

Personal Fitness Assessment

Assessment Performed by Dan Baugh:
Assistant National Strength & Conditioning Coach
Welsh Rugby Union
dbaugh@wru.co.uk

Additional Assessment Performed at
University of Bath 2005–2009

Contents

1. Personal Information
2. Physical Activity Schedule
3. Nutrition
4. Cardiovascular Fitness
5. Speed
6. Strength & Muscular Endurance
7. Flexibility

Personal Information

- Height: 1.75m (5 feet 8 inches)
- Body Weight: 75kg (11 stone 8 pounds)
- Age: 25y
- D/O/B: 1/4/1987
- Nationality: British
- Place of Birth: Northampton, England
- Smoker: Non-Smoker
- Pre-existing Medical Conditions: Non
- Lifestyle Goal
 - “To improve lean body mass, strength, and power to assist in my performance in rugby union at an amateur level”.

Physical Activity Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Resistance Training	Full Body 30-45 mins 7/10 Intensity	Full Body 30-45 mins 7/10 Intensity		Full Body 30-45 mins 7/10 Intensity	Full Body 30-45 mins 7/10 Intensity		
Aerobic Activity	Touch Rugby 90 mins 8/10 Intensity	Touch rugby 40 mins 8/10 Intensity		Squash 60 mins 8/10 Intensity			

- From your Physical activity Schedule you usually participate in ~ 6 hours of physical activity per week on average.
- This is above the American College of Sports Medicines (ACSM) Guidelines of at least 150 minutes of moderate exercise split into five times 30 minute bouts.
- Recommendations: Based on your training goal, separate speed and movement sessions need to be incorporated into your weekly activity schedule to improve speed performance.

Nutrition - Eating habits

- Good nutrition involving eating clean, whole foods with the the correct micronutrient contents will optimise both health and performance.

Food Diary:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Fruit, Probiotic Yoghurt, Oats	Fruit, Probiotic Yoghurt, Oats	Fruit, Probiotic Yoghurt, Oats	Fruit, Probiotic Yoghurt, Oats	Fruit, Probiotic Yoghurt, Oats	Fruit, Probiotic Yoghurt, Oats	Fruit, Probiotic Yoghurt, Oats
Snack	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts
Lunch	Tuna Sandwich	Tuna Sandwich	Tuna Sandwich	Tuna Sandwich	Lunch Out	Gilled Bacon Sandwich	Sunday Lunch
Snacks	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts	Fruit, Nuts
Dinner	Lamb Burgers	Lasagne	Chicken, Pesto Pasta	Spaghetti Bolognese	Takeaway	Turkey Stir Fry	Grilled Chicken Sandwich
Snack	n/a	n/a	n/a	n/a	n/a	n/a	n/a

- From your food Diary, your diet seems to be of a good standard.
- To help achieve your goal of improving lean body mass, you need to increase your protein intake during the day, as protein is the building block for muscle growth.
- You need to have some form of protein for breakfast. Examples of this may be poached eggs on toast, or cottage cheese on toast.
- To help supplement your protein intake a shake consisting of whey isolate, blueberries and coconut milk can be used. These can be taken before bed or post-session.

Nutrition - Body Composition

Assessment: 7 site Skinfold Calipers

Body Weight: 75kg

Abdomen	Supra-spinal	Subscap	Tricep	Bicep	Thigh	Calf	Sum (mm)	Density	Fat %	FFM
5	4.6	6	8	3	11	10	47.6	1.0798	8.44	68.67

- FFM = Free Fat Mass. This is your lean muscle mass and the mass of your body that does not consist of fat. Your FFM is 68.67kg.
- Fat% = This is the percentage of your body weight that is fat. Your fat percentage is 8.44%.
- 8.44% is in the excellent category for a male.
- Your abdomen body fat is low, which is positive as high values are linked with coronary heart disease.
- Your future aim is to maintain this body fat percentage whilst you are trying to increase lean muscle mass.

Cardiovascular Fitness - $\text{VO}_{2\text{max}}$

- Maximal oxygen uptake ($\text{VO}_{2\text{max}}$) is defined as the point at which oxygen consumption plateaus, or only increases slightly in response to an increased work rate (Wasserman *et al.*, 1999). $\text{VO}_{2\text{max}}$ is considered as the best single measurement of cardiorespiratory endurance and aerobic fitness (Wilmore & Costill, 1994).
- Incremental sub-maximal cycle ergometer test = used to access $\text{VO}_{2\text{max}}$ with a reduced risk of subject injury.
- Test Result = $58 \text{ ml.kg}^{-1}.\text{min}^{-1}$

Age (y)	Poor	Fair	Good	Excellent	Superior
20-29	≤ 41	42-45	46-50	51-55	56+
30-39	≤ 40	41-43	44-47	48-53	54+
40-49	≤ 37	38-41	42-45	46-52	53+
50-59	≤ 34	35-37	38-42	43-49	50+
60-69	≤ 30	31-34	35-38	39-45	46+
70-79	≤ 27	28-30	31-35	36-41	42+

V. H. Heyward, *Advanced Fitness Assessment and Exercise Prescription*, Fifth Edition, 2006, Champaign, IL: Human Kinetics.

- Your $\text{VO}_{2\text{max}}$ score is in the superior category for your age group (20-29y).
- This corresponds to you having high aerobic fitness, which reduces the risk of cancer, coronary hearts disease and helps to reduce cholesterol.

Cardiovascular Fitness - Yo-Yo test

- The Yo-Yo Intermittent Recovery Test is a crude assessment of Cardiovascular (Aerobic) Fitness.
- Sport teams use this test as large numbers can be evaluated simultaneously.
- Test used: Yo-Yo Intermittent Recovery Test Level-1
- Test Result = Level: 17 Stage 4

	Males		Females	
Rating	Meters	Level	Meters	Level
Elite	>1280	>20.0	>1600	>17.5
Excellent	1000-1280	18.7-20.0	1280-1600	16.5-17.5
Good	720-1000	17.3-18.7	1000-1280	15.6-16.5
Average	480-720	15.6-17.3	680-1000	14.6-15.6
Below Average	280-480	14.2-15.6	320-680	13.1-14.6
Very Poor	<280	<14.2	<320	<13.1

Jens Bangsbo, F. Marcello Iaia and Peter Krstrup, (2008) *The Yo-Yo Intermittent Recovery Test: A Useful Tool for Evaluation of Physical Performance in Intermittent Sports*, **Sports Medicine** 2008; 38: 10-25

- Your Yo-Yo Score is evaluated as Good.
- To help achieve your goal to improve rugby performance, increasing this standard is a long term goal.

Speed - 40y sprint test

- Speed is an important physical aspect of Rugby Performance.
- 40 yard (36.58m) sprint times are taken to access speed.
- Equipment used: Brower Light Gate System.
- Test Result = 40y: 5.30s

General Standard	Time (s)
College Footballers	4.6-4.9
High School Footballers	4.9-5.6
Recreational College Athletes	~5.0
Recreational College Athletes (female)	~ 5.8

topendsports.com

- Your 40 yard dash is equivalent to High School Footballers. This is not elite, so needs to improve.
- Recommendations: Lower Body strength has a strong correlation with 10m sprint times, therefore try to improve your strength..

Muscular Strength & Endurance

- Muscular Strength is a key contributor to optimal health and fitness.
- Competent muscular strength can help reduce the incidence of back pain as well as many other musculo-skeletal injuries.
- Muscular strength is also very important to performance in collision sports such as rugby, where strength during impact is vital.
- Testing: BW - 75kg

Exercise	1RM	BW Ratio	Estimated 3RM (85% 1RM)	Estimated 10RM (55% 1RM)
Bench Press	105kg	1.4 BW	89.25kg	57.75kg
Prone Pull	100kg	1.3 BW	85kg	55kg
Back Squat to Parallel	150kg	2 BW	127.5kg	82.5kg
BW Ratio Standards	Outstanding >2.0	Excellent > 1.25	Average < 1.0	Poor < .075

- Both your upper body strength scores are graded Excellent.
- Your lower body strength score is graded Outstanding.
- This is important as muscular strength is very important for health and sporting performance.
- Work ons - Your Push 1RM is 5kg greater than your Pull 1RM. Aim to improve your pulling strength to create at least a 1:1 ratio of pulling:pushing strength. This is because a larger number of movements in rugby are pulling rather than pushing.

Flexibility - Sit & Reach Test

- Flexibility is vital for optimal health and sports performance.
- Good flexibility can reduce joint pain, muscle stiffness, and other health-related problems.
- Good flexibility can also improve sports performance through developing strength through the entire joint range.
- Test - Sit and Reach Test

- Score: 1.4

Score	Males	Females
Excellent	>4	>6
Average	1.5	3.6
Poor	-1.0	0.0

- Your flexibility score for the Sit & Reach test is between Poor and Average.
- Regular resistance training with no prior stretching or mobility work can be a cause of poor flexibility.
- Work-Ons: Aim to have a 10 minute mobility segment before and after each resistance training session. Stretches should be held between 6-10s each, concentrating on the predominant muscle used during these weights session.