



# Female athlete development

Dr Kate Strachan, Jess Parry-Williams and Bex Milnes



# Who are we?

**Dr Kate Strachan**

**EIS Lead Sports Physician Midlands**

**Jess Parry - Williams**

**Welsh Triathlon Lead Physio**

**Bex Milnes**

**LTPC Lead Para triathlon coach**



# Areas we will cover

- Getting the basics right
- The development rollercoaster
- Menstrual health
- How to prepare for key life transitions
- **BUT..... WHICH OF THESE AREAS ARE MOST IMPORTANT TO YOU?**

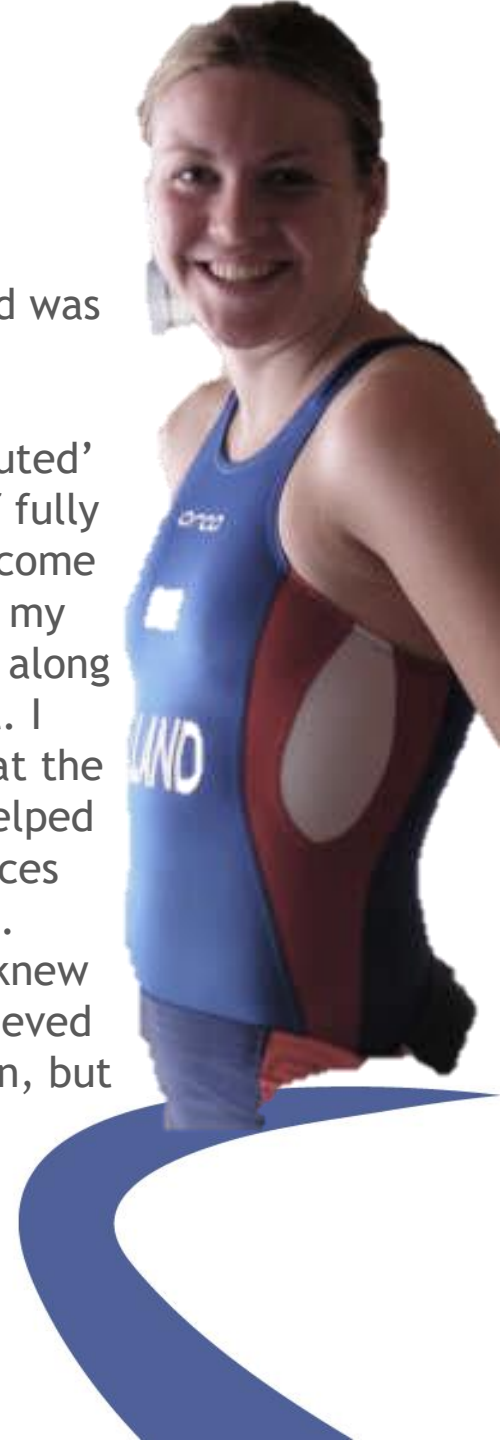


# Getting the basics right

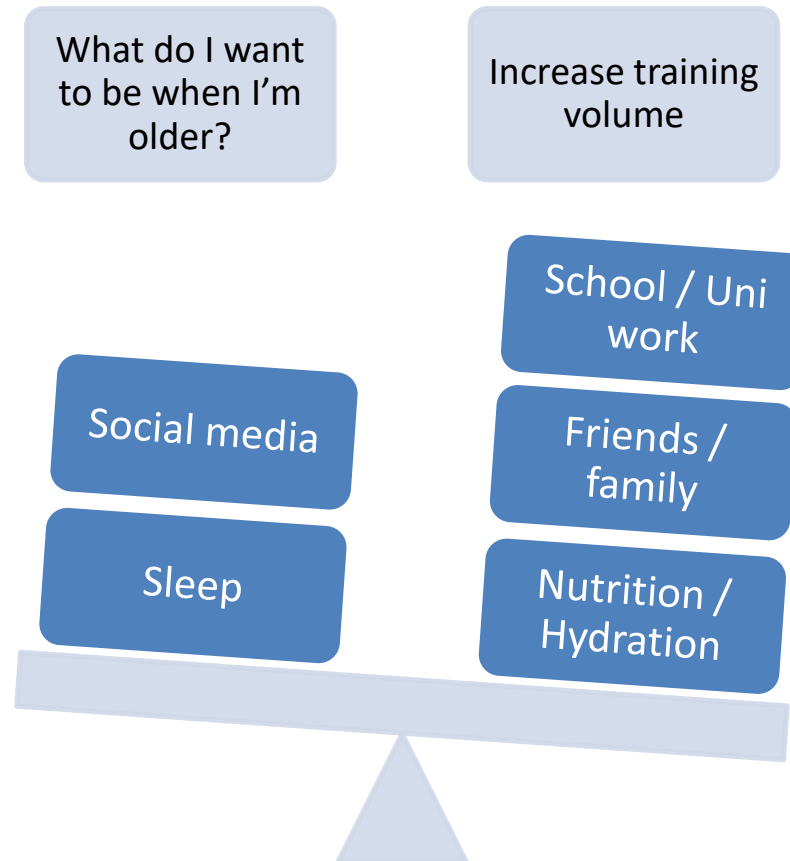


# Life balance

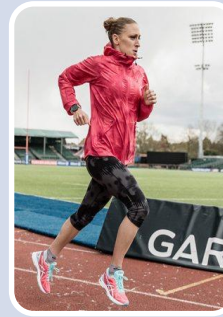
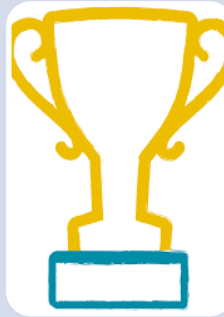
“Honestly, my progression through the sport has been pretty slow and was definitely not something I planned as a teenager!” Holland explains. “Everyone wants to be a teenage sensation and I know the national programme had high hopes for me from day one - I was actually ‘scouted’ into triathlon - but I don’t think I was actually ready to invest myself fully in triathlon as a student. I enjoyed it and a lot of my closest friends come from my involvement in triathlon at university, but I was also finding my own way in the world as a young adult and trying to balance training along with my studies and trying to make the most of my time as a student. I had a ball at university and even though I was a pretty poor athlete at the time, I don’t have any regrets there because I really believe it has helped my long term career development. I had some ‘normal’ life experiences before I fully immersed myself in the less ‘normal’ world of triathlon. Sure, I wasn’t happy with my level of performance in triathlon (and knew full well I could do better) but I wasn’t in a big hurry and always believed that I could ‘make it’. I may have had my doubts every now and again, but deep down I believed I had what it took.”



# Consistency is Key.... But it requires balancing lots of things



# How can you help get the basics right?



Support good sleep and good nutrition....  
But be careful not to do too much

Have an awareness of training load and be cautious of big increase in volume and or intensity  
10% Rule

Reward and show value to the development of self NOT the numbers on a results sheet

Reward a sound technical model across all 3 disciplines over the need for speed . Think about the long game!

Allow them to drive the process as much as possible. It shouldn't feel like a chore

# Menstrual health

## The 'P' Word

Why should you know about  
your daughters menstrual  
health?





# Stuff you should know

- Average age for starting periods = 12 (can be later in athletes)
- Should have started by 16
- Average length of cycle 28 days (normal range 21 to 40 days)
- Missing periods - going longer than 40 days can be a cause for concern
- Heavy or painful periods can affect performance



# Missing periods

- If they have previously been okay, this can be a symptom of relative energy deficiency in sport (RED-S)
- This can predispose to injury, illness and has impact on bone health both immediately and longer term. It does have a negative impact on performance.

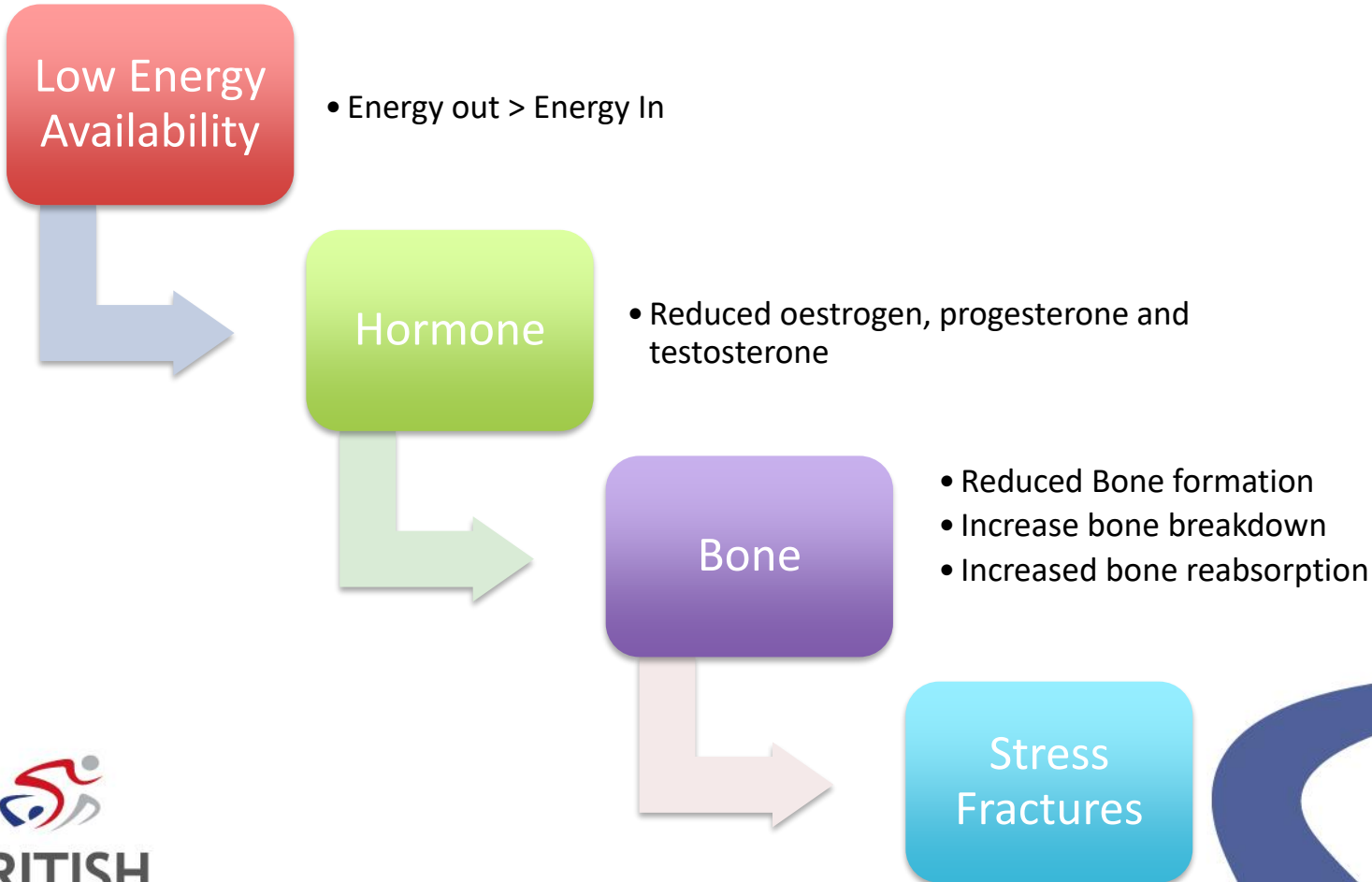


# Problem periods

- If heavy can cause iron deficiency which in turn has an impact on performance
- If painful can cause problems on race day, may also cause time loss in training and therefore may have impact on performance



# RED-S & Bone Health



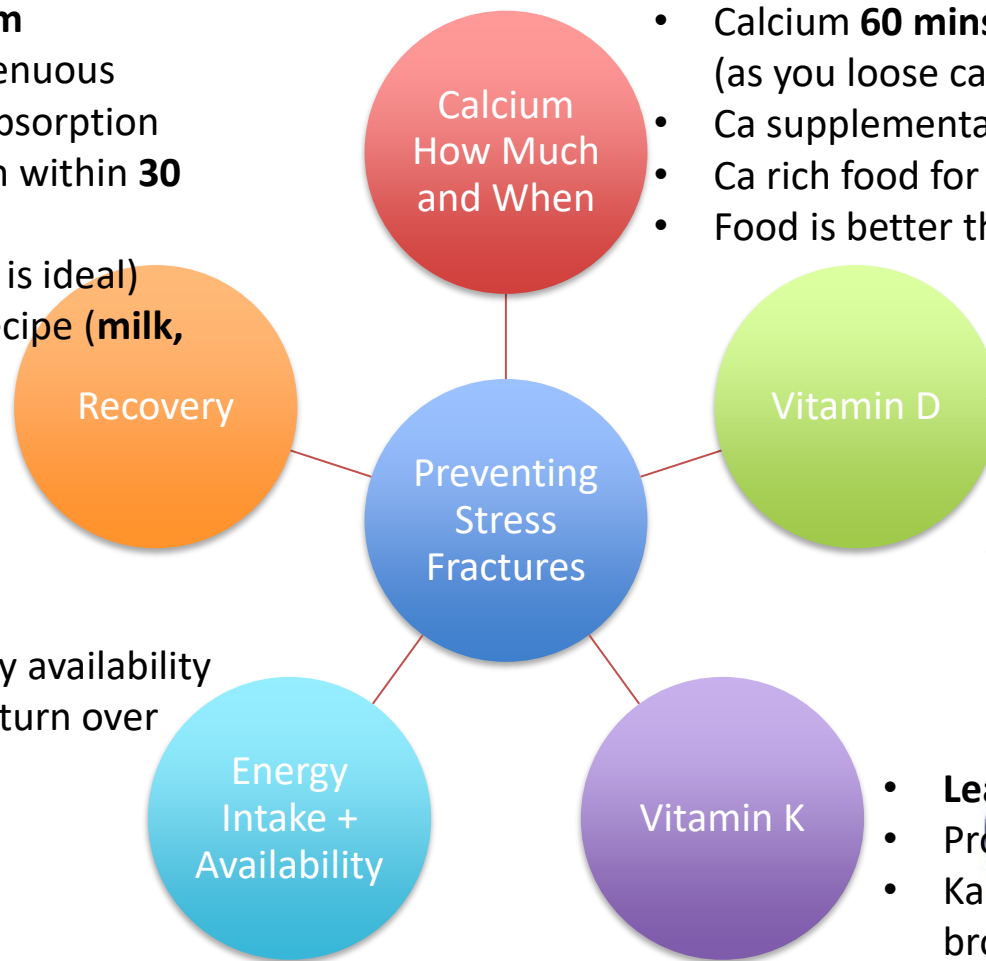
# Developing strong bones

- Reduced bone thickness is reversible
- Impact exercise shown to increase bone thickness if there is enough nutrition to support it
- 40 multi directional jumps x 5/week = thicker bone
- Should have  $\frac{1}{2}$  pint of milk for calcium to build strong bones  $\frac{1}{2}$  an hour before you do jumping drills



# Nutrition and bone development

- **Carbs/protein/calcium** immediately after strenuous running = ↓ bone reabsorption and ↑ bone formation within **30 mins**
- Include Calcium (**milk** is ideal)
- Recovery smoothie recipe (**milk, yogurt, kale, berries**)



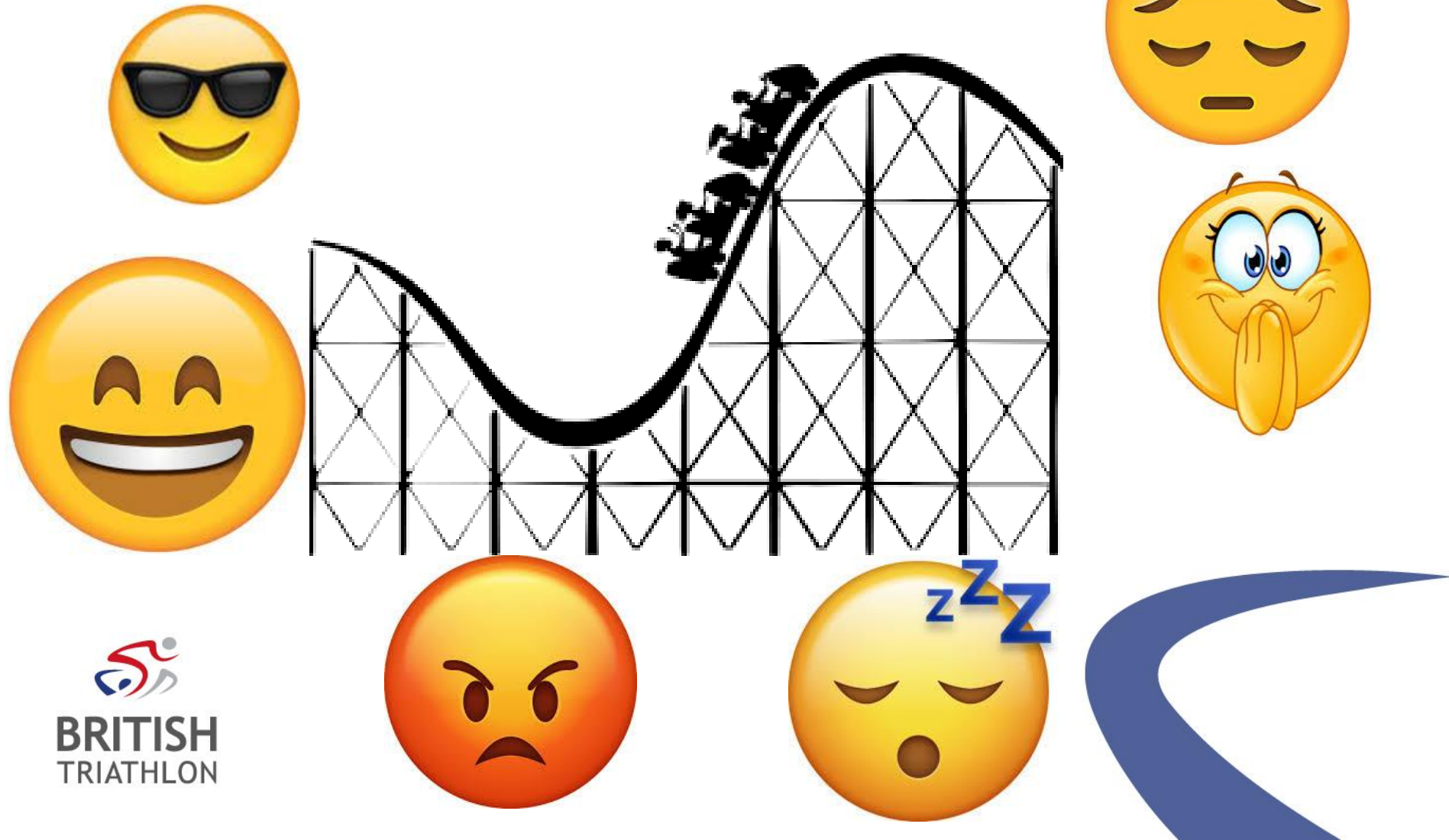
- **High calcium (Ca)** intake spread throughout the day (1500mg)
- Calcium **60 mins before** sweaty training (as you lose calcium in your sweat)
- Ca supplementation **pre jumping**
- Ca rich food for recovery
- Food is better than supplements

- Adequate energy availability maintains bone turnover

- Calcium absorption reliant on sufficient **Vitamin D**
- Recommended that in the UK people supplement with Vit D 10 mg/day

- **Leafy greens**
- Promote bone formation
- Kale, raw spinach, broccoli

# The development rollercoaster



## Kate Waugh 15-17

Best known performances															
Event	PB	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
800	2:12.7				2:17.9	2:18.77	2:12.7	2:20.7	2:26.7						
1200	4:00.0									4:00.0	4:21.6				
1500	4:31.84					4:43.97	4:31.84	4:40.9	4:49.12	5:05.0	5:44.60				
3000	10:13.46					10:13.46									
HJ	1.35							1.35							
3M	16:43				19:22		16:43	18:16							
5K	17:50				17:50										
parkrun	17:27	17:53	17:30	17:27		17:43	17:47	20:34	19:54						
10K	35:02	35:02													

Event	PB	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
800	2:15.60								2:17.2	2:15.60	2:24.74	2:30.5			
1200	3:54.6											3:54.6	4:14.2		
1500	4:35.0						4:35.0	4:43.0	4:35.55	4:35.02	4:50.2				
Mile	5:22.26										5:22.26				
3000	10:03.5						10:03.5				10:51.94				
3M	18:49										18:49				
parkrun	18:43						19:18	18:46	18:43						
10K	36:27			36:27											

## Sian Rainsley 14-17



## Jodie Stimpson 22-30

Event	PB	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
5K	17:54												17:54		
parkrun	17:34	17:34								17:38					
5M	27:58		27:59						27:58						
10K	35:16				35:16			35:34				35:28			
10M	57:15						58:47		57:15						
HM	79:58						79:58								

Event	PB	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
100	13.5										13.5				
800	2:12.5								2:18.4		2:12.5	2:22.5	2:25.4		
1500	4:33.0								4:41.7	4:40.70	4:33.0	4:55.3	4:54.5		
3000	10:14.2							10:31.70		10:19.83	10:14.2				
JT600	11.01										11.01				
3M	18:02										18:02				

## Sophie Coldwell 15-18

## India Lee 14-22

2011	2010	2009	2008	2007	2006	Event	2005	2004	2003	2002	2001
	32.0					<b>200</b>					
67.5	63.3	62.7	62.5	64.46/62.8	62.26/61.9	<b>400</b>					
						<b>600</b>					
	2:19.7	2:16.89	2:16.57	2:14.59	2:14.38	<b>800</b>	2:16.85	2:24.0		2:22.1	2:23.09
						<b>1000</b>					
4:49.38	4:35.0	4:35.80	4:40.11	4:42.15	4:47.84	<b>1500</b>	4:44.3	4:48.2	4:47.8	4:47.47	5:03.5
4:55.06i						<b>Mile</b>					
9:45.67i	9:59.27	10:03.35	10:23.4			<b>3000</b>	10:18.08	10:21.64	10:18.42	10:47.61	
16:56.89						<b>5000</b>					

Event	PB	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
<b>1500</b>	4:36.7										4:48.31	4:36.7	4:43.4		
<b>3000</b>	9:52.57								10:01.20		9:52.57				
<b>3M</b>	17:11									17:11					
<b>5K</b>	16:47							16:47							
<b>10K</b>	33:34							33:34							

## Georgia Taylor Brown 14-18



## Vicky Holland 18-24

2010	2009	2008	2007	2006	Event	2005	2004	2003	2002	2001
				2:12.4	800	2:16.8	2:10.77	2:19.1	2:27.3	2:27.3
					1000	2:56.28				
					1200		3:33.2			
			4:32.00	4:24.61	1500	4:30.42	4:23.55	4:34.24	4:39.20	4:55.14
					Mile	4:52.31	4:51.31			
9:50.82		10:19.85	9:34.18	9:22.98i	3000	9:25.43	9:22.84			
17:25	16:59			16:43	5K	17:11	16:48			
					5M	27:35				
	35:48		34:46		10K					

2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	Event	2004	2002
										800	2:14.1	2:15.3
										1500	4:27.81	4:26.25
										Mile	4:52.91	
		9:36.5								3000		9:57.5
						17:35				5K		
	17:08									parkrun		
		34:08								10K		

## Non Stanford 14-16

# How can you help?

- Its common to go backwards before coming forwards.
- Because of this, how you as parents reward performance is really important..... Focus on process not outcome
- Be aware of periods of growth



# Key life transitions



**Fail to prepare,  
prepare to fail!**

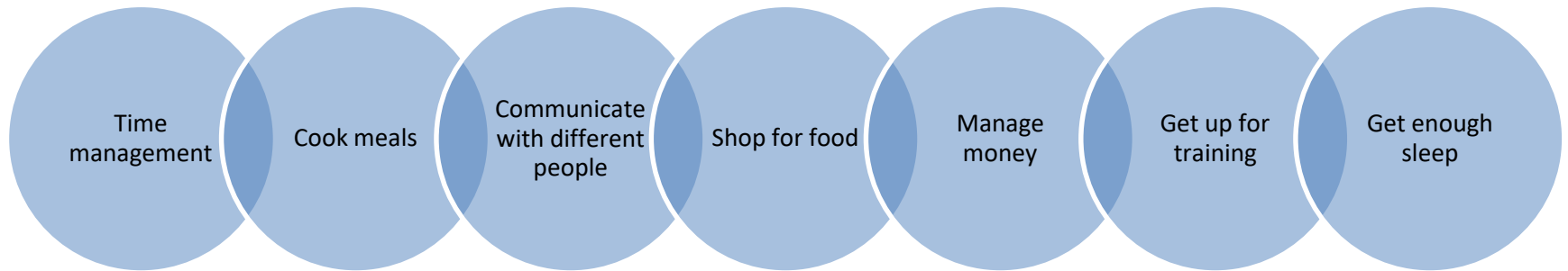


**Elite triathlon in the UK is primarily a University based program.**

**Academic and sporting balance is required**



# Skills needed...



**What are you actively  
doing now to help  
prepare your daughter?**





# Any questions?

