

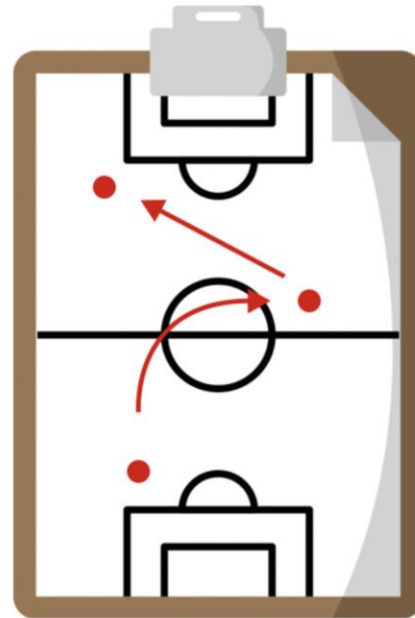
# The Multifaceted World of Sports Medicine

Bridging Performance and Recovery

Dr. Bryan Lau  
Director, Sports Medicine



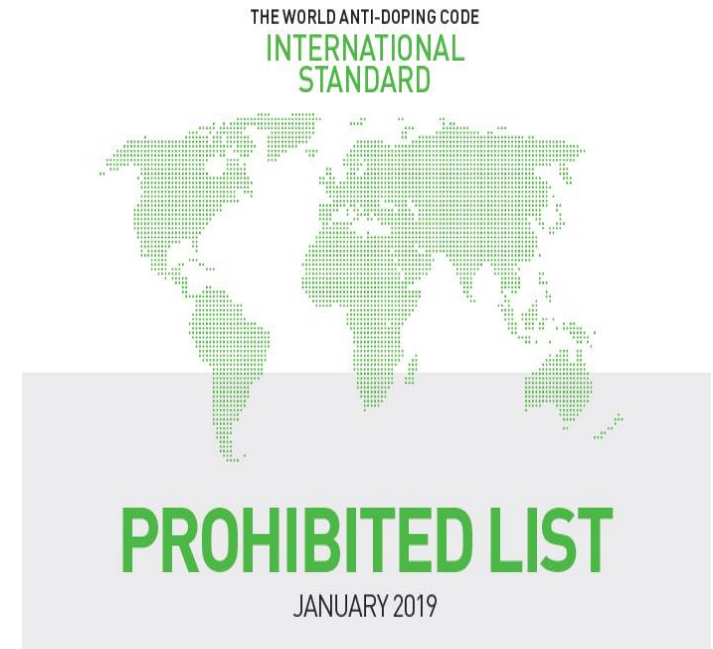
# Role of sports physician



# Role of Physician in **HKSI Clinic**

## 1. Treating common illnesses

**Curing of URTI**



<https://www.wada-ama.org/en/content/what-is-prohibited>

# Role of Physician in **HKSI Clinic**

## 1. Treating common illnesses

Curing of URTI

Contraindication  
Infectious Control

Ritalin in ADHD  
Tramadol

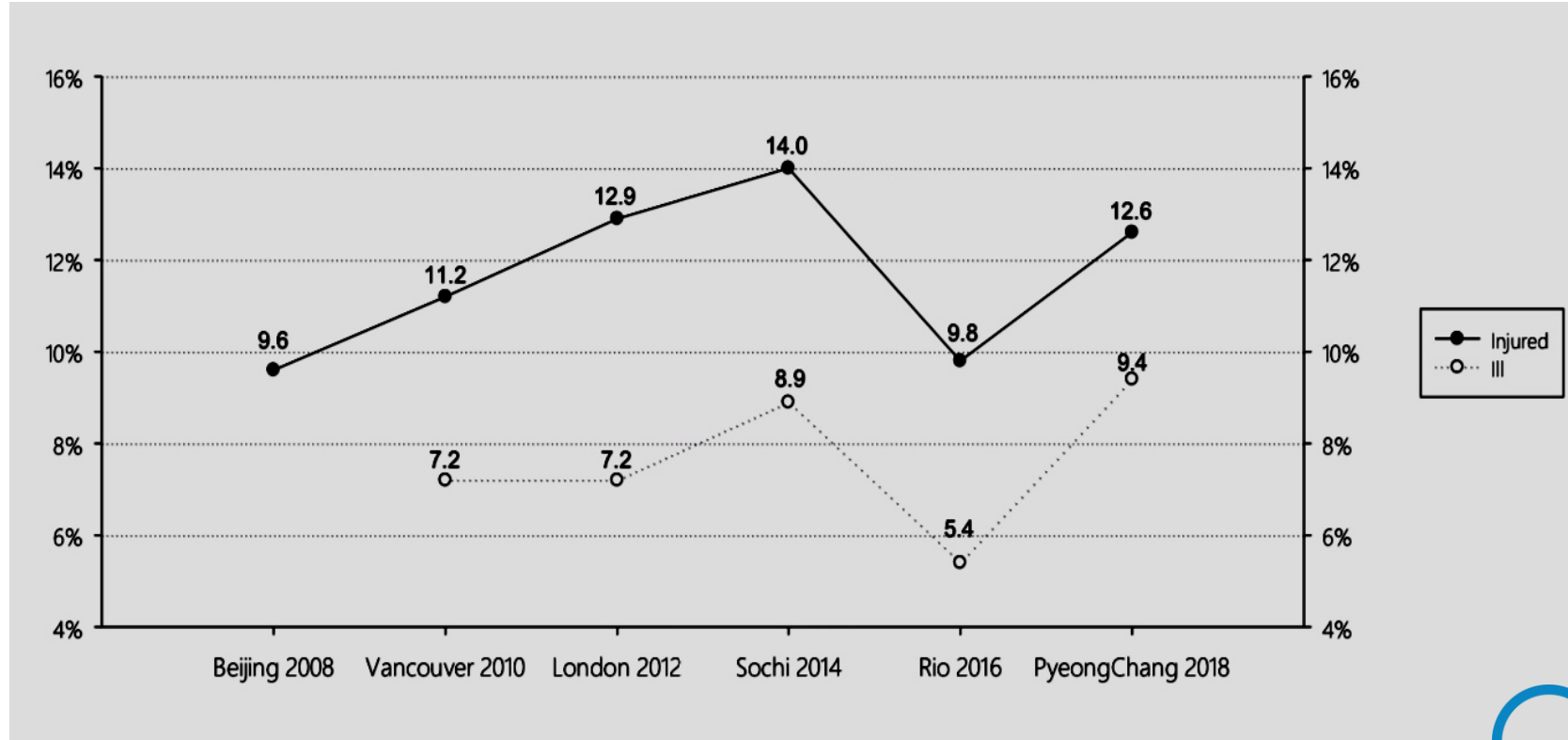


**Prohibited  
In-Competition  
S6 Stimulants-  
Pseudoephedrine**

Prohibited when its  
concentration in urine is greater  
than 150 micrograms per  
milliliter.

<https://www.wada-ama.org/en/content/what-is-prohibited>

# Incidence Rate in Olympic Games



Clinically diagnosed infections are generally reported as the most common cause of acute illness, with infection being the cause of **Respiratory Tract Illness** in 75% of cases.

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Schwellnus M et al. IOC consensus statement on load of sport and risk of illness. Br J Sports Med 2016;50:1043–1052

Elite athletes traveling to international destinations > 5 hours time differences from their home country have a **2-3 fold increased risk of illness.**

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Schwellnus M et al. Br J Sports Med 2012;46:816-21

# Role of Physician in HKSI Clinic

## 2. Preventive Care

URTI

Preventive Care and the  
Promotion of well-being



General Consensus



Clinical Evidence



Herd Immunity

Gärtner, B. C., & Meyer, T. (2014). **Vaccination in elite athletes**. *Sports Medicine*, 44(10), 1361-1376.



# Role of Physician in **HKSI Clinic**

## 2. Preventive Care

URTI

Preventive Care and the Promotion of well-being



Clinical Evidence  
*P < 0.001*



Compliance



Education and Policy

Protective Effect of **Hand-Washing and Good Hygienic Habits** Against Seasonal Influenza. A Case-Control Study.  
Mingbin Liu, MD. Medicine Volume 95, Number 11, March 2016

# Role of Physician in HKSI Clinic

## 2. Preventive Care

URTI

Preventive Care and the  
Promotion of well-being



Benefits



Clinical Evidence



Formulation

**Probiotic supplementation** for respiratory and gastrointestinal illness symptoms in healthy physically active individuals. Clin Nutr. 2014 Aug;33(4):581-7. doi: 10.1016/j.clnu.2013.10.002. Epub 2013 Oct 10.

# Team Illness Prevention Strategies



## **Are Team Illness Prevention Strategies (TIPS) effective?**

**Prof. Martin Schwellnus**

**Professor of Sport and Exercise Medicine, Faculty of Health Sciences, University of Pretoria, South Africa**

**Director: Sport, Exercise Medicine and Lifestyle Institute (SEMLI)**

**Director: IOC Research Centre of South Africa**



IOC  
ADVANCED TEAM PHYSICIAN COURSE

# Five Elements of TIPS

1. Pre-screening of individuals at increased risk
2. Ensure good hygiene practices
3. Prophylactic treatments for common infections
4. Early reporting of symptoms
5. Early isolation of players with symptoms

Original article

Team illness prevention strategy (TIPS) is associated with a 59% reduction in acute illness during the Super Rugby tournament: a control–intervention study over 7 seasons involving 126 850 player days

Martin Schwellnus,<sup>1,2</sup> Charl Janse van Rensburg,<sup>3</sup> Helen Bayne,<sup>4</sup> Wayne Derman,<sup>2,5</sup> Clint Readhead,<sup>6</sup> Rob Collins,<sup>7</sup> Alan Kourie,<sup>8</sup> Jason Suter,<sup>9</sup> Org Strauss,<sup>10</sup> Nicola Sewry,<sup>11</sup> Esme Jordaan<sup>3</sup>

TIPS during the Super Rugby tournament was associated with a **lower incidence of all acute illnesses (59%), infectious illness (49%) and illness burden (39%).**

Schwellnus M, Janse van Rensburg C, Blayne H, et al. Br J Sports Med Epub 1 August 2019.

# Pre-tournament Medical Screening

## **Respiratory:**

Screen for higher risk- past history of recurrent RT infections

Screen for allergies- AQUA screening questionnaire, serum IgE

Consider more specialized tests for EIB

**Consider flu vaccine**

## **Gastrointestinal:**

Screen for higher risk- NB: past history of travelers diarrhea

Screen for known GIT illness e.g. IBS, GERD, past history of abdominal surgery

## **Dermatological:**

Screen for past history of dermatological conditions (NB: allergies, infections e.g. fungal)

## During tournament- general advice

Discouraging sharing of utensils or water bottles  
Ensuring good sleeping habits

**Regular hand washing and/or use of personal  
antiseptic hand gel**

Avoidance of continuous exposure to air-conditioned  
or polluted environments

Consider high-dose vitamin C(>1000mg/day)

**Early reporting of symptoms**

**Early isolation of players at the onset of symptom  
development**

## Additional international travel guidelines >5hr time difference (2-3X increased risk)

Consider **prophylactic local antimicrobial spray,  
probiotics and antibiotic prophylaxis**

Prophylactic probiotics- option for prevention of  
travelers diarrhea, good safety profile, efficacy  
is variable and highly depended on the choice  
of the strains.

Prophylactic antibiotics- Rifaximin for travelers  
diarrhea chemoprophylaxis. Offer to athletes  
who have higher risk/relevant preexisting  
diseases





Evidence-based  
Sports Medicine





**Men Volleyball Team, Hong Kong Medical Association**





1. Treating common illnesses
2. Preventive care
3. Periodic Health Evaluation

# Role of physician in HKSI Clinic

<b>Heart and lung</b>	<b>no</b>	<b>within the last 4 weeks at rest.....during/after exercise</b>		<b>prior to last 4 weeks at rest...during/after exercise</b>	
Chest pain or tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shortness of breath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asthma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bronchitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Palpitations / Arrhythmias	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other heart problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dizziness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Syncope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SURNAME: \_\_\_\_\_ FIRST NAME: \_\_\_\_\_  
DATE OF BIRTH: \_\_\_\_\_ (DAY / MONTH / YEAR)  
NATIONAL TEAM: \_\_\_\_\_  
LOCAL CLUB: \_\_\_\_\_  
COUNTRY OF CLUB: \_\_\_\_\_



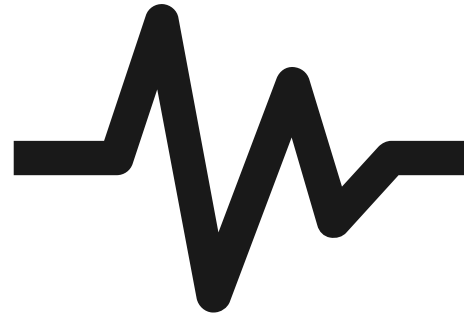
Periodic Health Examination



Evidence-based  
**Sports Medicine**

Preventive Care in  
**Sports Medicine**

**Preventive Care and the  
Promotion of well-being**



**American  
Heart  
Association®**



INTERNATIONAL  
OLYMPIC  
COMMITTEE

**FIFA®**



**ESC**

European Society  
of Cardiology

## Periodic Health Examination

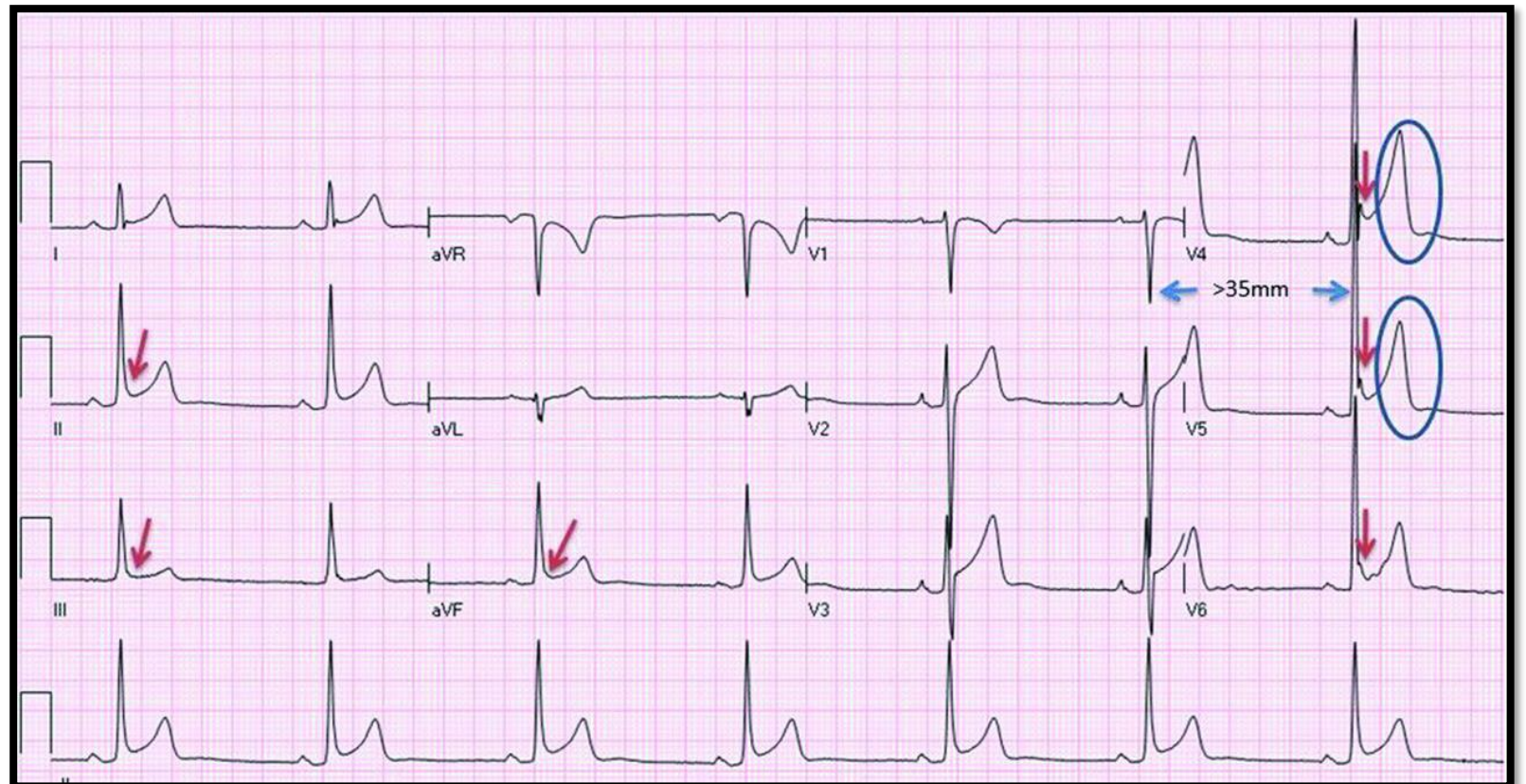


Evidence-based  
**Sports Medicine**

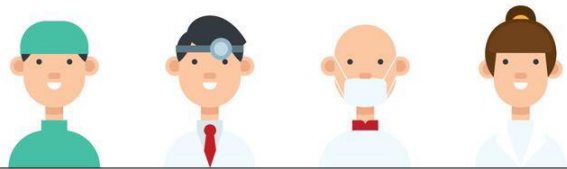
Preventive Care in  
**Sports Medicine**

Preventive Care and the  
Promotion of well-being

Sinus bradycardia (44 bpm), early repolarisation in I, II, aVF, V4-V6 (arrows), voltage criteria for left ventricular hypertrophy ( $S-V1 + R-V5 > 35 \text{ mm}$ ) and tall, peaked T waves (circles).



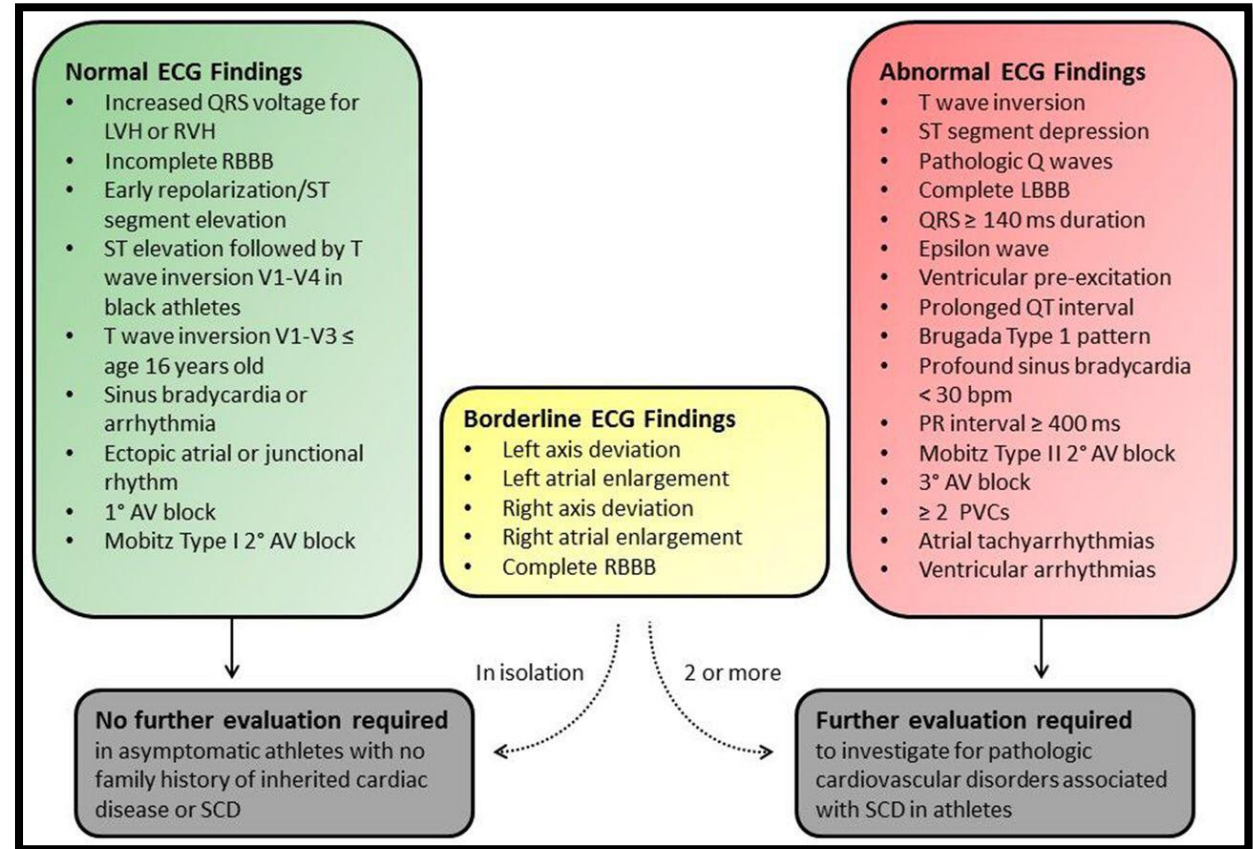
## Periodic Health Examination



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Sports Medicine

Preventive Care in  
Sports Medicine

Preventive Care and the  
Promotion of well-being



International criteria for electrocardiographic interpretation in athletes:  
Consensus statement. Br J Sports Med. 2017 May;51(9):704-731.

Periodic Health Examination

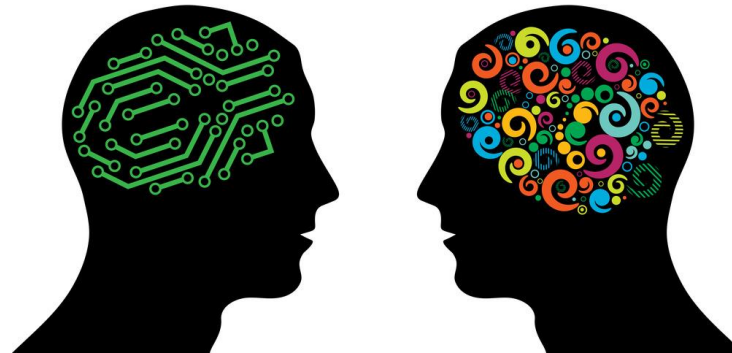


Evidence-based  
**Sports Medicine**

Preventive Care in  
**Sports Medicine**

**Preventive Care and the  
Promotion of well-being**

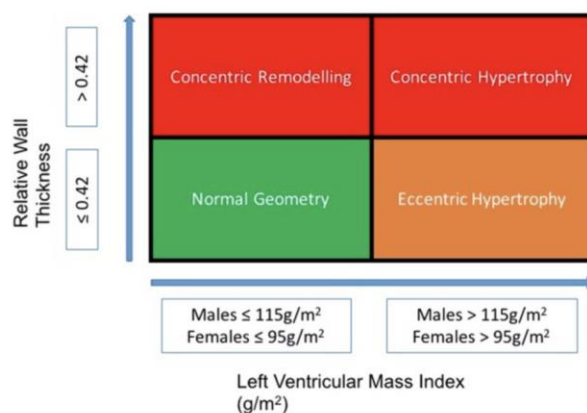
Normal under 2017 Criteria,  
ECG Interpretation for Athletes



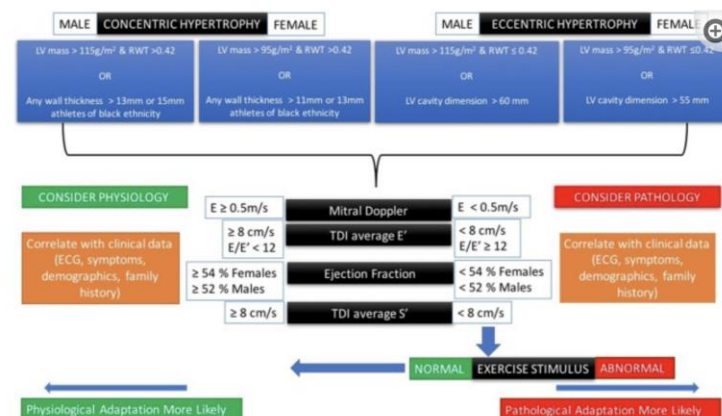


# A guideline update for the practice of echocardiography in the cardiac screening of sports participants: a joint policy statement from the British Society of Echocardiography and Cardiac Risk in the Young

[David Oxborough](#), PhD,<sup>1</sup> [Daniel Augustine](#), MD,<sup>2</sup> [Sabiha Gati](#), PhD,<sup>3</sup> [Keith George](#), PhD,<sup>1</sup> [Allan Harkness](#), MSc,<sup>4</sup> [Thomas Mathew](#),<sup>5</sup> [Michael Papadakis](#), MD,<sup>6</sup> [Liam Ring](#),<sup>7</sup> [Shaun Robinson](#), MSc,<sup>8</sup> [Julie Sandoval](#),<sup>9</sup> [Rizwan Sarwar](#),<sup>10</sup> [Sanjay Sharma](#),<sup>6</sup> [Vishal Sharma](#), MD,<sup>11,\*</sup> [Nabeel Sheikh](#), PhD,<sup>6</sup> [John Somauroo](#), FRCP,<sup>1</sup> [Martin Stout](#), PhD,<sup>12</sup> [James Willis](#), PhD,<sup>2</sup> and [Abbas Zaidi](#), MD<sup>13</sup>



Defining LV geometry.



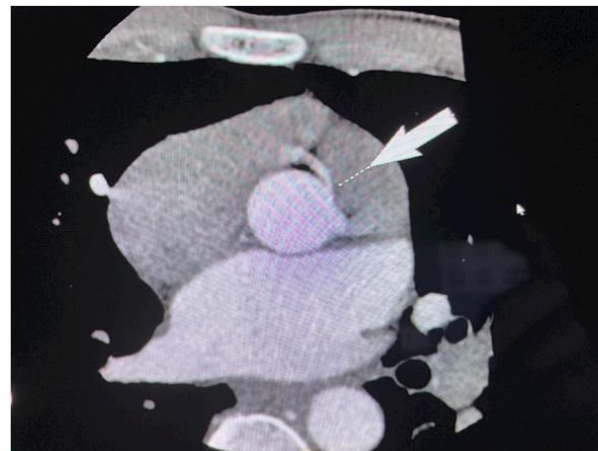
Algorithm when left-sided parameters suggest abnormal geometry.



# Conflicting Comments

## Pros:

- The anomalous origin of RCA from the left coronary cusp is a benign variation
- No evidence of vessel compression in stress echo 23 and exercise thallium 24



## Cons:

- High risk features of SCD according to the CTCA images, with elliptical slit like ostium in systole with acute angulation
- Suboptimal MHR in stress echo and exercise thallium





**Shared Decision Making**







*Thank  
you!*