



Coaching Females

Considerations for Planning

Lindsay Dunn, ASA England Programmes

Coaching Females

- Previously highlighted the issue within British Swimming of getting females to perform when it matters
- Discuss current trends: making sense of the data (insight gathered from the British Summer Championships 2016)
- Understanding the needs of female athletes;
 - biological, psychological and social perspectives
- In relation to the above insight, what are the key considerations for improving coaching practice?

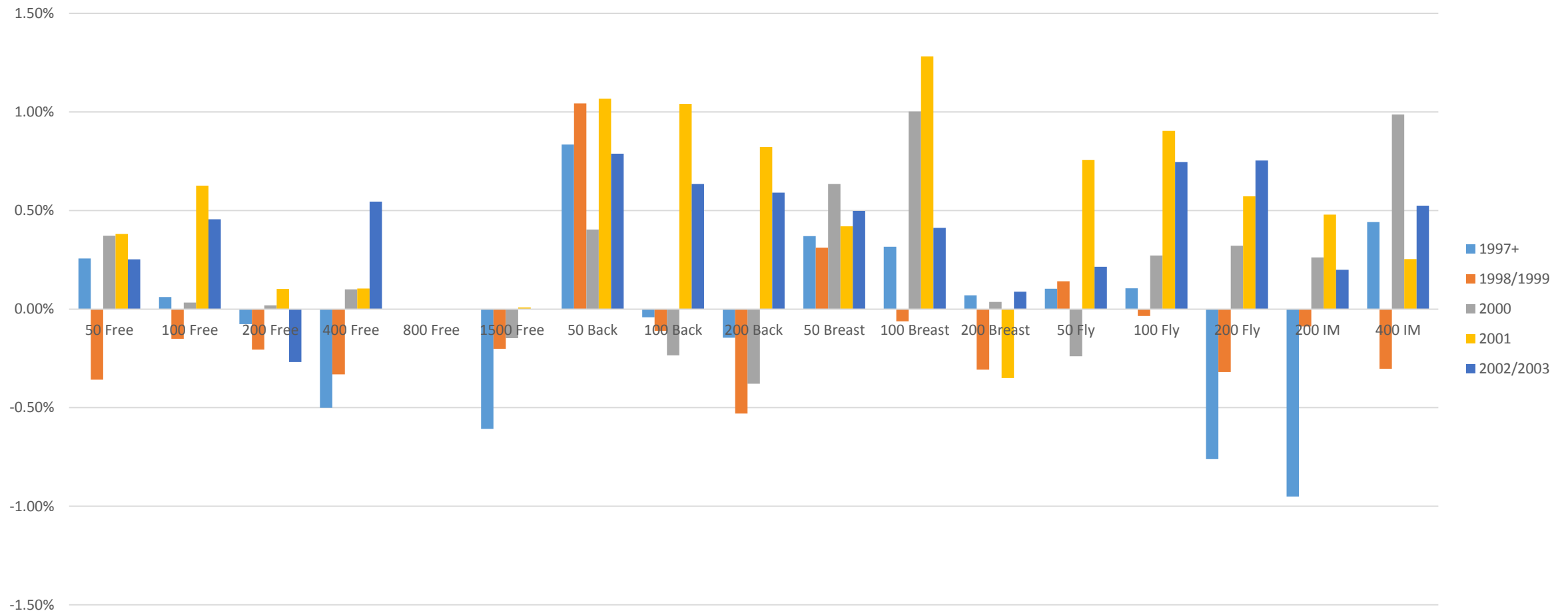
Data by Age/ Event



Last Men																	
	50 Free	100 Free	200 Free	400 Free	800 Free	1500 Free	50 Back	100 Back	200 Back	50 Breast	100 Breast	200 Breast	50 Fly	100 Fly	200 Fly	200 IM	400 IM
1997+	0.26%	0.06%	-0.08%	-0.50%		-0.61%	0.83%	-0.04%	-0.15%	0.37%	0.32%	0.07%	0.10%	0.11%	-0.76%	-0.95%	0.44%
1998/1999	-0.36%	-0.15%	-0.21%	-0.33%		-0.20%	1.04%	-0.11%	-0.53%	0.31%	-0.06%	-0.31%	0.14%	-0.03%	-0.32%	-0.09%	-0.30%
2000	0.37%	0.03%	0.02%	0.10%		-0.15%	0.40%	-0.23%	-0.38%	0.64%	1.00%	0.04%	-0.24%	0.27%	0.32%	0.26%	0.99%
2001	0.38%	0.63%	0.10%	0.10%		0.01%	1.07%	1.04%	0.82%	0.42%	1.28%	-0.35%	0.76%	0.90%	0.57%	0.48%	0.25%
2002/2003	0.25%	0.46%	-0.27%	0.55%		0.00%	0.79%	0.63%	0.59%	0.50%	0.41%	0.09%	0.22%	0.75%	0.75%	0.20%	0.52%
Last Women																	
	50 Free	100 Free	200 Free	400 Free	800 Free	1500 Free	50 Back	100 Back	200 Back	50 Breast	100 Breast	200 Breast	50 Fly	100 Fly	200 Fly	200 IM	400 IM
1997+	-0.77%	-0.36%	-0.19%	-0.33%	-0.44%		-0.04%	-0.86%	-0.91%	0.07%	-0.61%	-1.29%	0.02%	-0.38%	0.31%	0.13%	-0.19%
1998/1999	-0.66%	-0.30%	-0.46%	-0.34%	0.06%		-0.05%	-0.18%	-0.28%	0.18%	-0.72%	-0.75%	-0.26%	-0.26%	-0.54%	-0.25%	-0.23%
2000	-0.79%	-0.55%	-0.75%	-0.37%	-0.65%		0.11%	-0.68%	-0.08%	-0.08%	-1.14%	-0.52%	-0.14%	-0.58%	-0.61%	-0.81%	-0.51%
2001	-0.35%	-0.01%	0.07%	-0.16%	-0.24%		0.12%	0.19%	-0.45%	-0.18%	-0.45%	-0.80%	0.22%	-0.01%	-0.43%	-0.68%	-0.05%
2002/2003	-0.05%	-0.50%	-0.46%	-0.60%	-0.14%		0.31%	0.00%	-0.17%	0.25%	-0.62%	-0.45%	-0.32%	-0.28%	-0.11%	-0.73%	-0.19%

Average Male Improvement

British Summer Championships 2016 - Males Final Round Average Improvement Compared to Entry Time



Males: The Stats ...

% Improvements:

1997 + Born (19+ years)

50 FS, 100 FS, 50 BK, 50 BR, 100 BR, 200 BR, 50 FLY, 100 FLY, 400 IM

1998/ 1999 Born (18/ 17 years)

50 BK, 50 BR, 50 FLY

2000 Born (16 years)

50 FS, 100 FS, 200 FS, 400 FS, 50 BK, 50 BR, 100 BR, 200 BR, 100 FLY, 200 FLY, 200 IM, 400 IM

2001 Born (15 years)

50 FS, 100 FS, 200 FS, 400 FS, 1500 FS, 50 BK, 100 BK, 50 BR, 100 BR, 50 FLY, 100 FLY, 200 FLY, 200 IM, 400 IM

2002/ 2003 Born (14/ 13 years)

50 FS, 100 FS, 400 FS, 50 BK, 100 BK, 50 BR, 100 BR, 200 BR, 50 FLY, 100 FLY, 200 FLY, 200 IM, 400 IM

Analysed 5 age groups across 16 events

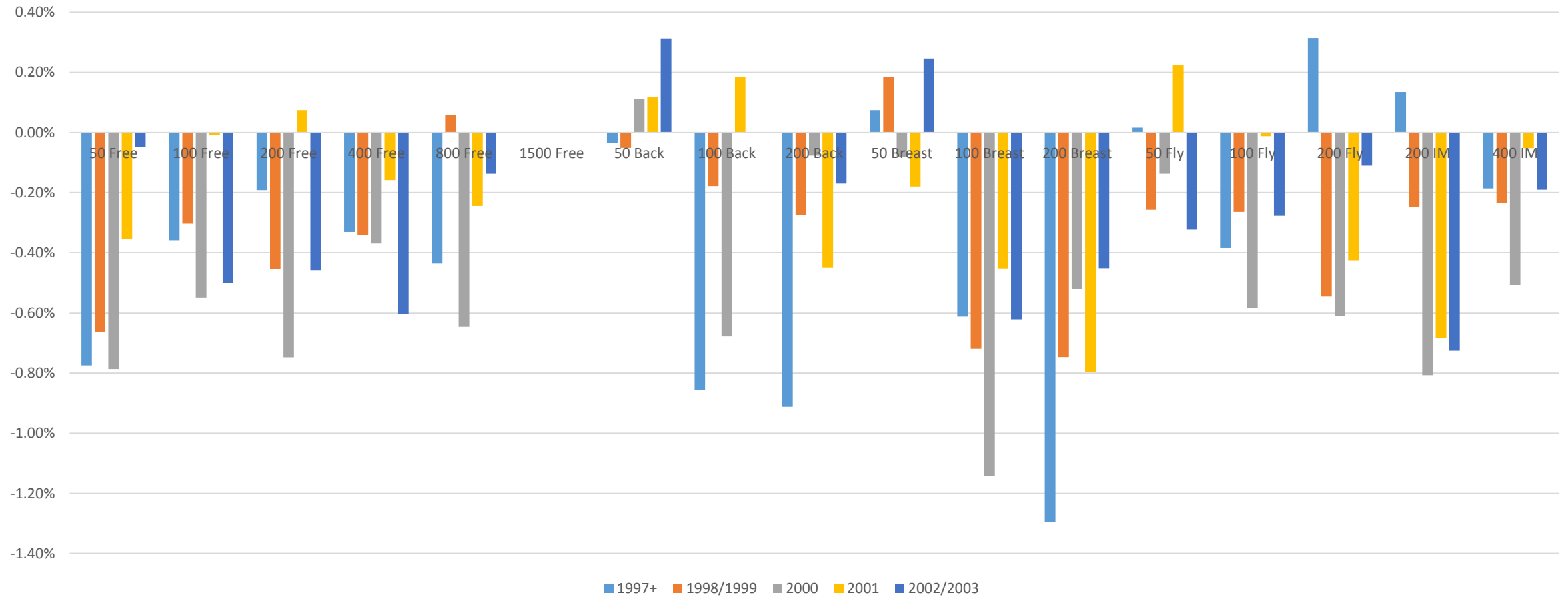
80 data sets emerged

Overall Males improved in only 51 of the 80 data sets = **63.75 %**

Olympic Events Males improved in 37 of the 65 data sets = **57.56 %**

Average Female Improvement

British Summer Championships 2016 - Females Final Round Average Improvement Compared to Entry Time



Females: The Stats ...

% Improvements:

1997+ Born (19 years +)

50 BR, 50 FLY, 200 FLY, 200 IM

1998/ 1999 Born (18/ 17 years)

800 FS, 50 BR

2000 Born (16 years)

50 BK

2001 Born (15 years)

200 FS, 50 BK, 100 BK, 50 FLY

2002/ 2003 Born (14/ 13 years)

50 BK, 50 BR

Analysed 5 age groups across 16 events

80 data sets emerged

Overall Females improved in only 13 of the 80 data sets = **16.25 %**

Olympic Events Females improved in only 5 of the 65 data sets = **7.69 %**

In Summary ...

- The 2016 data shows a significantly greater regression in performance for females than males
- Results compared to the 'final' round performance as this is the swim that matters
- 2000 Born females only improved in one non Olympic event (50 BK)!
- Across all events, females improved 47.5 % less than males
- In Olympic events, females improved 49.87 % less than males



Biological Considerations

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The Youth Physical Development Model

- An alternative approach to 'Long Term Athlete Development' (Lloyd and Oliver, 2012)
- The model encompasses athletic development from early childhood (2 years of age) up to adulthood (21 years of age)
- Offers a comprehensive approach to the development of males and females respectively
- Provides an overview of total physical development, while identifying when and why the training of each fitness component should be emphasized

YOUTH PHYSICAL DEVELOPMENT (YPD) MODEL FOR MALES

CHRONOLOGICAL AGE (YEARS)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21+		
AGE PERIODS	EARLY CHILDHOOD			MIDDLE CHILDHOOD							ADOLESCENCE							ADULTHOOD				
GROWTH RATE	RAPID GROWTH			↔		STEADY GROWTH				↔		ADOLESCENT SPURT				↔		DECLINE IN GROWTH RATE				
MATURATIONAL STATUS	YEARS PRE-PHV										←		PHV		→		YEARS POST-PHV					
TRAINING ADAPTATION	PREDOMINANTLY NEURAL (AGE-RELATED)										↔		COMBINATION OF NEURAL AND HORMONAL (MATURITY-RELATED)									
PHYSICAL QUALITIES	FMS		FMS				FMS			FMS												
	SSS		SSS				SSS			SSS												
	Mobility		Mobility							Mobility												
	Agility		Agility							Agility			Agility									
	Speed		Speed							Speed			Speed									
	Power		Power							Power			Power									
	Strength		Strength							Strength			Strength									
	Hypertrophy										Hypertrophy		Hypertrophy					Hypertrophy				
	Endurance & MC		Endurance & MC							Endurance & MC			Endurance & MC									
TRAINING STRUCTURE	UNSTRUCTURED			LOW STRUCTURE					MODERATE STRUCTURE				HIGH STRUCTURE				VERY HIGH STRUCTURE					

YOUTH PHYSICAL DEVELOPMENT (YPD) MODEL FOR FEMALES																								
CHRONOLOGICAL AGE (YEARS)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21+				
AGE PERIODS	EARLY CHILDHOOD			MIDDLE CHILDHOOD					ADOLESCENCE										ADULTHOOD					
GROWTH RATE	RAPID GROWTH			↔		STEADY GROWTH				↔		ADOLESCENT SPURT					↔		DECLINE IN GROWTH RATE					
MATURATIONAL STATUS	YEARS PRE-PHV								←			PHV		→			YEARS POST-PHV							
TRAINING ADAPTATION	PREDOMINANTLY NEURAL (AGE-RELATED)										↔		COMBINATION OF NEURAL AND HORMONAL (MATURITY-RELATED)											
PHYSICAL QUALITIES	FMS			FMS			FMS		FMS															
	SSS			SSS			SSS		SSS															
	Mobility			Mobility					Mobility															
	Agility			Agility					Agility						Agility									
	Speed			Speed					Speed						Speed									
	Power			Power					Power						Power									
	Strength			Strength					Strength						Strength									
	Hypertrophy								Hypertrophy		Hypertrophy								Hypertrophy					
	Endurance & MC			Endurance & MC						Endurance & MC							Endurance & MC							
TRAINING STRUCTURE	UNSTRUCTURED			LOW STRUCTURE					MODERATE STRUCTURE				HIGH STRUCTURE				VERY HIGH STRUCTURE							

Biological Considerations

The Prepubertal years:

- Boys and girls will follow similar rates of development in growth and maturation
- Boys and girls can therefore follow similar training programmes during this period
- The YPDM (Lloyd and Oliver, 2012) advocates a focus of training that centres on FMS, strength, speed and agility development
- Children experience rapid gains in bone mass due to modelling/ remodelling.
- Exposure to appropriately designed weight – bearing exercise of moderate to high load intensity is an osteogenic stimulus
- Such training can result in large increases in bone mass and density, and research suggest the adaptive response is most sensitive during the prepubertal years

Biological Considerations

The Adolescent Spurt:

- Clear maturational differences are apparent for nearly all components of fitness at the onset of the adolescent growth spurt
- Males make greater improvements in most physical qualities except flexibility
- The onset of adolescent growth spurt occurs around 2 years earlier in females (about 10 years of age) than in boys (approximately 12 years of age).
- In the majority of cases girls experience PHV at an earlier age than boys (12 years versus 14 years). However, the magnitude of the growth spurt is greater in boys.

Biological Considerations

During the adolescent spurt, female athletes will undergo sex – specific physiological processes that may affect performance:

- Stature and body mass changes
- Menstrual cycle commences
- Increased fat mass
- Differential rates of neuromuscular strength development
- Increased joint laxity
- Increased knee valgus angle
- Increased reliance on quadriceps dominant landing strategies

***All associated with the increased risk of noncontact anterior cruciate ligament injury**



Coaching Considerations

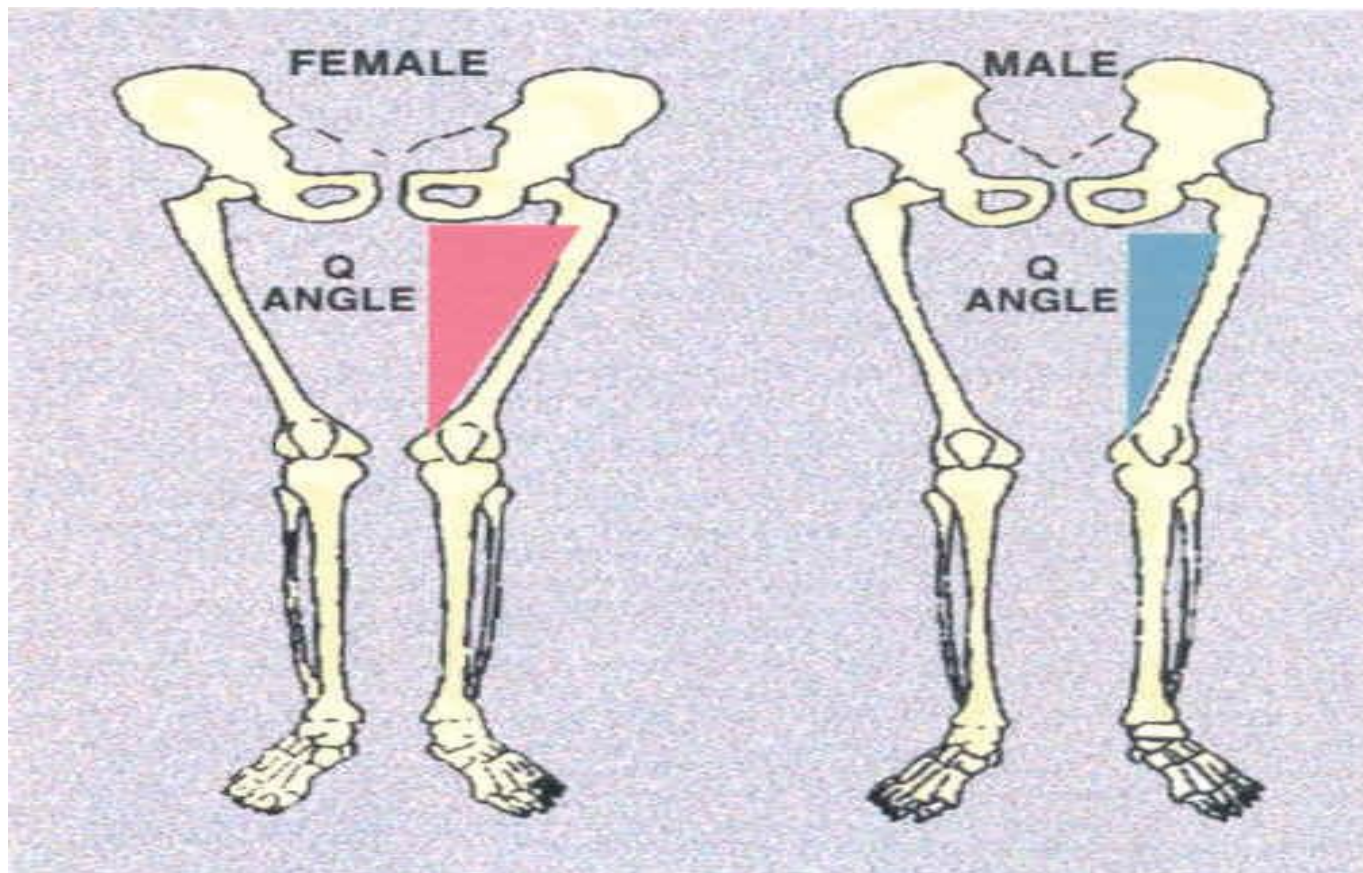
- Measure stature and body mass every **three to six** months to determine PHV (**appropriateness to undertake diff work?**)
- Complete daily health and well – being records which can subtly request information regarding the athlete's menstrual cycle in order for dietary/ training interventions to be considered
 - females utilise 4% more calories during the luteal phase (second half of the menstrual cycle) due to increased progesterone levels
 - adequate iron is required to make up the deficit of mineral loss during the athlete's period
 - training at a given intensity may be perceived as greater effort during their period
 - higher intensity training may be uncomfortable during their period
- Land based, weight bearing exercise is more efficient and effective at breaking down fat mass than swimming alone

Health and Wellness Monitoring Sheet		7 th September	8 th September	9 th September	10 September	11 th September	12 th September
Today I am? Training/ Travelling / Racing / Resting							
Resting heart rate (bpm)							
How energetic are you feeling?							
How well did you sleep?							
Time to bed							
Time awake							
How stressed are you feeling?							
How sore do you feel?							
Where do you feel sore?							
Do you feel ill? (YES/NO)							
If yes, what symptoms?							
Notes:		Take your heart rate for a full minute whilst resting, immediately after waking.					
		All scale 1 - 7: 1 = very bad, awful, super stressed / 7 = very good, great, super chilled					

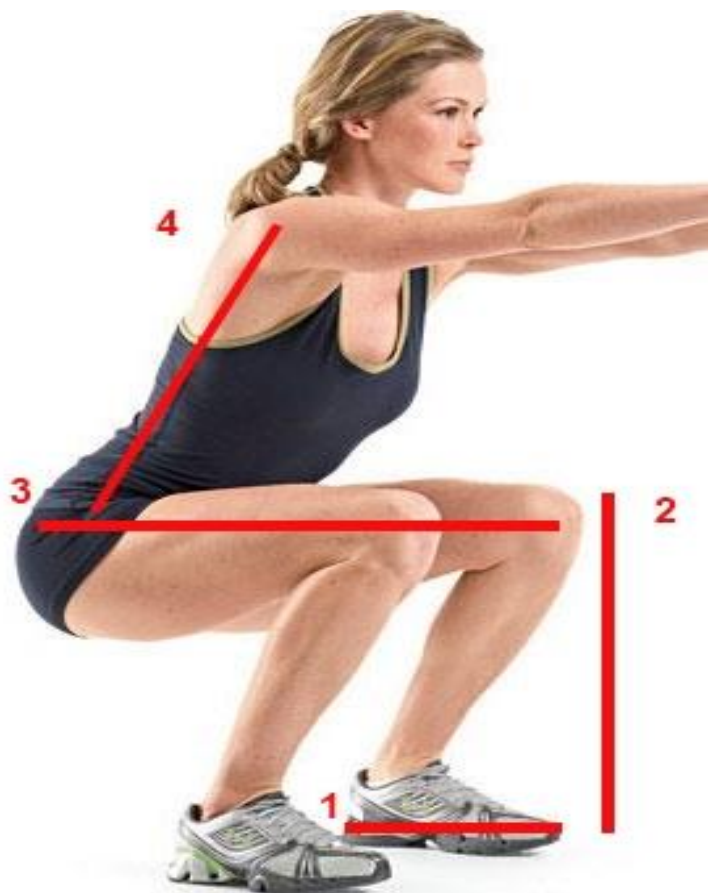
Coaching Considerations

- Strength training for females is critical to during maturation. A relative lack of strength to cope with increases in height and weight serves to drive the differences in motion patterns that we see develop between males and females during maturation.
- Females have greater anterior knee joint laxity. Joint hypermobility is a condition in which joints easily move beyond the normal range of motion expected at a particular joint. Males tend to 'grow out' of the hypermobile phase and females do not. Stability work is critical for females with increased joint laxity.

Coaching Considerations



Coaching Considerations





Psychological Considerations

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Psychological Considerations

- Females are more process oriented than males and even if they don't win, they feel a sense of accomplishment when they reach a goal as this improves their feelings of **competence**
- Females like to take an active part in the decision making process which fosters a greater sense of **autonomy**
- Females are motivated by pleasing others, particularly those who play a significant role in their lives. Females need acceptance to perform well. Acceptance in turn creates a greater sense of **relatedness** to their surrounding 'team'

Coaching Considerations

- **Advocate a 'process' focus:**
 - Complete a race process sheet to clearly outline the process goals for the event ahead. Focus on the 'controllable'.
- **Encourage greater self awareness/ autonomy in your female swimmers:**
 - During pre race conversations, encourage the swimmer to talk through the agreed race strategy.
 - Post race, give the swimmer time to emotionally self – regulate, self – reflect and feed back their own feelings about how they raced, before providing coach feedback
- **Ensure feedback focuses upon the extent to which the goals are achieved/ not achieved:**
 - If a key process goal for the race is to execute 6 dolphin kicks per wall, try to avoid discussing other elements of the race too extensively, for example split times

Competition	Rate Objectives from 1 – 5 (5 = Great, perfectly achieved)									
Event										
Main Objective						1	2	3	4	5
Secondary Objective						1	2	3	4	5
Split Emphasis [Not times]	<u>1st 25/50/100</u>	<u>2nd 25/50/100</u>	<u>3rd 25/50/100</u>	<u>4th 25/50/100</u>						
Issues to work on						1	2	3	4	5
Coach Feedback						1	2	3	4	5
Issues to work on										



Social Considerations

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Social Considerations

- Females thrive in a cooperative environment and like to make decisions collaboratively
- Females value attachment, intimacy and interdependence. They fear rejection, isolation and abandonment.
- Competition and personal relationships are intertwined. Their teammates are their friends
- Team chemistry is critical. Females value friendships and focus on team unity.

Social Considerations

- Females will likely begin to question the investment versus return in relation to training commitments/ perceived sacrifices to their social lives
- As females often mature earlier than males, they will also likely plateau earlier so improvements during the 'youth' period require a potentially greater level of commitment
- Conversely, females are typically more willing to consistently undertake the mundane, repetitive training that is required due to their task/ process focused orientation

Coaching Considerations

- Team building can prove to be very critical for females, it allows them time to bond through social interaction and communication
- Females use conversations as a time to share and develop relationships with their teammates. It helps them unite and build trust between one another.
- Sport helps to teach girls to be assertive and task oriented while functioning as part of a team. Female athletes need to have clear roles so that they feel like a valued contributor.
- Feedback must always be congruent to the initial goals set!

Task: Case Study

In your recent staff meeting the team have discussed a young swimmer called Alice as one of your 'concerns':

- Alice is a 13 year old girl who has recently started her period in early July.
- Alice made some significant performance improvements between January and June but then under performed at the British Summer Championships 2017.
- Alice gained approximately 3kg of fat mass over the summer break (three weeks) and is feeling very self – conscious about her body image and looks heavy in the water. Her self – esteem is very low.
- At a recent Arena league competition, Alice did a faulty relay takeover and the team were disqualified, losing 3 points. The team lost the gala due to this and Alice feels that she has let the team down.

TASK: Case Study

Reflect on the information discussed so far today around the **biological**, **psychological** and **social** considerations for coaching females

In your groups, formulate a 'support plan' for Alice over the forthcoming season.

In relation to your planning, please consider the following to the following areas:

The Individual's Specific Needs

Coaching Behaviours

The Coach – Athlete Relationship

Planning

Management of the Environment (Physical and Learning)