



The Road to (and in) Japan... the Nutrition Journey

Planning for RWC 2019

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Nutrition Framework for RWC 2019 AP and Medical Strategic plan

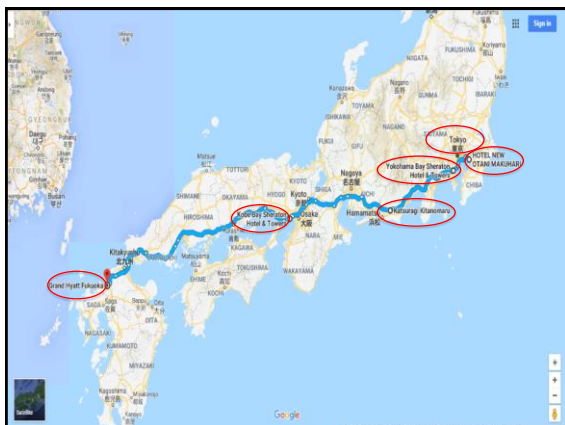
Goal	Objective	Success Measure	Timelines
To support healthy, fit and resilient players to consistently train and compete with maximal effort <ul style="list-style-type: none"> Illness prevention Injury prevention Sleep health Early intervention Optimal physical adaptations Nutrition to perform Cutting edge advances 	Work with MDT at National and Provincial level to: <ul style="list-style-type: none"> Agree BC profile for players of National interest Ensure appropriate energy availability, nutrient sufficiency and euhydration Implement recovery and rehabilitation programmes 	For players of National Interest: <ul style="list-style-type: none"> Targets and actions for optimal BC are agreed Nutrition plans are in place to support energy requirements and nutrient sufficiency to support health and performance 	Throughout 2018/19 season

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Nutrition Framework for RWC 2019 AP and Medical Strategic plan

Goal	Objective	Success Measure	Timelines
To support healthy, fit and resilient players to consistently train and compete with maximal effort <ul style="list-style-type: none"> Illness prevention Injury prevention Early intervention Sleep health Optimal physical adaptations Nutrition to perform Cutting edge advances 	<ul style="list-style-type: none"> Use nutrition programmes to help support strong immunity and maintain gut health Use nutrition strategies to help manage chronic and acute illnesses Use nutrition interventions to help maximise performance 	For players of National Interest: <ul style="list-style-type: none"> Protocols are in place to manage acute illness while in assembly Nutrition plans are in place to support unique challenges of travel, culture and food availability PN strategies are in place to meet demands of competition 	6 Nations 19 and RWC 2019 September 2019 2018/19 season

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IRFU

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- Meetings with catering staff
- Guidelines translated into Japanese
- Tasting menu prepared
- Meeting with Dietitian who is working as catering consultant for JR2019
- Recommendations made post recce



Guidelines for Hotel Catering

ホテルケータリングのためのガイドライン

IRFU Nutrition Philosophy (アイランド協会の栄養指針)

The IRFU's nutrition philosophy is based on eating fresh and whole foods. We expect the use of fresh seasonal produce and high-quality meat, fish and fowl products in our menu provision during our stay with you. The key nutritional principles we expect you to follow include:

アイランド協会の栄養指針としては新鮮で全てを食べられる食材を基本にしています。我々は、滞在期間中に提供されるメニューに新鮮で旬な食材、高品質の牛肉や魚、肉類を使用することを望みます。重要な栄養に関する考え方として、次の内容を含むようお願いします。

- A focus on fresh produce including fruit, vegetables, meats and fish
果物や野菜、牛肉や魚などを含む新鮮な食材であること。
- Generous portions of all foods available at all meal times
すべての食事ですべての食品を惜しみなく使用すること。
- Foods are seasoned with salt, pepper and other herbs and spice as appropriate to recipes used
食べ物は塩と胡椒で味付けされること。使用するレシピに応じて他のハーブやスパイスを使用すること。
- All vegetables are prepared by steaming or boiling with no fat added (unless roasted)
全ての野菜は脂肪を加えずに蒸したり、煮たりして調理すること。(ローストの場合以外)
- Mashed potato is mashed with low fat milk with no added butter or margarine
マッシュドポテトは、バターやマーガリンを加えずに、低脂肪牛乳ですりつぶすこと。



April Recce to Japan


- Meetings with catering staff
- Guidelines translated into Japanese
- Tasting menu prepared
- Meeting with Dietitian who is working as catering consultant for JR2019
- Recommendations made post recce






<https://f.io/AM9KAaI>

Short videos on how to make porridge and custard




カスタードソース
-4人前

U. Nishimura
IRFU Catering JAPAN RECCE



ポリッジオーツ
-1人前

U. Nishimura
IRFU Catering JAPAN RECCE



Pool A: Ireland												IRFU										
19-Sep - 25-Sep												Red	Blue									
Camp Name												Volume 1	Volume 2	Volume 3	Volume 4	Volume 5	Volume 6	Volume 7	Volume 8	Volume 9	Volume 10	
Dunfermline												19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep				
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Physical preparation pre-season

- ✓ **Body Comp targets set for RWC** (Short-term targets for MS/ES/BPS, Pre-season DXA scans, End of PS DXA scans)
- Bloods testing: FBC, U&Es, LFTs, fasting glucose, Ferritin, Vitamin D
- Wellness and weight monitoring
- Sweat testing and fluid balance study – Precision Hydration
- Cooling strategies – slushies/cold water immersion/cooling garments

Body Composition Targets and Results

Position	Target % BF	Achieved	Target % LM	Achieved
THP (4)	≤20	0	≥75	1
LHP (3)	≤18	1	≥76	2
Hooker (4)	≤18	3	≥78	3
Lock (6)	≤16	3	≥80	3
Back Row (7)	≤14	6	≥83	5
SH (4)	≤12	4	≥84	4
OH (4)	≤13	2	≥84	2
Centre (5)	≤13	4	≥84	4
Back 3 (7)	≤12	1	≥84	3

Sweat Sodium concentration and sweating rate

Fluid Balance in Team Sport Athletes and the Effect of Hypohydration on Cognitive, Technical, and Physical Performance

Sweating Rate and Sweat Sodium Concentration in Athletes: A Review of Methodology and Intra/Interindividual Variability

Normative data on regional sweat-sodium concentrations of professional male team-sport athletes

Planned intervention

- Sweat sodium analysis**
 - Sweat stimulation at rest
- Sweat rate testing**
 - Measure sweat volume loss during high intensity pitch session in 12 players who were historically regularly dehydrated
- Results**
 - Sweat sodium analysis, sweat rate, cramping history and whole-body weight loss data was used to guide hydration strategies

Sweat sodium concentration - results

No of players	Sweat Na (mg/L)	Sweat Na classification
1	471	Very Low
23	532 - 798	Low
15	819 - 1085	Moderate
4	1126 - 1330	High
1	1331	Very High

<500mg/L = Very Low
 500mg/L – 799mg/L = Low
 800mg/L – 1099mg/L = Moderate
 1100mg/L – 1300mg/L = High
 >1300mg/L = Very High

Sweat Rate: 90 minute pitch session 18°C/80% humidity

Player	% BW change	Drink consumed (L) (90 mins)	Total sweat loss (L) (90 mins)	Sweat rate (L/hr)
1	-1.2	0.5	1.7	1.1
2	-1.2	0.4	1.4	1.0
3	-0.5	1.0	1.5	1.0
4	0.2	1.0	0.8	0.5
5	-0.9	1.3	2.3	1.6
6	-0.9	0.8	1.8	1.2
7	-0.6	1.0	1.8	1.2
8	-0.2	1.4	1.6	1.0
9	-1.5	0.7	1.9	1.2
10	-0.4	1.0	1.4	1.0
11	-0.7	0.8	1.6	1.0
12	-1.0	0.5	1.5	1.0

Cooling strategies

- Cold water immersion
- Cooling garments
- Slushie drinks



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PN Strategy 2: Hydration

When/Timing	Rationale	Actions
Pre-match day	Achieve optimal hydration status	Hydration monitoring H2 ProHydrate 1500 x 1 given to any player with USG > 1.020
Match Day	Maintain optimal hydration and prevent dehydration	All players take ORS x 2, PH500 x 1 or Dioralyte x 1 at breakfast. Fluids encouraged. During match: Fluids available are water, PH1000 powder* and Lucozade Sport
Post-match – acute	Promote re-hydration	All players weigh-out post match. All players given H2 ProHydrate 1500 x 1 in 250mls.

PN Strategy 3: Fuelling

When/Timing	Rationale	Actions
Pre-match day	Promote optimal fuel stores	Carbohydrate-rich, protein-rich meals and snacks
Match Day	Maintain fuel stores Avoid gut discomfort	Meal timings Gels at half-time Sports drinks

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Match day preparation

PN Strategy 5: Slushie use

When/Timing	Rationale	Actions
Match Day	To promote core cooling	150ml of slushie solution was given to each player in the match 23 at <ul style="list-style-type: none"> End of pre-match warm-up Half time <p>The slushie solution was made with CHO/electrolyte powder and water made up to an 8% CHO solution. This was the minimum level of sugar necessary to allow the solution to 'slush' and not freeze.</p>

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Match day preparation

PN Strategy 6: Recovery

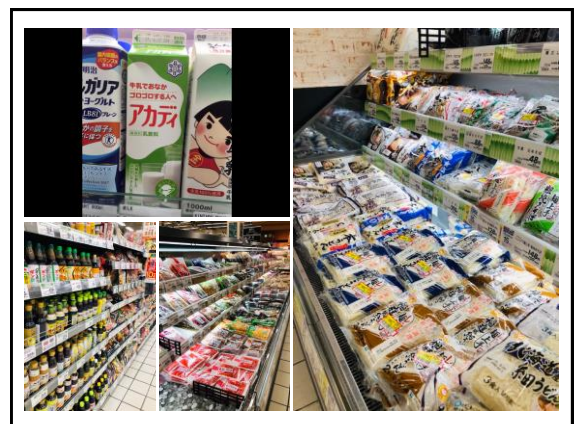
When/Timing	Rationale	Actions
Match Day – post match	Start re-fuelling and support regeneration	Post-match shake Gold Standard Gainer x 75g Whey protein x 30g (400kcal/42g CHO/40g Pro/5g fat) Changing room food Cherry Active x 30mls Rehydration – see PN Strategy 2 Recovery meal within 3 hours
Post-match days	Support re-fuelling and regeneration	Carbohydrate-rich, protein-rich meals and snacks Cherry Active x 30mls HSE Opti-Turmeric x 1 x 2 days (500mg Curcumin, 20mg Vitamin C)

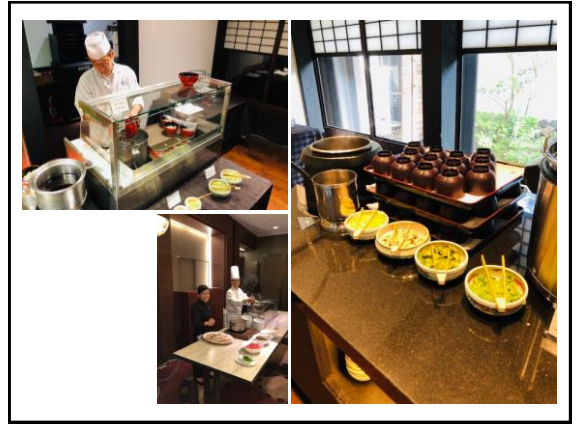
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Match day recovery

Nutrition challenges during RWC19

- Importing supplements and foods
- Japan – language, culture and food
- Travel – distances to training venues and between hotel bases
- Heat and humidity





Key take-home messages

- Relate all interventions to performance
- Keep things simple – they have the biggest impact. Find some 'easy wins'.
- Work out what is negotiable and what is not
- Compromise is necessary to fit into bigger picture – happy players, happy camp
- Sometimes you have to stir porridge

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Next time
...
France
2023



Thank you for your attention