

4th FIFA
Women's Football
Symposium

Shanghai, 28 and 29 September 2007

Health and Fitness of the female football player

Football for Health....Health for Football
Benefits and Challenges of Women's Football

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- **Great form of exercise**
 - Physical benefits
 - Psychological benefits
 - Social benefits



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- **Getting faster and more physical**
 - Up to 13km covered during a 90 minute game
 - 10-20% of this at high speed
 - Constant changes of speed and direction
 - Average intensity 70-85% HR_{max} *



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- Injury and illness possible but often preventable
- Lower injury rate in women's football than in men's
 - 2.2 injuries per game v 2.7
- Mostly contusions, strains or sprains
- Lower limb the most common site
 - Ankle, knee and thigh



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Gender Differences

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- Tackling the most common cause
 - Foul play involved in @ 30% of cases
- Concussion also prevalent
- Technique coaching crucial



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- Of most concern is the high rate of knee injuries
 - Particularly ligament strains
 - ACL tears 10 times more common in females
 - Can result in significant time-loss, sometimes career-ending



Prevention Better than Cure

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- Simple measures are proven to reduce incidence and severity of injuries and illness leading to:
 - Increased enjoyment of the game
 - Prolonged participation
 - Enhanced performance (of self and team)
- Focusing on the latter may help in the acceptance of health promotion strategies.



For Example

- Dehydration reduces mental and physical performance
 - 1-2% sweat induced weight loss is enough to impair performance, but up to 5% may be seen
- Addressing this will improve performance and reduce injury risk



New Zealand Data FIFA Women's World Cup 2007

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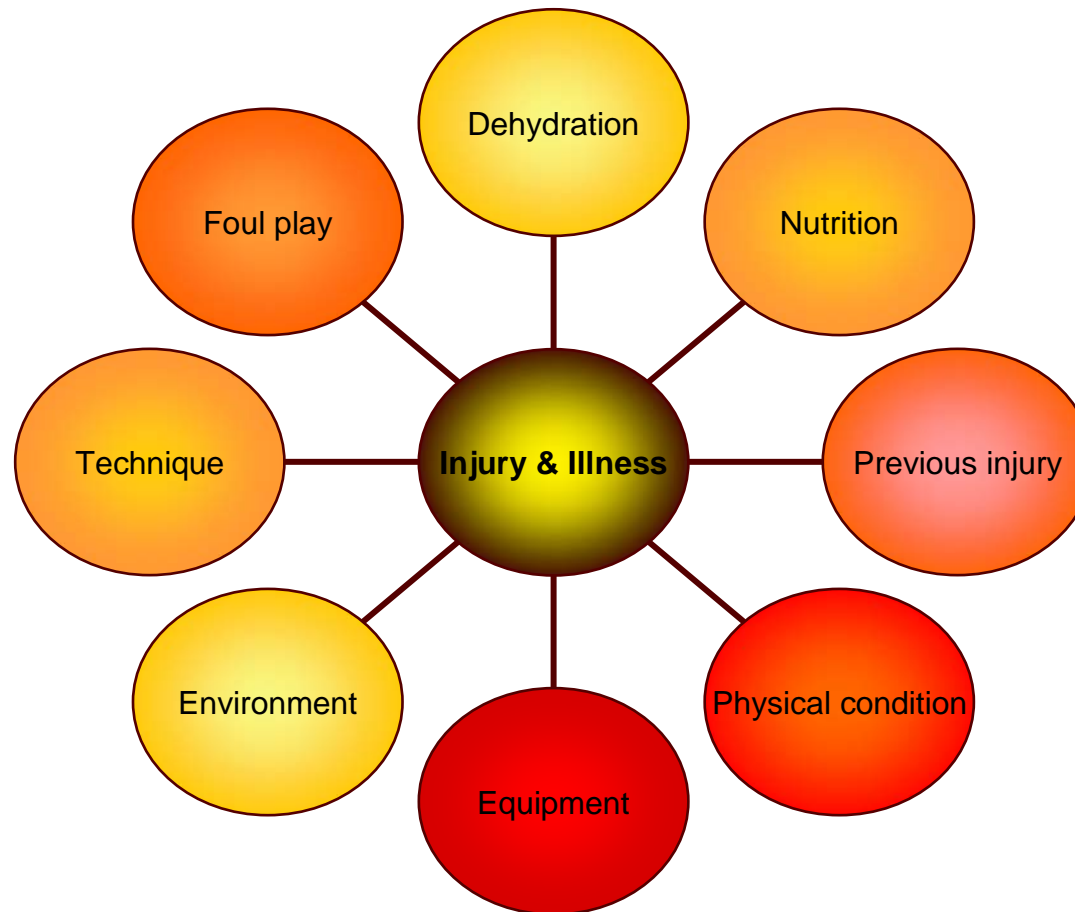
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	% Body Mass Loss (average from 3 games)
1. Goal Keeper	1.89
2. Defender	0.68
3. Defender	0.82
4. Defender	0.15
5. Defender	1.69
6. Midfield	1.87
7. Midfield	0.77
8. Midfield	0.90
9. Midfield	1.34
10. Striker	0.78
11. Striker	0.82
Average	1.06

Factors affecting risk of injury and illness

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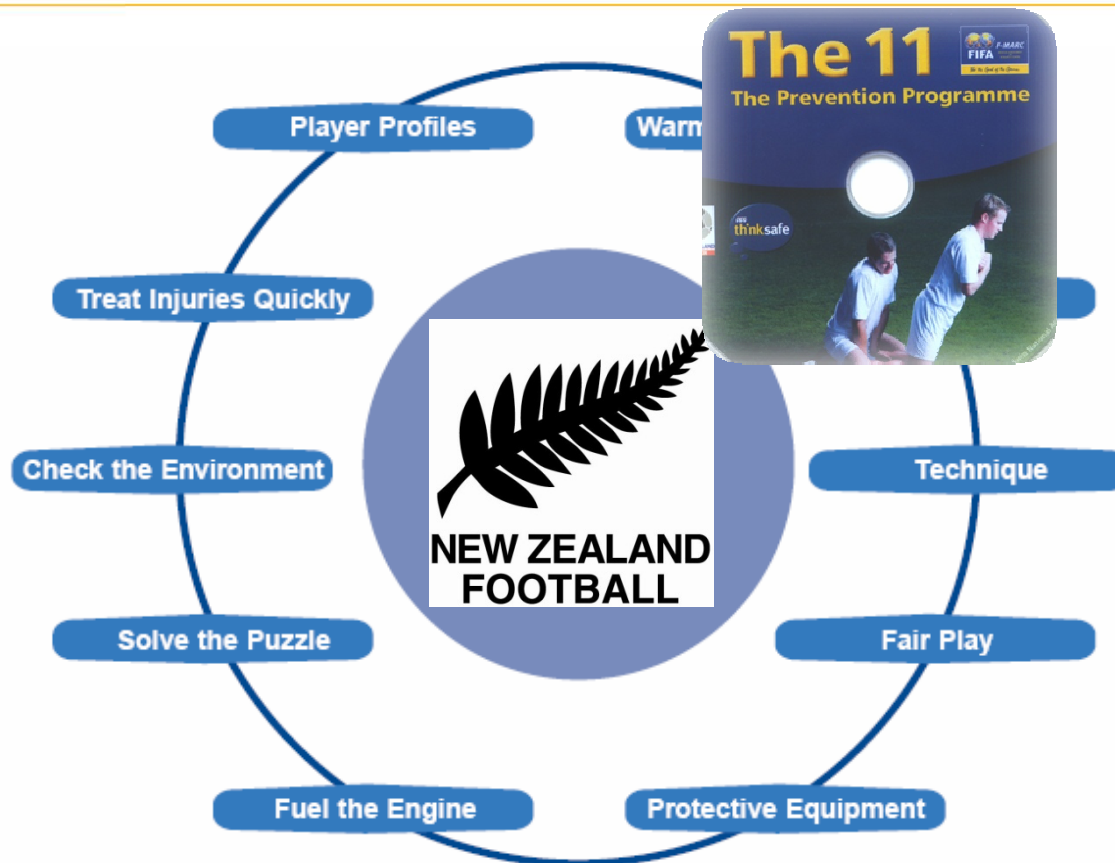
How can you help?

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- Structured approach to coach and player education and support – nationally driven programmes
- Evidence based strategies available
 - uptake and adherence is the challenge
- Ankle stability example.....





Based on ACC SportSmart, the 10-point action plan for sports injury prevention.

New FIFA Resource

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100 YEARS FIFA 1904 - 2004
Fédération Internationale de Football Association
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**Health and Fitness for
the Female Football Player**
A guide for players and coaches

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Warm-up

- Prepares mind and body for the activity to come
- Crucial that players come out ready to perform, at the start of both halves. In women's football:
 - The team that scores first goes on to win in 85% of games and;
 - In Women's World Cups, most goals are scored at the start of each half
- A combined warm-up and functional strength routine at the start of every training session is recommended.....

Examples

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- **The PEP programme – “Prevention Enhances Performance”**
 - <http://www.aclprevent.com/pepprogram.htm>

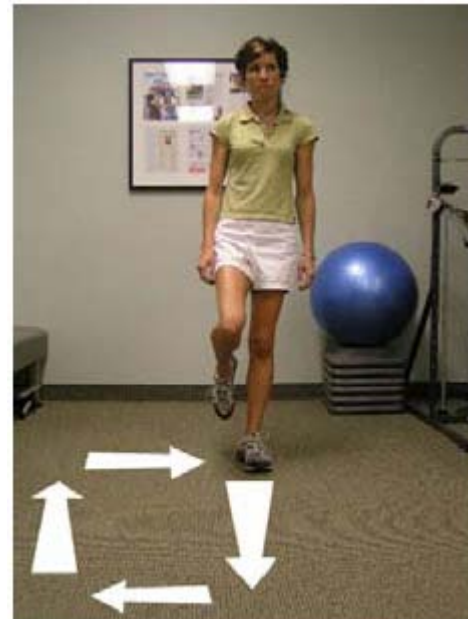


Examples

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- **The F.A.S.T programme – Functional Ankle Stability Training**
 - <http://www.footankleinstitute.com/Download/fast.pdf>



Examples

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- **FIFA's "The 11" – 10 exercises plus fair play**
 - www.fifa.com/aboutfifa/developing/medical/the11/index.htm



spilleklar_4.avi

Fair Play component of “The 11”

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- Injuries, or enhanced performance, due to foul practice are not good for the game, or the players
- Guilty party in a foul may be injured just as badly, if not more so, than their victim
- Use of performance enhancing drugs is also against the spirit of the game
 - Associated health and career risks should be highlighted to female players from a young age.

MY GAME IS
FAIR PLAY

FIFA

© 1993 FIFA

Physical Conditioning

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- Complimentary strength and conditioning will add to the benefits of playing the game
 - Weight bearing exercise increases bone density and decreases risk of osteoporosis
 - Stretching improves range of motion, for performance and injury prevention
- Need to promote physical fitness but not to the point where over-training and exercise addiction result
 - All programmes should follow the F.I.T.T.R principle

F.I.T.T.R principles

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FREQUENCY

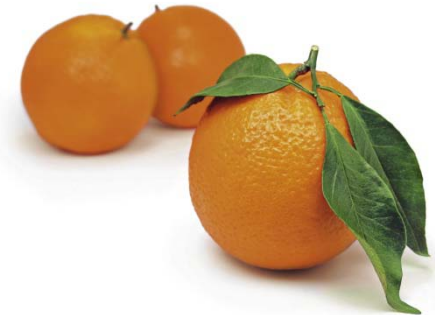
INTENSITY

TYPE

TIME

REST

- Good nutrition is crucial, for health and performance
- It's not rocket science
 - Right amounts of the right foods
 - Plus a healthy attitude to food
 - Typical energy expenditure in a game = 1,100kcal for a 60kg player
 - Restricted intake will limit performance and increase injury risk



Nutrition

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- Fat is a poor fuel for football
 - Diets should be “Low fat not No fat”
- Carbohydrate is key – forget Atkins!
- Protein also important
 - Particularly before and after training/game
- Improvement of body composition should be progressive, monitored and handled tactfully
- With good training and a sensible diet, a healthy, effective player will result



The end result.....

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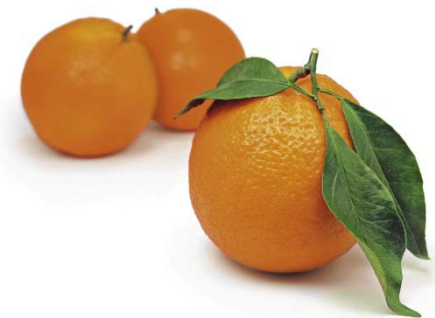
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Other issues to be aware of.....

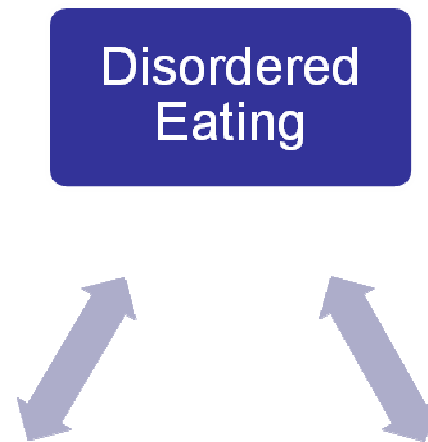
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- Low iron levels
 - Monitor regularly
 - Promote Vitamin C intake
- Exercise addiction & The Female Athlete Triad....



Female Athlete Triad



- Body composition important, but not to the detriment of health (17-22%)
- Weight loss may limit performance rather than improve it



- Irregular or no menstruation
- Be aware of exercise addiction

- Watch for repeated stress fractures
- Low peak bone mass
- Calcium intake
- Vitamin D exposure

And a final, dark issue.....abuse

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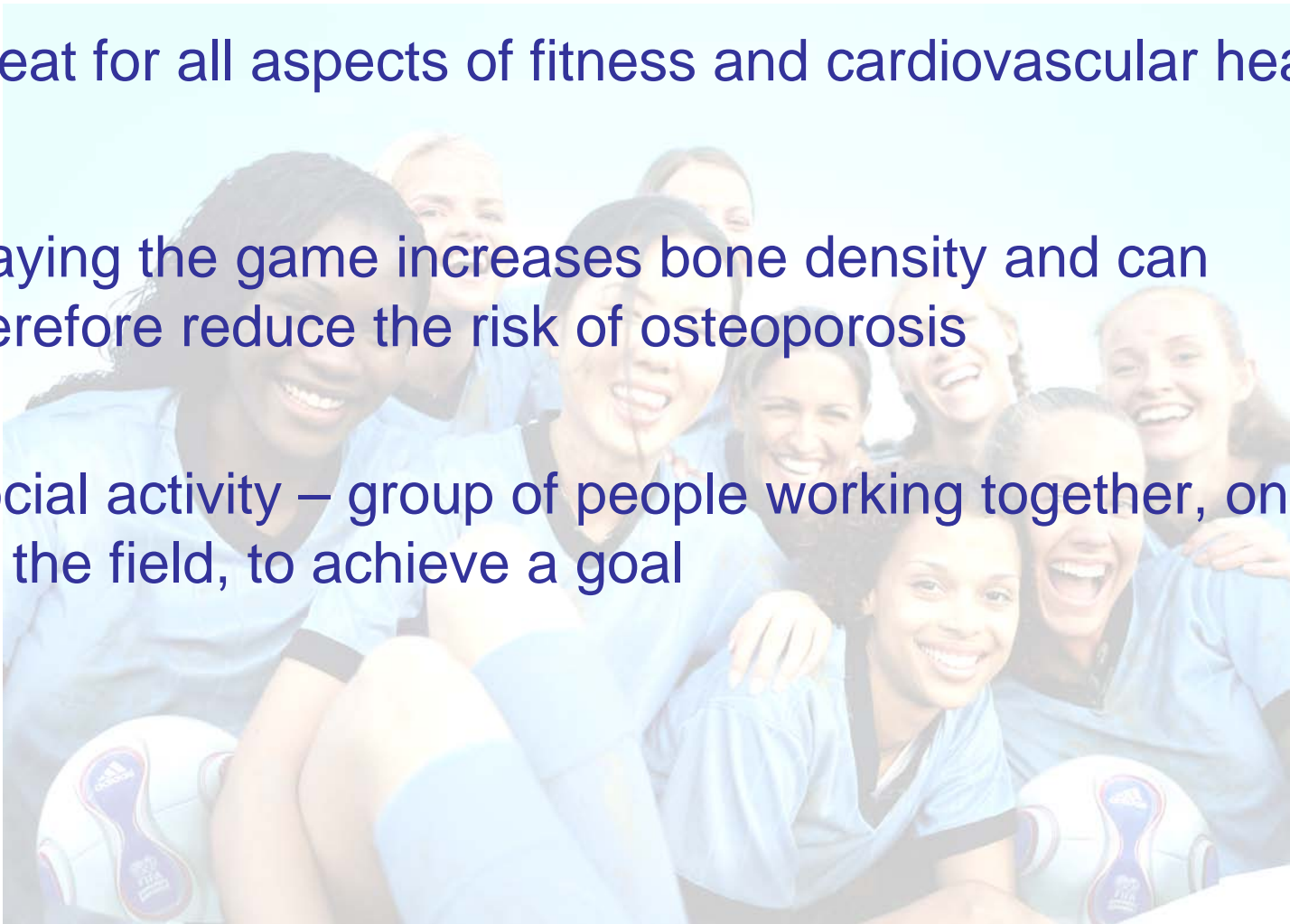
- Mental and physical abuse is unpleasant to accept but exists and needs addressing
- No data to support but anecdotal evidence is enough
- F-MARC is represented on the “Triad” group with IOC, but we need your help

But so many benefits.....

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- Great for all aspects of fitness and cardiovascular health
- Playing the game increases bone density and can therefore reduce the risk of osteoporosis
- Social activity – group of people working together, on and off the field, to achieve a goal





Thank you & good luck

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