



Dr Chris Milne

Sports Physician

Anglesea Clinic

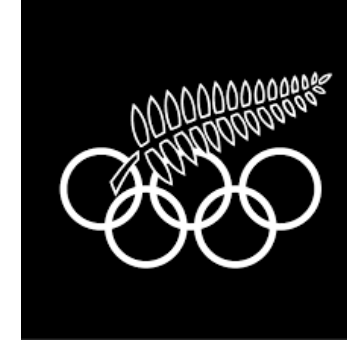
Hamilton

Friday, June 9, 2017

(Room 7)

14:00 - 14:55 WS #44: Postcard from Rio - The Olympic Experience

15:05 - 16:00 WS #56: Postcard from Rio - The Olympic Experience (Repeated)



Medicine at the 2016 Rio Olympic Games



Dr Chris Milne
Sports and Exercise Physician
NZ Olympic Team Doctor
Hamilton NZ

Where we have come from– 1972 Olympic gold medal winning men's rowing 8



Scale of the Olympic Games

- ▶ World's premier multi events sporting festival
- ▶ 10 500 athletes, 5000 support staff
- ▶ 20 000 journalists
- ▶ 385 000 visitors to the Games
- ▶ Billions of TV viewers worldwide



NZ team, then and now



Pre Games issues– 2009

- ▶ First ever Olympic Games to be held in South America
- ▶ Resource rich country
- ▶ Great cultural diversity
- ▶ Economy on a high
- ▶ Great place to stage a party



- ▶ What could possibly go wrong?????

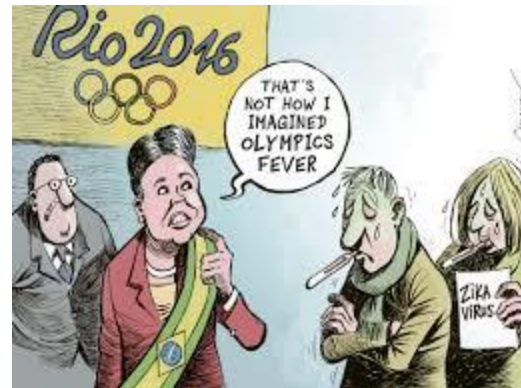
Pre Games issues 2015

- ▶ Football World Cup 2014 had been staged with success, apart from Brazil being thrashed in the final
- ▶ Economy was tanking
- ▶ Slow development of infrastructure
- ▶ Concern re water quality at some venues



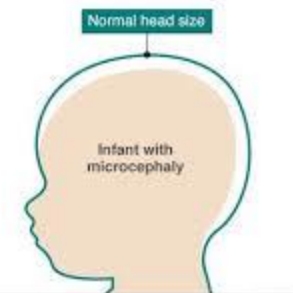
Pre Games issues 2016

- ▶ Zika virus infection and risk of microcephaly–media frenzy ensues
- ▶ Political unrest, potential impeachment of the President
- ▶ Russian doping scandal



Microcephaly

- Symptoms include below-average head size
- Often caused by failure of brain to grow at normal rate
- Head circumference measuring **less than 31.5-32cm** at birth
- Affects **25,000 children** in US each year



Source: AQAM, WHO

BBC

Brazil

- ▶ Renowned for
Beaches
Bikinis
Football
Samba



- ▶ Not known for
Potable water
Robust infrastructure
Political stability
Buses running on time



Pre Games challenges

- ▶ Water pollution
- ▶ Crime
- ▶ Traffic congestion
- ▶ Zika/other arboviruses
- ▶ Political unrest
- ▶ Russian doping



Water Pollution

- ▶ Water quality concerns at
 - 1–Rowing/kayak venue– admixture of sewage with stormwater after heavy rain
 - 2–Sailing venue– partly treated human waste discharged into Guanabara Bay



Who would have thought—more worries about the water in Havelock North than in Rio!



Planning response to water issues

- ▶ Assume all tap water is not drinkable
- ▶ Wash down all boats/clothing/equipment after training and competition
- ▶ Pre-departure immunisations– Hep A and Typhoid
- ▶ Education ++ of athletes and support staff



Crime

- ▶ Education ++ of athletes and support staff
- ▶ Pre Games evaluation trips by senior management
- ▶ NZ Team built a relationship with a favela
- ▶ NZ police officer Tania Kura travelled over with the NZ team, and stayed in the Village
- ▶ Travel 'in the bubble' – ie Village, buses, venues
- ▶ When going out, sign out of NZ team quarters, carry cell phone
- ▶ Remove watches and jewellery, carry some cash in small denomination notes



Traffic



- ▶ Rio a city of 6.8 million people– traffic problems similar to Auckland's
- ▶ Response
 - 1–Existing roads–dedicated Olympic lanes, work well on motorways, less well on suburban streets
 - 2–Extension of city rail network to Games Village area– opened only a few days prior to Opening Ceremony
 - 3–Exclusion of non essential traffic from around Olympic Village

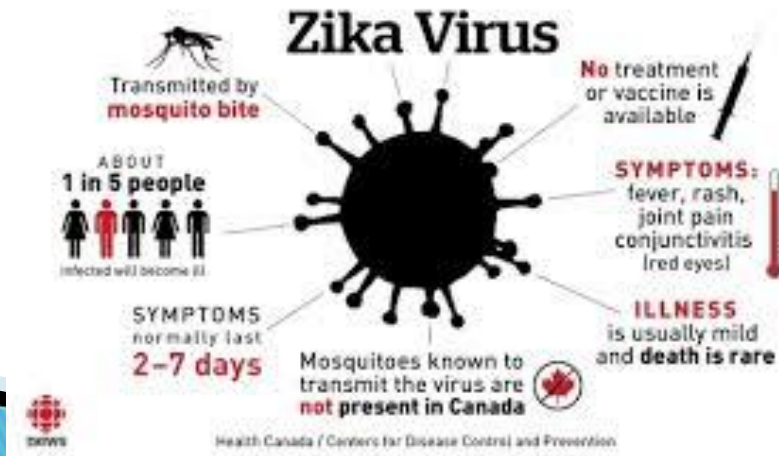


Arbovirus infections– Zika, Dengue Chikungunya



- ▶ Much media concern following establishment of link between Zika virus infection and microcephaly, plus Guillain–Barre syndrome
- ▶ Dengue fever/Dengue haemorrhagic fever actually a much bigger issue for non pregnant athletes
- ▶ Media showed lack of perspective in my view
- ▶ Infectious diseases experts made a late attempt to have the Olympics postponed or moved– that was never going to happen!

Pre Olympic paranoia

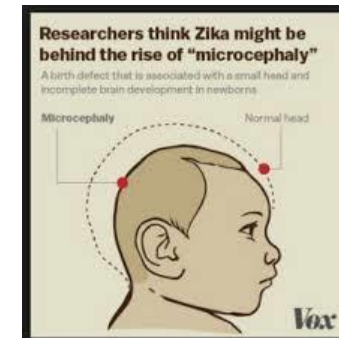


*If you think you are too small to
make a difference,
try sleeping with a mosquito.*
-Dalai Lama XIV



Zika etc– advice to NZ team members and supporters

- ▶ Insect repellent– DEET 40%– protection for 12 hours
- ▶ Every team member issued with their own spray
- ▶ Mosquito nets above beds
- ▶ Air conditioning in rooms
- ▶ Mosquitoes present even on 18th floor!!!
- ▶ Long sleeved clothing issue with team gear



Political unrest

- ▶ Brazil is a Third World country
- ▶ Graft is endemic
- ▶ When the economy falters, people go looking for scapegoats



- ▶ PS–President Rousseff was removed from office 2 weeks after the end of the Olympics

Russian doping scandal

- ▶ Systematic state sponsored doping over several years
 - ▶ Came to a head at Sochi 2014 Winter Olympics, where Russia had control of the anti-doping laboratory
 - ▶ 'Hole in the Wall' system for changing contents of sample bottles
 - ▶ WADA on the case
 - ▶ Release of McLaren report a few weeks prior to the Olympics
 - ▶ IOC passed the buck to International Federations
- 1–Athletics– all banned
- 2–Rowing– some banned
- 3–Weightlifting– some banned



NZ team set-up in Village

- ▶ Advance party– arrival 2 weeks prior to Games opening ceremony
- ▶ Second wave, including myself– arrival 10 days prior to opening ceremony
- ▶ NZ team medical centre situated on 17th floor of tower block
- ▶ Supplies brought over from NZ
 - 1–Medications
 - 2–Dressings
 - 3–Splints/sports tape



NZ team medical centre open from 0730–2200 daily, with on call overnight service

Olympic Village– Polyclinic medical facilities

- ▶ Primary medical care/emergency
- ▶ Physiotherapy
- ▶ Podiatry
- ▶ Dentistry
- ▶ Optometry
- ▶ Pharmacy
- ▶ Laboratory
- ▶ Radiology– plain X-ray, ultrasound, MRI
- ▶ Rehabilitation gym



Sports venue medical facilities

- ▶ First aid/emergency care
- ▶ Field of play medical staff
- ▶ Liaison with team doctors/physiotherapists
- ▶ Ambulance transfer to hospital or Village Polyclinic



Anti-doping issues

- ▶ No notice testing during entire Games period 24 July–21 August, at end of Closing Ceremony
- ▶ Doping Control Stations at all venues and at Olympic Village
- ▶ WADA accredited lab in Rio– 24 hr turnaround for results
- ▶ TUEs [Therapeutic Use Exemptions] applied for in advance– eg
 - 1– asthma drugs eg certain B2 agonists, prednisone
 - 2– stimulants for ADHD
 - 3– use of probenecid for infections
 - 4– prednisone for flares of inflammatory bowel disorders

These enable treatment of illness to be the same as in the community



IOC needle policy at Olympics

- ▶ Designed to restrict use of injections and hopefully some banned drugs
- ▶ Needles must be stored in a secure location
- ▶ All used needles must be safely disposed of
- ▶ Injection declaration form filled in for all athletes receiving injections
- ▶ Athletes requiring injections for known conditions eg IDDM, migraine auto-injector must have a TUE



Clinical summary–NZ rowing team

- ▶ 40 athletes, plus 4 reserve athletes
- ▶ 16 support staff–coaches, managers etc
- ▶ Consultations– 40 for athletes, 8 for support staff
- ▶ Busiest day 28 July– date most athletes arrived from Europe
- ▶ Diagnoses– most common conditions seen

URTI– 8

Asthma/chest infection– 3

GI issues– inc infection, motility upset– 6

Injury– 3

Dental– 2

Ear wax– 4



Sentinel cases



- ▶ Pre– games

- 1–AF in 25 yr old athlete– Rx ablation in WPH

- 2–Forearm compartment syndrome– decompressive surgery in Hamilton prior to travel to Europe

- 3–Low back– extension related pain– image guided facet joint injection performed in Europe

In Games

- ▶ Gastro–enteritis– D/V for 5 days– isolated, and Rx azithromycin plus loperamide

- ▶ Calf strain ?DVT in overweight coach with type 2 DM– D–dimer test plus calf stocking, then clexane on flight home

- ▶ Dental– loss of filling in coach– filling replaced in Village Polyclinic

- ▶ Fall plus scalp laceration– observation, concussion assessment, no need for CT scan

Daily routine in Rio– competition day

- ▶ 0515–out of bed, shower, dress, eat
- ▶ 0610–on the bus to Lake Lagoa– 1 hr trip
- ▶ 0710–arrive at venue– advise athletes/coaches on any current medical issues they may have, be a ‘gofer’
- ▶ 1330–attend Doping Control Station with selected athletes
- ▶ 1630–back to Village by bus
- ▶ 1800–dinner
- ▶ 1900–write up day’s cases
- ▶ 2000–watch sport on TV
- ▶ 2200–bed



Definition of a successful day of racing– finals days

- ▶ One or more medals
- ▶ No sick/injured athletes



Roles of Team Doctor for rowing

- ▶ Clinical medical care
- ▶ Being a 'gofer' – tasks
 - 1–Carry ice/water/other supplies
 - 2–Carry boats/oars
 - 3–Man the athlete rest area– security function
 - 4–Accompany selected athletes to drug testing facility
- ▶ Liaison/banter with coaches and athletes



The rowing medallists

- ▶ Men's pair– Gold– delivered the goods under pressure– have now acquired rowing legend status
- ▶ Men's single scull– Gold– rowed to budget, won by half a bow–ball [2 cm in 2000 metres]
- ▶ Women's pair– Silver– backed up with 2 races in 90 minutes due to rescheduling of events with poor weather [NB– next to no media comment on this]



Qualities required in an Olympic environment

▶ Athletes

- 1–Talent
- 2–Talent
- 3–Talent
- 4–Wishbone– burning desire
- 5–Backbone– resilience
- 6–Funny bone– sense of proportion



▶ Clinicians

- 1–Clinical acumen, technical skills
- 2–Adaptability to challenging conditions
- 3–Stamina
- 4–Collaboration with athletes, coaches, managers, other clinicians



Rio 2016 Olympics– NZ results

- ▶ 18 medals– better than the predicted 15
- ▶ Many personal bests
- ▶ Some disappointments
- ▶ Note to media pundits– form is a guide, not a guarantee!!!!



Personal observations

- ▶ Games in Rio were about what I had expected
 - ▶ No Zika infections in Rio during Games period
 - ▶ Technology provided an edge in some sports– eg GB cycling team, carbon fibre shoes, with input from British Aerospace
 - ▶ Funding helps athletes remain competitive, but their individual drive is no less important
- 

Personal observations– continued

- ▶ Media coverage– need for immediacy trumps a measured reflection of events
 - ▶ The most appropriate team won the inaugural men's rugby sevens gold medal– Fiji played 'sevens from heaven'
 - ▶ Village was a 45 min bus ride from the main athletics stadium– I felt disconnected from events there
 - ▶ My PB in the marathon [2.30 in 1982] would have placed me 119th in the field!
- 

Athlete observations

- ▶ If you believe your own press releases, you are on a slippery slope– Ryan Lochte
- ▶ He may be running out of ‘get out of jail free’ cards– Nick Willis
- ▶ The best medals are the unexpected ones–
Natalie Rooney– shooter
Luuka Jones– canoe slalom
Eliza McCartney– pole vaulter



The future

- ▶ Public interest will remain high– there is an X factor to the Olympics
- ▶ Costs need to be contained
- ▶ There are incongruities when the events are held in countries with obvious great disparities in wealth

