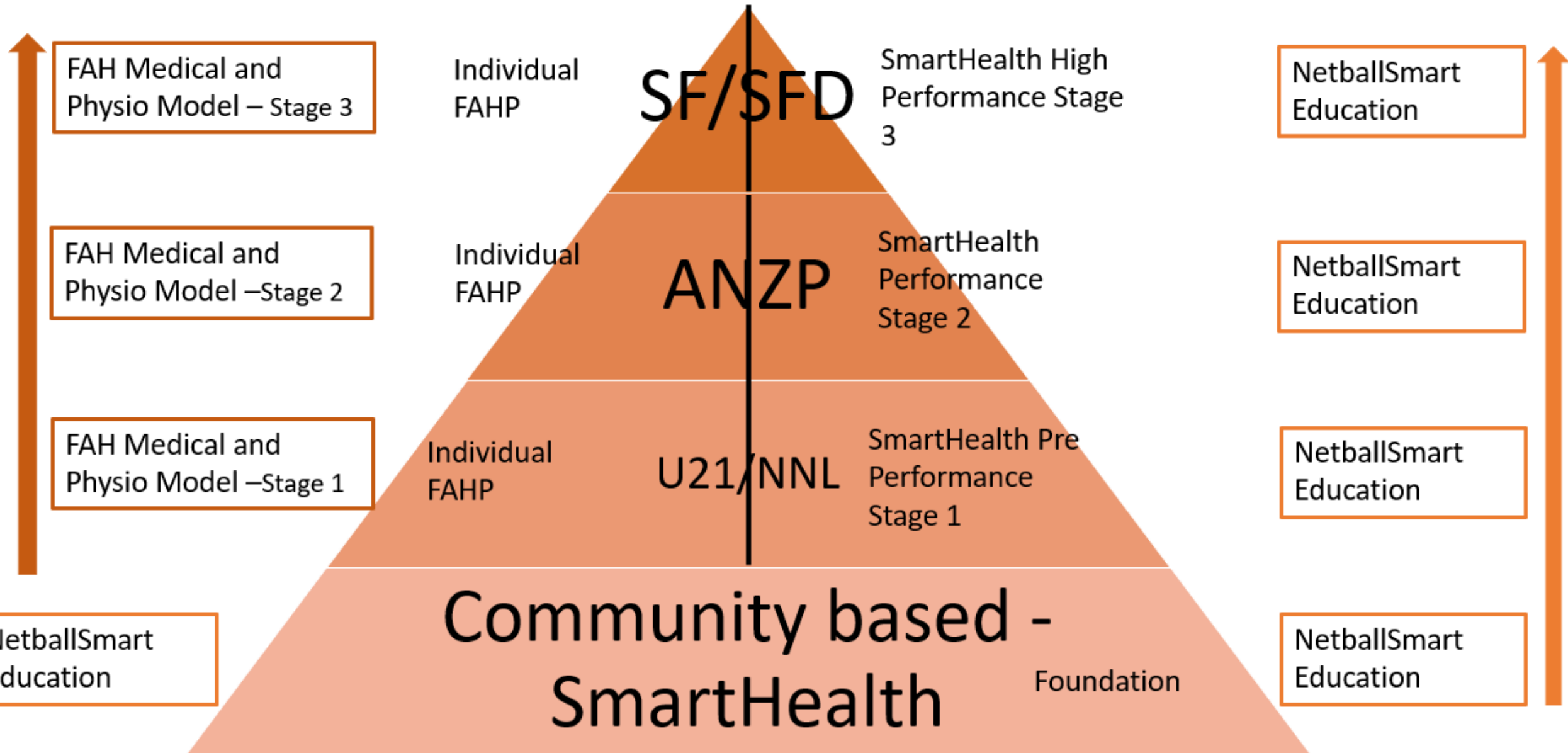


Optimise Performance in Sport, Life and Life after Sport





“Prioritising Health to Optimise Performance”



Stage 3 FAH Medical and Physio Model

Individual and SmartHealth Performance

FAH Individual

Prioritise Health to optimise performance

- Full Medical (PHE) and proactive plan focusing on all key areas of FAH
 - PHE – prior to ANZP

Proactive Physiotherapy plan

- MSK screening assessment and proactive plan
 - Rehab / prehab Programme
 - Gym / training modifications

Nutrition

- Individual planning
- Education

SmartHealth Performance Education

- SmartHealth Performance
 - Understanding female athletic health
 - Menstrual health
 - LEA and REDs education
 - Bone Health
- Breast Care
- Pelvic Floor Education and resources
- Fertility (NZNPA)
- Concussion education
- Pregnancy and RTP
 - Individualised

Stage 2 FAH Medical and Physio Model

Individual and SmartHealth Performance

FAH Individual

Prioritise Health to optimise performance

- Full Medical (PHE) and proactive plan focusing on all key areas of FAH

Proactive Physiotherapy plan

- MSK screening assessment and proactive plan
 - Rehab Programme
 - Gym / training modifications

Nutrition

- Group Education
- Individual planning

SmartHealth Performance Education

- SmartHealth Performance
 - Understanding female athletic health
 - Menstrual health
 - LEA and REDs education
 - Bone Health
- Breast Care
- Pelvic Floor Education and resources
- Fertility (NZNPA)
- Concussion Education
- Pregnancy and RTP
 - Generic

Stage 1 FAH Medical and Physio Model

Individual and SmartHealth Performance

FAH Individual

Prioritise Health to optimise performance

- Campaign based Medical

Proactive Physiotherapy plan

- MSK screening assessment and proactive plan Stage 1
 - campaign based
 - Rehab Programme
 - Gym / training modifications

Nutrition Education

SmartHealth Performance Education

- SmartHealth Performance
 - Understanding female athletic health
 - Menstrual health
 - LEA and REDs education
 - Bone Health
- Breast Care
- Pelvic Floor – resources provided
- Concussion Education

ANZP FAH Medical and Physiotherapy Models

- Supporting SF and SFD and Club players to optimise health
- Optimal Proactive Medical Model (PHE) and Plan
- Optimal Proactive Physiotherapy Model and plan

Optimal Proactive Medical Model

- **PHE / Medical – planned and done**
 - FAH lens
- **Proactive plan in place**
- **Follow up**
- **Developing a relationship with Dr aligned to Franchise**
- **Supporting the Physiotherapist aligned to the ANZP programme to support SF / SFD and ANZP players**

Optimal Proactive Physiotherapy Model

A female netball player in a black and yellow uniform is captured in mid-air, jumping to catch a ball. The background shows other players and a crowd, all slightly blurred, emphasizing the main player's action.

- **What should you expect?**
- **Minimising Injury Risk Plan**
 - MSK screening and rehab / prehab plan
- **Smart Injury Management and Plan**
 - Diagnosis
 - Plan
 - Rehab programme and time line
 - Modification of loading as appropriate
 - Player individual accountability and management of their body ie “their tool of their trade”

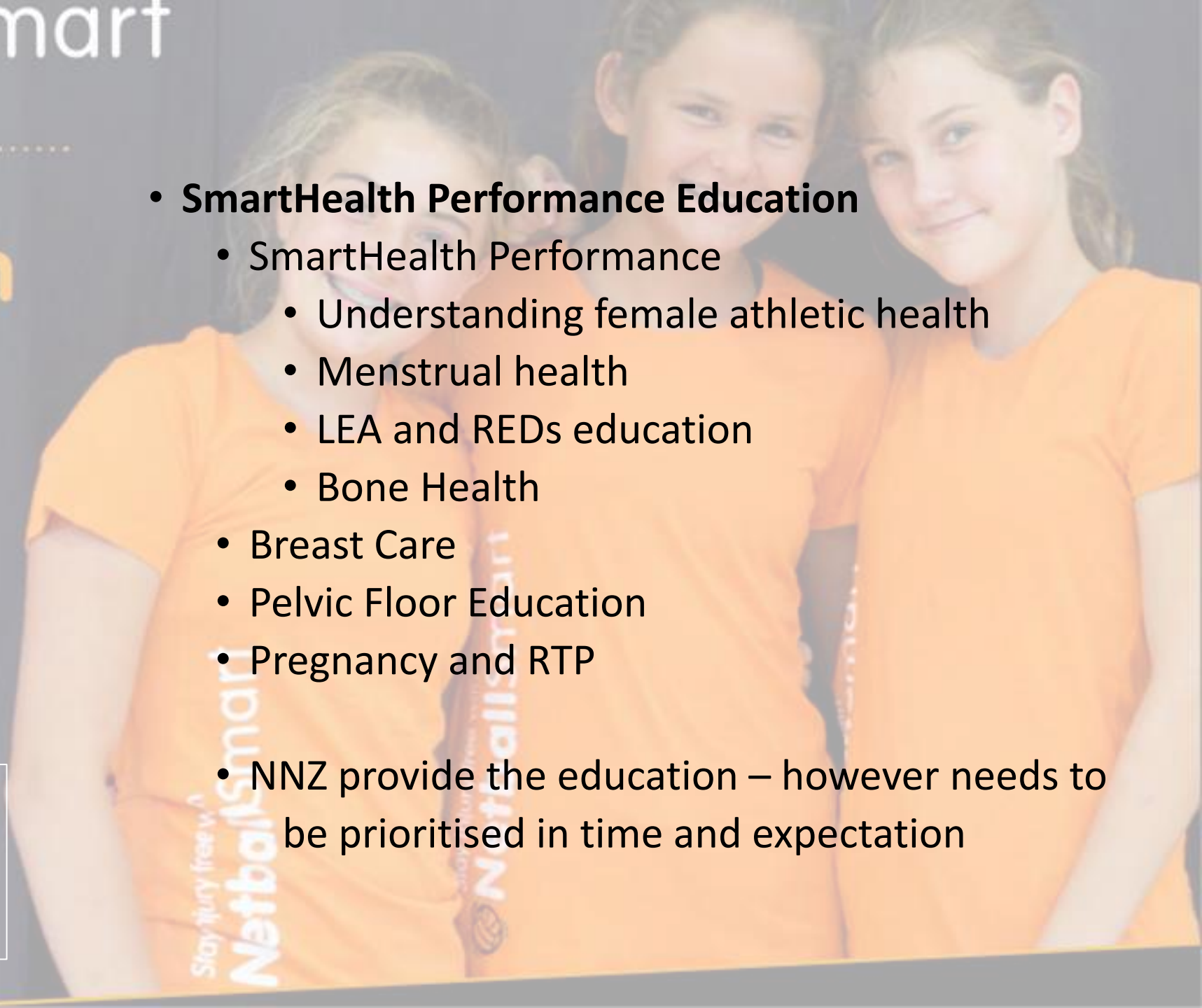
SmartHealth Handbook

A resource to support
female player health
and development.

www.netballsmart.co.nz

SmartHealth
Performance

- **SmartHealth Performance Education**
 - SmartHealth Performance
 - Understanding female athletic health
 - Menstrual health
 - LEA and REDs education
 - Bone Health
 - Breast Care
 - Pelvic Floor Education
 - Pregnancy and RTP
- NNZ provide the education – however needs to be prioritised in time and expectation





Physiotherapy and Medical Support

- NNZ Lead Physiotherapist
- NNZ Medical Director
- Support, Education, Resources, PD
- PD sharing with NZ Rugby

