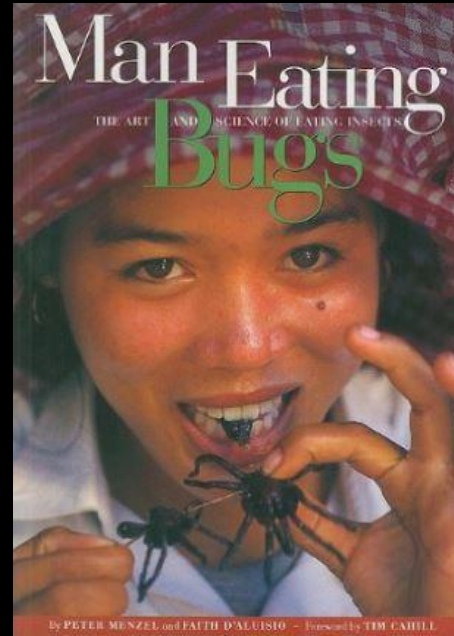
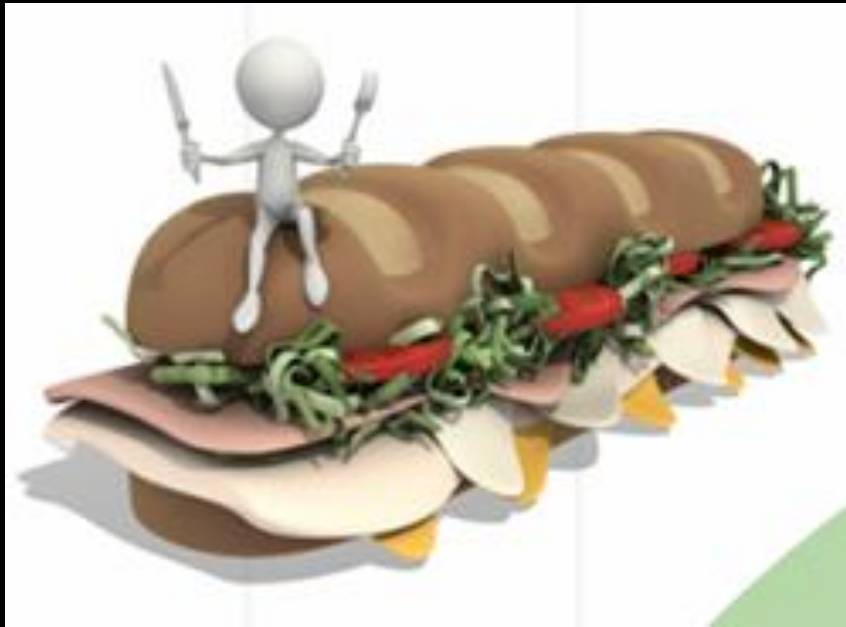


# Nutrition and Exercise – Are they perfect partners?

Jeni Pearce  
High Performance Sport  
Performance Nutrition Technical Lead

ANA Conference 22 May 2019





If we really are what we eat – then many people are fast, cheap and easy!

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# These are not the major food groups

- Many people overeat and under train!





# Athletes come in different ages, shapes and sizes



Just like everyday people



# Nutrition Guidelines



- Athletes need to follow the general healthy nutritional guidelines as a baseline. This is key!
- Some recommendations are opposite for the elite athlete, are short term and highly specific
- Not designed to be followed long term
  - Lower fibre (high energy intakes and endurance events)
  - Higher sodium/salt (heavy sweaters in heat and high humidity)
  - Can use sugar (used in recovery, fuel source during endurance events, role in sports drinks and gels)





# Nutrition Guidelines



- Higher nutrient intakes (injury, immunity, illness, endurance) eg vit C, Zinc, probiotics,
- Eat more often (may need to eat before and after training sessions)
- Eat more protein – recovery, tissue repair, illness, injury
- Weight gain (increase in total mass – fat and muscle) to meet weight class and specifics of sport (shotput)
- Weight loss for performance (be lighter for jumps, running, cycling where carry weight, for weight class – rowing, boxing, combat sports, pole vault, high jump.
- Weight loss may need to loose lean mass to make weight) and periodization of weight changes



# Performance Nutrition v Healthy Nutrition

- Long term weight loss for health v making weight in sport (may regain weight loss, and short term loss for events)
- Hydration v Deliberate or progressive dehydration (lighter = faster, go higher, jump longer) for specific event, weight class
- No supplementation v Specialized supplementation prescription (creatine, beta alanine, probiotics, injury, illness). General overuse of supplements recreational area



Note: There is no substitution for training





# Research on milk and protein in athletes shown benefit for older adults

## Why protein isn't just for gym-going youngsters

By Judy Buttriss

02-May-2019 - Last updated on 02-May-2019 at 09:56 GMT



37



POST A COMMENT



Professor Buttriss: 'Studies show that it's never too late, even in frail individuals, to change diet'

Research suggests that age-related muscle loss (sarcopenia) can be slowed by a combination of extra protein and exercise.

Loss of muscle mass and strength is a major contributor to disability, falls and frailty in old age, and undermines independent living. Muscle mass is estimated to fall by about 8% per decade over the age of 40, progressing to 15% per decade beyond 70 years of age.

Associated healthcare costs (£2.5m per annum for those in the UK aged 70 and over) are expected to rise in line with the number of people living beyond 70 years.

The current UK protein recommendation is 0.75g/kg body weight/day, but researchers are now advocating at least 1.2g/kg for older adults. Only 13% of adults aged 40 and above currently consume 1.2g/kg and one in three fail to achieve the lower (current) recommendation.

### It's never too late

Studies show that it's never too late, even in frail individuals, to change diet and exercise habits to benefit musculoskeletal health, but starting early is preferable.

Focus groups reveal that while healthy middle-aged adults are receptive to health promotion messages, most don't prioritise protein and many are unaware of the diverse variety of plant- and animal-derived proteins and the amount of protein they need daily.

Consuming protein regularly over the day is now considered important for muscle mass retention – yet, typically, we consume much of our protein in the latter half of the day.

The [Protein for Life research team has identified breakfast and tunities to improve protein intake in older adults](#), in tandem with



# Antidoping and the role of supplements

APRIL 25 2019 - 12:00AM

## ASADA boss calls on parents to help deliver anti-doping message

David Polkinghorne

Top Sport Stories



As a parent, David Sharpe wants to know how best to help his kids. Which is why as ASADA boss he's launched the Parents' Guide to Support Clean Sport.

In his role in fighting the war on drugs in sport, Sharpe wants to make a pre-emptive strike and educate children before they become elite athletes.



 ASADA CEO David Sharpe launched the Parents' Guide to Support Clean Sport as a parent.

## Youngsters exposed to 'significant misinformation' on sports nutrition: Irish authority



By Annie-Rose Harrison-Dunn+  
28-Apr-2016  
Last updated on 28-Apr-2016 at 15:39 GMT

 Post a comment



Related tags: Food Safety Authority of Ireland's, Young people, Teenagers, School, Misinformation, Misleading, Sports nutrition, Health, FSAI, Ireland, UK, ESSNA, Sport, Protein, Vitamins, Weight loss, Fat burner, Nutrition, Regulation, Health claims, Advertising, Body image, Muscle



MEDIA RELEASE

3 JULY 2018

### SCHOOL BOY CAUGHT UP IN NZ CLENBUTEROL INVESTIGATION

Drug Free Sport New Zealand (DFSNZ) says the four-year ban handed down by New Zealand Rugby to a schoolboy rugby player supports DFSNZ's focus on increased education and awareness around performance enhancing drugs at all levels of sport.

> <https://youtu.be/ArRbR3hcyJY>

<https://jillcastle.com/podcast/protein-supplements-young-athletes/>

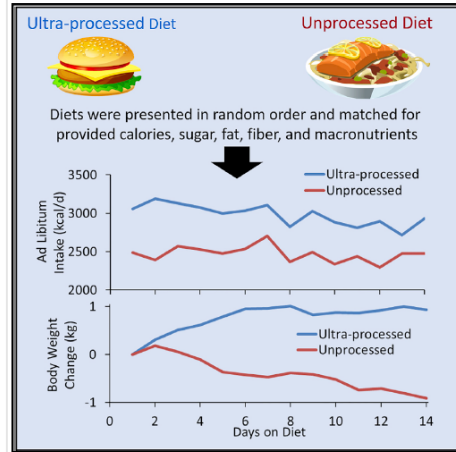
# All about perception



# Cell Metabolism

## Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

### Graphical Abstract



### Authors

Kevin D. Hall, Alexis Ayuketah, Robert Brychta, ..., Peter J. Walter, Shanna Yang, Megan Zhou

### Correspondence

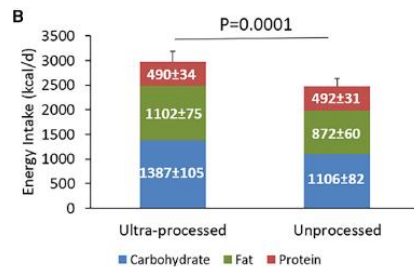
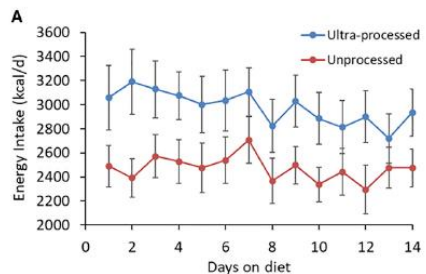
kevinh@nih.gov

### In Brief

Hall et al. investigated 20 inpatient adults who were exposed to ultra-processed versus unprocessed diets for 14 days each, in random order. The ultra-processed diet caused increased *ad libitum* energy intake and weight gain despite being matched to the unprocessed diet for presented calories, sugar, fat, sodium, fiber, and macronutrients.

### Highlights

- 20 inpatient adults received ultra-processed and unprocessed diets for 14 days each
- Diets were matched for presented calories, sugar, fat, fiber, and macronutrients
- *Ad libitum* intake was ~500 kcal/day more on the ultra-processed versus unprocessed diet
- Body weight changes were highly correlated with diet differences in energy intake



## Highly processed food lead to increased energy intake and weight gain but it's more than calories:

- Insulin levels and glucose - no difference
- Processed ate more at all main meals
- Unprocessed increase in hormone PYY (suppresses hunger)
- Processed ate faster, more CHO & fat + food had increased energy density
- Unprocessed lost 0.9kg in 2 wks (processed gained 0.9kg)
- Unprocessed had slightly higher protein level
- Socioeconomic level, skill, time all factors



# Lesson learned from Athletes we could all apply

# Key Messages



- Set a goal then work backwards
- Someday's it just hurts
- Only Quitters Quit
- It's Lonely on the Extra Mile
- If it was Easy Everyone would be an Olympian
- Get expert help
- Preparation, Preparation, Preparation
- Sleep is a step towards the next training session
- Food first – supplements only for impact
- Body Composition Matters
- Alcohol is not a recovery drink





# Set a Goal and Work Backwards

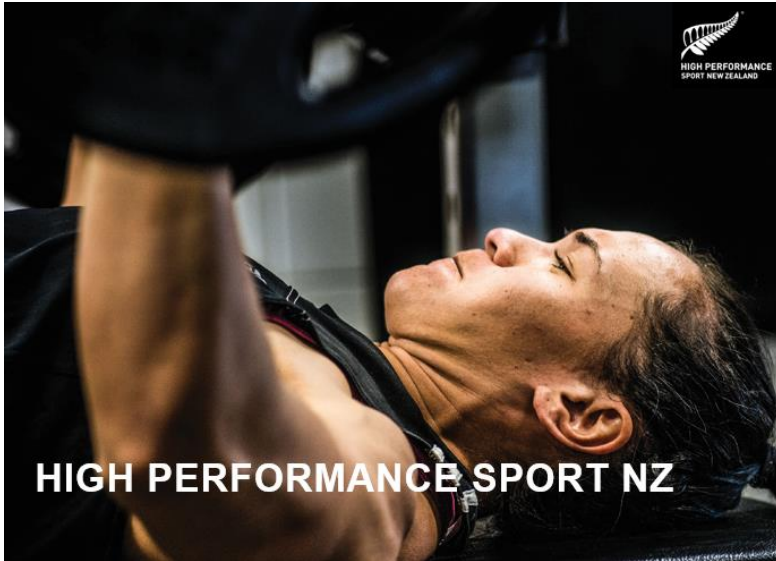
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Body composition rather than weight  
Event rather than activity, realistic time frames





**HIGH PERFORMANCE  
SPORT NEW ZEALAND**



**HIGH PERFORMANCE SPORT NZ**



# Some days it Hurts

Injury – fact of life

Illness – rare to escape

Pushing your self

Making better choices

Getting back into habits and training

Say No

Be the best version of yourself within the resources available to you

# It's lonely on the extra mile



Inch by inch life's a cinch, yard by yard life is hard  
In sports the distance between medals is very  
small



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# Only Quitters Quit

**"THE DIFFERENCE IN  
WINNING AND LOSING  
IS MOST OFTEN...  
NOT QUITTING."**

WALT DISNEY

Before you quit remember why you  
started

Don't get distracted

Life gets in the way – don't use it as  
an excuse

Drop the perfectionist behaviours





# If it was Easy Everyone would be an Olympian

Sticking to your goals can be tough  
Look out for sabotage  
Stay focused on the big picture and your why



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# Get Expert Help

It takes a support team – family, friends,  
experts, GP

Athletes have a team around them – who is in  
your team?

Who needs to go from your 'tight support  
team'





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# Preparation, Preparation, Preparation!

From Olympics to a 5km fun run  
Early morning start to overseas work travel  
Plan for disruptions and challenges – it's called life  
Holiday to last minute commitments





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# Sleep – the first step towards the next training session

Sleep = rest and recovery  
Hormonal responses  
Muscle recovery  
Quality and quantity



## Food first — supplements only for impact

- Energy v stimulant
- Antioxidants
- Superfood v superdiets
- Sustainability concerns
- Plant food diets v vegetarian v vegan v flexitarian
- Over use and reliance on supplements
- Exercise is an important antioxidant! Upregulated with exercise!



**Step 1: apply Miracle Cellulite Cream to problem areas. Step 2: run 10 miles a day.**

GLASBERGEN © Randy Glasbergen / glasbergen.com



"On this diet, you can eat all the steak you want, but a slice of bread will kill you. On this other diet, you can eat all the bread you want, but a steak will kill you."

# Body Composition – NOT weight – Matters



Stop gaining undesirable body mass – don't get any heavier

Its about health and wellbeing

Muscle is heavier and uses less space than fat

Body fat is a living tissue

Orthorexia - when healthy eating become unhealthy






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Alcohol is not  
a recovery  
fluid

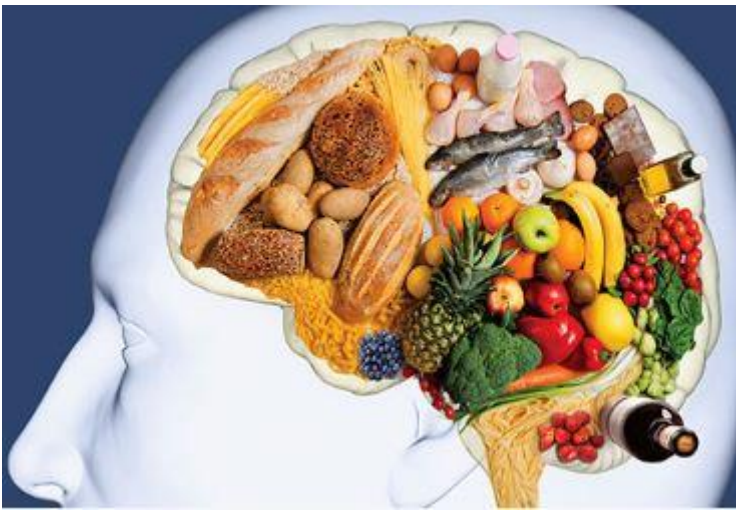




What is the size of  
your wine glass



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# Nutrition and exercise is confusing and changing

Media

Research

Rat and mice studies v human data

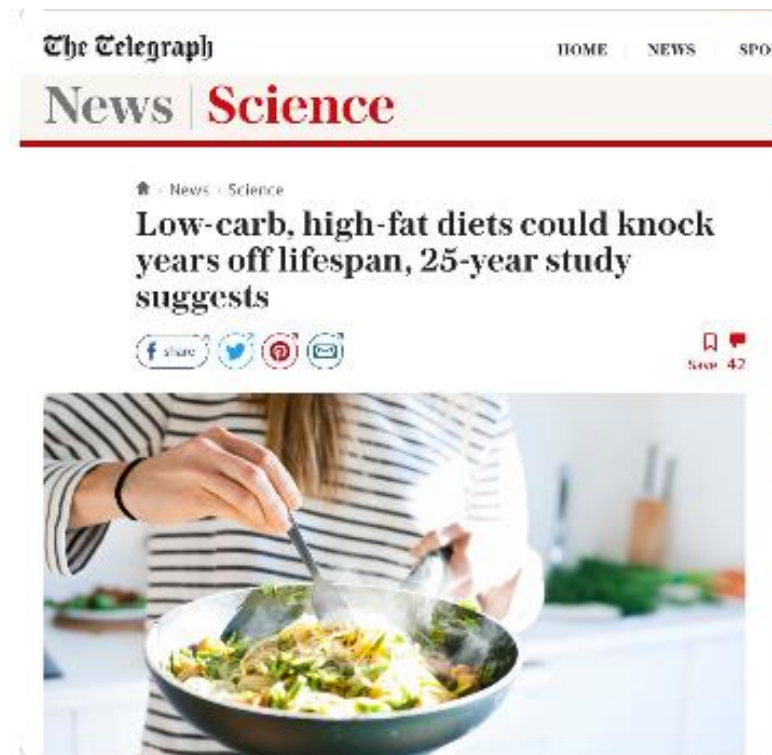
Latest diet, equipment, fad, myth

It is not a quick fix – summer bodies are not made in winter - they take all year every year



Why is nutrition  
so confusing:

Media messages and  
Research don't tell  
the full story



10:28 AM - 19 Aug 2018



# Key Messages

Set a goal then work backwards  
Someday's it hurts and it's hard  
Only Quitters Quit  
It's Lonely on the Extra Mile  
If it was Easy Everyone would be an Olympian  
Get Expert Help  
Preparation, Preparation, Preparation  
Sleep is a step towards the Next Training session  
Food first – supplements only for impact  
Body Composition Matters  
Alcohol is not a recovery drink

TRAIN LIKE  
**AN ATHLETE**

EAT LIKE  
**A DIETITIAN**

SLEEP LIKE  
**A BABY**

WIN LIKE  
**A CHAMPION**

## Summary

Eat like an athlete

Sleep like an athlete

Play like an athlete

**Moderation matters!**

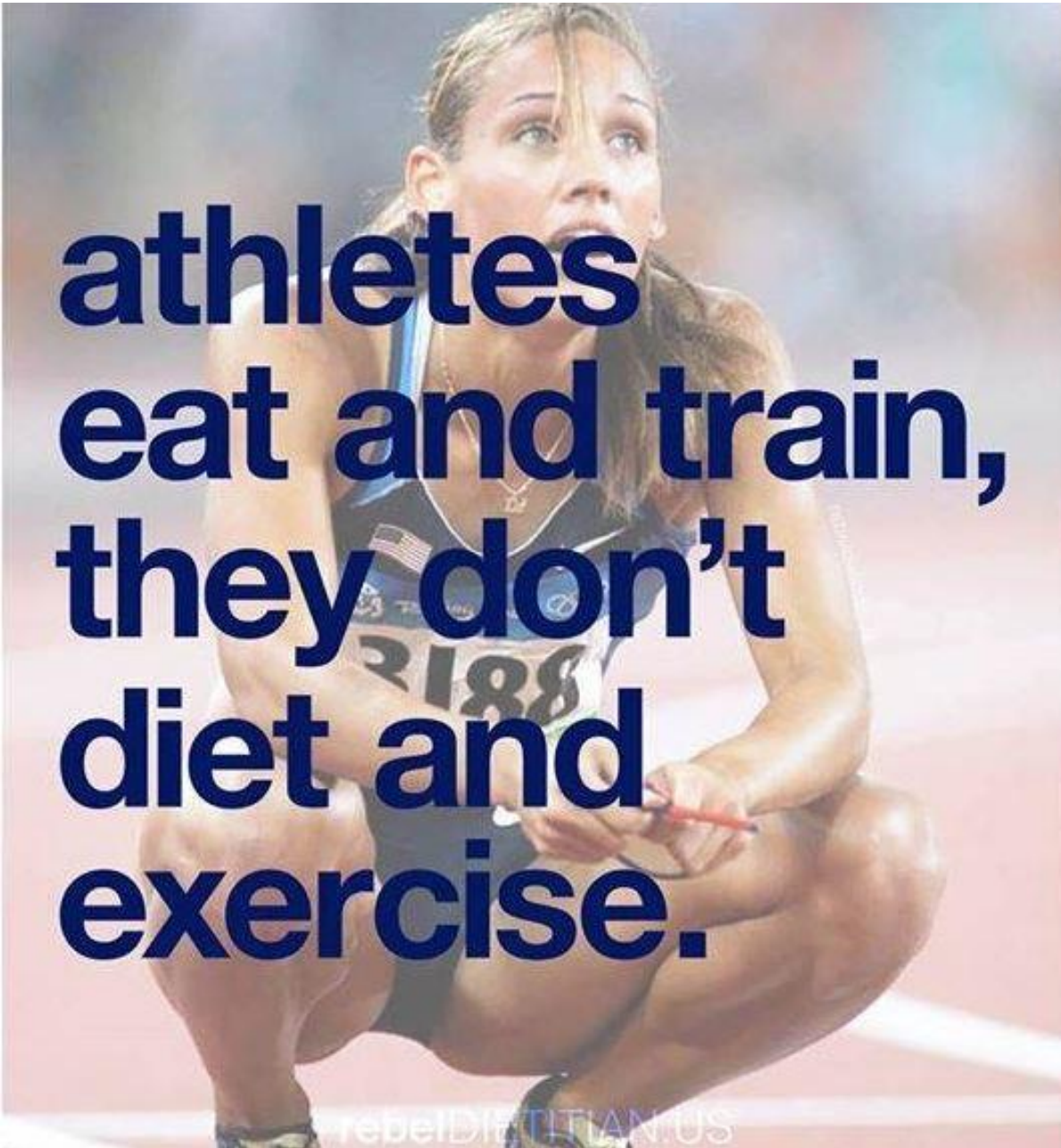




## Performance, health and wellbeing

### Health, wellbeing and performance

- High Performance Sport New Zealand
- National Training Centre
- 17 Antares Place, Mairangi Bay
- Auckland, 0632
- PO Box 302 563
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- Auckland 0751
- [info@hpsnz.org.nz](mailto:info@hpsnz.org.nz)
- [www.hpsnz.org.nz](http://www.hpsnz.org.nz)
- [Jeni.pearce@hpsnz.org.nz](mailto:Jeni.pearce@hpsnz.org.nz)



**athletes  
eat and train,  
they don't  
diet and  
exercise.**



# Nutrition and Exercise – Are they perfect partners? Yes! – only if clear on the messages

Jeni Pearce  
High Performance Sport  
Performance Nutrition Technical Lead

ANA Conference 22 May 2019