## Hong Kong Association of Sports Medicine and Sports Science



## 香港運動醫學及科學學會

NEWSLETTER

August 2 2010 🔝 No. 8

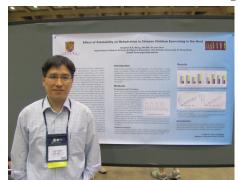
## Our participation in the American College of Sports Medicine 57th Annual Meeting & World Congress on Exercise is Medicine

ACSM's 57th Annual Meeting was held in conjuction with the "World Congress on Exercise is Medicine" in Baltimore, U.S. June 2 to 5, 2010.

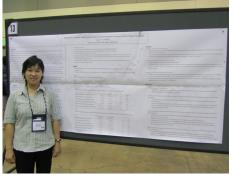
It attracted distinguished experts in the fields of basic and applied science, education, medicine, research, public health, health and fitness and sports performance, and offered cutting-edge research, hands-on workshops, and highlighted symposia. The World Congress on Exercise is Medicine was a unique international forum that addresses the science, practice, public health, and policy aspects of the impact physical activity has on disease prevention and health promotion.



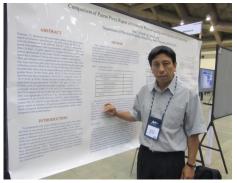
#### HKASMSS Council Members presented their research papers in the conference



"Effect of Palatability on Rehydration in Chinese Children Exercising in the Heat" presented by Prof Stephen Wong and Ya Jun Chen, Department of Sports Science & Physical Education, The Chinese University of Hong Kong.



"Association of Children's After-School Activity Level and Organized Physical Activity Program Participation" presented by Dr Peggy P.Y. Cheung, Hong Kong Institute of Education.



"Comparison of Parent Proxy Report on Children's Physical Activity with Pedometry and Accelerometry" presented by Dr. Lobo H.T. Louie & Prof Bik Chow, Department of Physical Education, Hong Kong Baptist University.



It is the photo taken with the Exercise is Medicine™ Task Force Chairman Robert E. Sallis, M.D., M.P.H., FACSM, and our fellows Prof Stephen Wong, Prof Stanley Hui & Prof Lobo Louie

#### HKASMSS supports "Exercise is Medicine" Campaign

The Exercise is Medicine Campaign is to make physical activity and exercise a standard part of a disease prevention and treatment medical paradigm in the United States and everywhere in the world. The campaign was launched in November 2007 by the American College of Sports Medicine (ACSM) and the American Medical Association (AMA).

It aims to encourage primary care physicians to include exercise when designing treatment plans for patients. It emphasizes that exercise and physical activity are integral in the prevention and treatment of diseases, and should be assessed as part of medical care and integrated into every primary care office visit.

Dr. Lobo Louie Vice President HKASMSS

## Sports Medicine, Sports Science, and the Athletes

## 運動醫學、運動科學、運動員

#### 壁球運動員麥珮軒小姐專訪

香港壁球選手麥珮軒於去年在東亞運動會壁球賽中取得女子團體金牌,今年退役重返校園,獲香港中文大學中醫學院 取錄修讀為期六年的中醫中藥學位,促進運動員以中藥調養身體和加強認知。

麥珮軒一九九八年起成為香港體育學院全職獎學金運動員,加入香港壁球代表隊,獲第十屆亞洲壁球錦標賽女子團體項目金牌,二零零六年取得第十五屆多哈亞運會壁球女子單打賽事銅牌及於二零零九年東亞運壁球女子團體項目獲金牌。

我們的會訊編輯馮英騏近日為麥珮軒進行了以下專訪:

馮英騏: 麥珮軒小姐,我知道你已經做了十二年壁球運動員,可以分享一下你最難忘既比賽嗎?



了!空調很冷,即使我很大力打,球也好像熱不來。因為始終要通過五面牆(連地板),球不熱的話會很易失分。賽事開始的時候,我的心情未能調節,在對手強攻下連輸七分。後來,我冷靜過來,而對手速度減慢,我才一分一分地取回來,最終得到勝利,取得銅牌。真是驚險!

馮英騏: 在你的運動生涯中有沒有嚴重的傷患?有否因傷患而 打算退休呢?

麥珮軒: 在我十二年的壁球運動生涯中,曾受三次需長時間復元的傷患。第一是在訓練初期,我的腳腕受傷了,四年來要不斷以黏膏帶來紮腳以冤痛及保持其穩定性。第二是在中期,我的右膊,右手肘及右腕都勞損了,看過很多不同的治療,包括物理治療、鐵打、刮沙、拔罐都不能治好。之前四年即使有腳傷也沒有停止訓練及跑步,痛是可以承受的,但好不容易才挨過了那四年,現在又四年,此段時間真的想過退出。幸好最後找到「高人」,做了穴位和針灸治療,用了差不多一年時間治好了。第三是後期,我的膝蓋因打了多年壁球開始退化了。完成亞運的任務後,我對自己說,再多堅持一段時間吧!我跟教練說過會待完東亞運才退出,結果也能完金夢。

馮英騏: 在衆多學科中你為何會選擇中醫作為進修目標呢?

麥珮軒: 我自小陪父母看中醫治病調理身體,當時看到的中醫師總是親切和藹,常常嘘寒問暖,很關心人的。所以對中醫

這個行業留下了很深刻的印象。加上自己在香港體育學院當上了運動員後,經常因為比賽受傷或長期訓練而導肌肉關節勞損,接受物理治療服務時,治療人員也會為我進行針灸療法。藉此,我的痛楚也很快得到紓緩。另外,我相信每個運動員都會因為想得到好成績而加大自己的訓練量,或因過分緊張而失眠。我自己便因時時刻刻要控制體重而感到很大的壓力,更慢慢得到了胃病。每次當知道自己是無法達標,感到有壓力時,便會胃痛。之後看了許多醫生,最後都是中醫把病治好。

馮英騏: 那你覺得中醫在那些方面能夠幫助到運動員呢?

麥珮軒: 我覺得中醫在推拿,針灸,尤其是養生法方面都能夠幫助到運動員。因中醫是按照個人體質、四季、地理環境、心理狀態,去調節起居飲食,以確保我們的精、氣、血,能得以「攝、養、保」。所謂「正氣存內」才能身體健康,提高運動水準。若能將此推廣並教育下一輩,尤其是運動員,相信能提升運動員的表現。

馮英騏: 在退休運動員生涯後,你對將來有何既期望呢?

麥珮軒: 六月尾我已經正式退出體院,現在準備於九月當全職學生,入讀香港中文大學的中醫學學士學位課程。當我完成

此課程及正式執業後,我期望來看我的每一個人的身體狀況都得以改善。看見他們康復的時候,那種滿足感是任何東西都換不來的。另外,除了為人治病,我更想將中醫養生的文化推廣至各個階層,令所有人明白並實踐中醫養生之道。此外,曾經是運動員的我,更希望將中醫治療帶進體育,改



善運動員的身體素質,從而提升運動水準。

有次我聽一個醫學講座,有一在場觀衆說:「我全家都對中醫 很信任,但對中藥不時發生的安全性問題便有點而卻步」。這 也是我的心聲,所以我希望政府可以儘快落實監察中藥的制 度,讓更多人能體現中醫藥帶給他們的療效。

#### 重要國際性賽事成績一覽:

| 年份   | 賽事 組別            | 成績 |
|------|------------------|----|
| 2009 | 東亞運壁球女子 團體項目     | 冠軍 |
| 2008 | 杭州壁球錦標賽 子公開組     | 亞軍 |
| 2007 | 巴基斯坦壁球公開賽 子公開組   | 冠軍 |
| 2007 | 全中國壁球公開賽 子公開組    | 冠軍 |
| 2006 | 第十五屆多哈亞運會 子公開組   | 季軍 |
| 2006 | 第十三屆台灣壁球錦標賽 子公開組 | 季軍 |



圖右一:麥珮軒小姐

## 運動醫學與足球發展

在世界盃的狂熱下,香港的普羅大衆必定有觀看世界盃賽事。足球是一種身體接觸頻繁的運動,當中攔截及頭球更是經常導致創傷發生。大家可否記得法國對南非的賽事中,8號球員哥古夫 (Yoann Gourcuff) 在爭頂頭球時用手肘擊中對方頭部,即時被紅



於2005年,國際足協(FIFA)的醫學測試及研究中心

(F-MARC)在科研雜誌《British Journal of Sports Medicine》刊登了有關足球球員頭部創傷的綜合分析。文章指出頭部創傷的主要成因是頭與頭和頭與手肘的碰撞,而頭部創傷更會令球員有長遠的後遺症,所以分析建議國際足協必須採取預防頭部創傷的措施。他們考慮的大前提是「改變技術規則」、「改變足球」和「配戴頭盔」作為減少頭部創傷的措施。綜合前人研究及各方而考慮,總結出「改變足球」和「改變技術規則」為可行的方法。



# Impact Reduction Approaches Skills and Regulating Mass, Pressure Head to Head Head to Head

Head to Extremity 在2006年德國世界盃開幕前夕,國際足協宣佈所有球證在賽事同時不可以 有球證在賽事目前 有球證等對方 都會嚴懲對方 等的 等 等 的 行為。 結果 在 2006年世界 。 數 目 有明顯下 降

的趨勢,可見球例改變後的成效。這是繼2002年日韓世界盃以紅牌嚴懲「從後截擊」的行為後,國際足協以改變賽例的方式減少球員受傷。值得一提的是,所有賽例的改善都是由科研方法來訂定的。

總括而言,科研對運動項目的發展來說,實在是不可或缺的。國際足協的成功例子可以引為借鏡。相信未來的方向必定是以科學證實(Evidence-based)為中心前進。

#### 參考文章:

Kirkendall, D., Jordan, S., Garrett, W. (2001). Heading and head injuries in soccer. Sports Medicine, 31(5), 369-386. Dvorak, J., Judge, A., Grimm, K., Kirkendall, D. (2007). Medical Report from the 2006 FIFA World Cup Germany. British Journal of Sports Medicine, 41(9), 578-581. Fuller, C., Junge, A., Dvorak, J. (2005). A six year prospective study of the incidence and courses of head and neck injuries in international football. British Journal of Sports Medicine, 39(S1), i3-i9.

莫鑑明先生香港中文大學醫學院矯形外科及創傷學系碩士研究生 美國國家體適能總會(NSCA)之認可體適能專家

## 傷殘人士連動競賽V.S.分級競賽

經常聽到身邊的運動員形容傷殘人士運動就是組別(Class)的比賽、分組(Classification)的較量。只要身體條件或活動能力能界乎於一個級別或組別的上限,運動員已具備該運動的天賦,得獎只是「計日可待」。

我曾經認識一位國内的運動員,因為他能夠在田項分級中有較大優勢,結果他由輪椅劍擊轉為田項運動員,最終他能夠奪得奧運金牌。反之如果他當時繼續參加輪椅劍擊,恐怕要踏上奧運的頒獎台上,他還是有一段差距。畢竟在輪椅劍擊中他的身體條件沒有帶給他絕對優勢。

這種類似健全人士運動選材的方法,近來在國內外傷殘人士運動中已極為普遍。雖然本人覺得運動技術是可鍛鍊的,但無疑有較好的身體條件當然會比較容易事半功倍。不過這類選材方法其實並不容易,因為選材者需要對分級非常非常了解(最好本身是Classifier),否則錯誤評估只會造成錯配。另外選材者需要追貼分級趨勢,因為國際殘奧委員會(IPC)的運動科學委員會已決定在2012殘奧後,在將來各個運動項目採用Evidence-based classification system,而田徑將會是第一個被重組的項目(試點)。在2012殘奧後所有田徑現役及新的運動員都必須用新的標準及測試進行新的分組(classification)或再分組(reclassify)。該研究報告其實已於去年刊登於一份學術期刊「英國運動醫學雜誌」"British Journal of Sports Medicine"中1。所以相信在不久的將來其他運動的分級亦相繼有所變動。

由於筆者的博士論文也是跟傷殘人士運動分級相關,所以對於這話題相當有興趣。試想想從1960羅馬殘奧到2008北京殘奧、從Medical classification到Functional classification,傷殘人士運動其實也不斷地演化。還記得2008年北京奧運中也有歷史性的兩位傷殘運動員——波蘭乒乓球運動員Natalia Partyka和南非游泳運動員du Toit, Natalie,同時參加奧運會(Olympic Games)和殘奧會(Paralympic Games),所以運動員不應被組別(Class)所限制,只要有技術大家也可以參加無限級別或跟南非跑手Oscar Pistorius—樣越級比賽。畢竟組別(Class)是死,技術是生的。

#### 參考文章:

<sup>1</sup> Tweedy, S. M., & Vanlandewijck, Y. C. (In-press). International Paralympic Committee Position Stand - Background and scientific rationale for Classification in Paralympic Sport. British Journal of Sports Medicine. Beckman, E. M., & Tweedy, S. M. (2009). Towards evidence-based classification in Paralympic athletics: evaluating the validity of activity limitation tests for use in classification of Paralympic running events. British Journal of Sports Medicine, 43(13), 1067-1072.

馬英騏先生 香港中文大學醫學院矯形外科及創傷學系博士研究生 前輪椅劍擊運動員

## A new coming sports scientist to Hong Kong — Angus Burnett



From mid August 2010, we shall have a new sports scientist, Dr Angus Burnett, joining Hong Kong. Angus will be joining the Department of Sports Science and Physical Education at The Chinese University of Hong Kong, and will be teaching sports biomechanics and related subjects.

Angus is indeed not a newbie to Hong Kong. Since

he works in Australia, most of the time when he travels for conferences, he may stop over Hong Kong. I first met Angus in 2000 when he attended the XVIII Conference of the International Society of Biomechanics in Sports (ISBS), organized by Prof Youlian Hong. At that time I was just a fresh graduate who helped organizing the conference, and Angus was already a world-wide known researcher. We then met each other for a couple of times during the ISBS annual conferences at Ottawa, Canada (2004),

Beijing, China (2005), and Salzburg, Austria (2006). This year we met again at Marquette, Michigan, US, for the ISBS conference again, and I learnt from Angus that he is moving to Hong Kong.

Angus is very experienced in research in sports biomechanics, spinal biomechanics, clinical rehabilitation, and strength and power development in athletes. He also has a unique blend of theoretical and practical experience as he worked at the Western Australian Institute of Sport in the late 1990's and also coached elite junior track and field athletes for during this time. We shall try to work together to promote sports biomechanics in Hong Kong. Last but not the least, I welcome Angus joining Hong Kong, and congratulate him for receiving the Fellow of International Society of Biomechanics in Sports (FISBS) this year in the ISBS annual conference.

Daniel Fong, PhD, FISBS Editor of HKASMSS Newsletter Council Member of HKASMSS

## The 3rd HKASMSS Student Conference on Sport Medicine, Rehabilitation and Exercise Science

The 3rd HKASMSS Student Conference on Sport Medicine, Rehabilitation and Exercise Science was successfully held on 19 Jun 2010(Sat) at LT2, Teaching Complex at Western Campus at The Chinese University of Hong Kong. It was well-attended by over 180 participants from all fields related to sports medicine, rehabilitation and sports science. Participants include not only current undergraduate and post graduate students of the fields, but also participants such as orthopaedic doctors, physiotherapists, nutritionists, and physical fitness coaches.



The HKASMSS Student Conference is a biennial conference with the aim to provide a platform for local postgraduate students studying in sports-related programs to exchange their research ideas, to enrich their experience in delivering academic presentations, and to gain exposure to other professionals in sports medicine and sports science.

This year, the student conference is co-organized by the Hong Kong Association of Sports Medicine and Sports Science (HKASMSS), the Department of Sports Science and Physical Education of the Chinese University of Hong Kong, WHO Collaborating Centre for Sports Medicine and Health Promotion and The Hong Kong Jockey Club Sports Medicine and Health Science Centre. It is generously funded by the Hong Kong Jockey Club Charities Trust.



The conference started with opening remarks given by Dr. Lobo Louie, the Vice-president of HKASMSS and Prof. Stephen Wong, the Conference Chairman. Together with other invited guests including experts in the fields such as Prof. Frank Fu and Prof. KM Chan, who is also the founding president of HKASMSS, they officiated the student conference with a ribbon-cutting ceremony.



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This year, a record-breaking number of paper submissions were received from various education institutes in Hong Kong. It is the first time that both oral and poster presentations were staged. There were altogether 22 oral presentations and 18 poster presentations delivered by student participants in the meeting. The oral presentations were divided into 4 symposia, namely, Sports Medicine, Biomechanics, Exercise Science, and Physical Activity and Health.



The 3rd HKASMSS Student Conference has also brought in new elements which included 2 keynote lectures delivered by overseas guest speakers and a lunch symposium. Prof Ron Maughan and Dr Susan Shirreffs, who are experts in sports nutrition from Loughborough University in United Kingdom, were invited to deliver keynote lectures on sports nutrition to the participants.



A lunch symposium on "Tips for PhD students and post-docs aiming for a successful academic career" was presented by Prof Stephen Wong and Dr Parco Siu from the Hong Kong Polytechnic University, dedicating to those who want to develop an academic career.

At the end of the event, Dr Ya-Jun Chen, the chairman of the scientific committee announced 6 best paper awards winners on behalf of the Scientific Committee. The 4 Best Paper Award (Oral) winners are Mr. Wai-Man Chung (Department of Rehabilitation Sciences, The Hong Kong Polytechnic University), Ms. Shirley Siu-Ming Fong (Department of Rehabilitation Sciences, The Hong Kong Polytechnic University), Ms. Catherine M Capio (Institute of Human Performance, The University of Hong Kong)

and Ms. Fiona CM Ling (Institute of Human Performance, The University of Hong Kong). And the 2 Best Paper Awards (Poster) went to Mr. Gang He (Department of Sports Science and Physical Education, The Chinese University of Hong Kong) and Mr. Andy Choi-Yeung Tse (Institute of Human Performance, The University of Hong Kong). HKASMSS was glad to present a cash prize of \$500 to each of them.



Moreover, Mr. Wai-Man Chung and Ms. Fiona CM Ling were awarded the Best of the Best Award, and an opportunity to go on an exciting and rewarding exchange trip to Japan! Once again congrationations!



With encouraging response from the participants, the Student Conference was proved to be an overwhelming success. It clearly highlighted the depth of academic talent and research ability of local students in the areas of sports medicine and sports science. It was also undoubtedly a valuable learning experience for the students and prepared them for similar occasions on a larger scale in the future.

### **Past Activities**

#### Seminar on "Exercise is Medicine"

On behalf of HKASMSS, one of our council memebrs, Dr. Jonathan Wai has attended a seminar on "Exercise is Medicine" held by The Physical Fitness Association Hong Kong, China on 8 May 2010 at the The Hong Kong Polytechnic University. HKASMSS is one of the co-organizers in the Hong Kong "Exercise is Medicine" Project. "Exercise is Medicine" is a global initiative focused on encouraging primary care physicians and other health care providers to include exercise when designing treatment plans for patients. The concept of "Exercise is Medicine" were introduced to professionals and the public in the Seminar.



## American College of Sports Medicine (ACSM) 57th Annual Meeting & World Congress on Exercise is Medicine

On behalf of HKASMSS, Prof. Stephen Wong and Dr. Lobo Louie has attended the ACSM 57th Annual Meeting and World Congress on "Exercise is Medicine" on 2-5 Jun, 2010 in Baltimore, USA.

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## **Upcoming Events**

#### **SMART Convention 2010**

The SMART Convention 2010 is surely an event that must not be missed for all those involved in sports and rehabilitation, especially those interested in Running and Hiking! Running and Hiking is the theme of the SMART Convention this year. There will be exhibitions about the new technology, products and services about running and hiking, public seminars covering interesting topics as well as lectures for professionals of the fields.



SMART stands for Sport Medicine and Rehabilitation Therapy. It is a signature annual event which aims to improve the professional standard of exercise-for-health services and rehabilitation services after sports and occupational injuries, as well as to encourage all segments of society to enjoy the benefits of exercise. HKASMSS is one of the organizers of the event. It will be held on 9 Oct 2010 at Postgraduate Education Centre in Prince of Wales Hospital.

#### The 16th Asian Games Science Congress in Guangzhou



The 16th Asian Games is going to take place on November 12-17, 2010 at Guangzhou, China. Since the 1980s each edition of the Asian Games Organising Committee (AGOC) organises the Sports Science Congress in collaboration with the host city, and brings together sports scientists, researchers and scholars to share their knowledge, experience and expertise in sports science. This year, the 16th Asian Games Science Congress will be held on 10-12 October 2010 in Guangzhou.

The congress will be hosted by the General Administration of Sport of China, GAGOC and China Sport Science Society, with Guangzhou Sport University as the organiser. The aim of this quadrennial congress is to create a multi-disciplinary forum for sports science individuals and groups from all fields of sport sciences in Asian countries and regions, and it provides a state-of-the-art view of scientific theories, applied and clinical sciences in sport science for the continent. The Congress will include spoken presentations, workshop discussions, symposiums, published reports and other written materials. It is anticipated that over 600 sports experts and scholars from more than 40 Asian countries and regions will attend the 16th Asian Games Science Congress.

For more information about the 16th Asian Games Science Congress and registration, please visit http://www.agsc.gz2010.cn/en/home.action.

For more information about the 16th Asian Games, please visit http://www.gz2010.cn/en/.

## 運動大字典專欄

本會獲蘋果日報的邀請,自本年一月起為其健康與醫療版撰寫運動大字典專欄,逢星期一刊登,至六月底共邀請了二十位會員為此專欄撰寫了二十四篇文章。

歡迎各位本會網站 www.hkasmss.org.hk 閱讀完整剪報。

以下是本年五月至六月期間刊登的文章:

2010年5月24日



2010年6月7日



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損

逄周一刊出

隨着高爾夫球運 動的普及, 距高球相 關的肌骨骼損傷也越

來越常見。這些損傷主要是由於不正確的擊球 動作所造成,往往需要很長的時間才能康復 讓球手望場興嘆好一陣子。中文大學醫學院矯 形外科及創傷學系運動醫學組的研究顯示,這 些損傷最常見於左手腕,其次是下背部,左手: 左肩,

#### 官增強肌肉力量

如果你是右手球手,可能會問:「為甚麼左 手腕最容易受傷?」答案是由於運動員在整個擊 球過程中,左手腕有如一個彈弓般拉伸、延展 及變形以觸發着右手腕的活動,這往往超出了 腕關節的正常活動範圍,其動作幅度亦超出了 其他運動所需。此外,腕關節在擊中球時承受 極大壓力,亦是左手腕容易受傷的原因之

至於高爾夫球手的背部疼痛,一般來説可 分為物理性背痛和椎間盤類背痛。物理性背部 35 疼痛通常不引發其他部位的疼痛。疼痛在身體 活動時加劇,休息時減輕。其預防措施包括增 強肌肉力量,正確揮桿和保持正確姿勢。相比 之下,椎間盤類背痛由椎間盤處開始疼痛,而 且往往導致坐骨神經痛及神經根刺激。其他導致背痛的原

因包括椎管狹窄,及小面關節病,常見於老球手中。 - 旦不幸有任何肌骨骼損傷,一般都建議球手充份 休息,停止任何運動。長遠來說,建議以下預防措施來 減低創傷的機會:

- 1. 注意打球姿勢, 改善打球動作
- 2. 改善揮桿:輕握球桿可減少擊中球時手和手腕的壓力
- 3. 選擇適合的球桿
- 4. 適當的負重訓練,可以加強肌肉的力量,而且幫 助肌肉更好地應付突然活動帶來的能量
- 5. 做好上場前的熱身運動

2010年5月10日

膝蓋痛是本港其 大字典 中一種非常普遍的痛 症,除非是運動創傷,否則大多數的膝蓋痛也

是由膝關節勞損退化所引致。它會不知不覺間 慢慢開始,最初病徵並不明顯,只會於走遠路 及上落樓梯時才感覺到輕微疼痛,但當患者發 現膝蓋有紅腫、發熱、痛楚,甚至關節變形時, 情況已相當嚴重。

#### 只能做簡單的伸展

常言運動能改善健康, 那麽膝蓋痛患者可 以做運動嗎?

膝蓋痛大致可以分為急性期(發炎)、亞急 性及慢性期。當急性期時,患者就算坐下或晚 上睡覺也會有疼痛、腫脹及發熱等症狀,若這 時做不適當的運動及動作(特別是負重運動、蹲 身動作或上落樓梯),只會增加炎症的痛楚及加 深病情,因此這時我們只能靠冰敷、休息和藥 物來減輕症狀。同時只能做一些簡單的伸展及 鬆弛運動,以保持膝關節的活動幅度及筋腱的 柔軟度。

#### 應請教物理治療師

當病情由急性期進入亞急性及慢性期,發 炎症狀會逐漸減少,但還會有關節僵硬、筋腱 緊張、肌肉無力及功能障礙。這時可以多做一 些鬆弛運動增加 膝關節的活動能力及靈活性, 也可以同時進行強化肌肉的鍛煉來加強肌肉力 量,從而達致保護關節的效果,並進一步回復 日常的活動。市民若有膝蓋痛問題,最好還是 請教醫生及物理治療師尋找合適的治療方案。

## 

女性的生理結構、功能和 心理與男性有明顯區別,以往 有一些並沒有設立女子組別的 項目,如馬拉松長跑,但經過 科學的分析和監控, 女性運動 員同樣能夠跑出驕人的成績。

女性青春期較男性約早兩 年出現,在10歲左右之前, 女孩的發育速度比男孩快, 所以運動能力略高於同齡的男 孩。當男孩進入發育期後, 身高和運動能力就明顯招越女 孩。

#### 韌帶彈性較好

踏入成年期,女性心臟的 重量較男性輕約10%至15%, 體積約小於男性 18%, 容量小 150ml 至 200ml;安靜時,女 性的心率較快,每分鐘快過男 性約 10 次左右,而收縮血壓 和舒張血壓,分別平均低於男 性約 10mmHg 和 5mmHg。從 以上的心血管系統分析,女性 的心肺耐力較男性遜色。由於 運動時必須依靠加快心率,來 維持足夠的心輸出量, 在運動 後的恢復過程中, 女性心率的 恢復速度也會較慢。女性進行 耐力運動前,只要賽前有足夠 的科學化訓練和均衡營養的監 控, 是不會對身體產生負面影 變的

女性上肢和腰部的肌肉力 量只有男性的三分之二,下肢 爆發力約為男性的四分三。女 性的身體脂肪含量約佔體重的 25%至30%,皮下脂肪約為男 性的兩倍。由於女性的皮下脂 肪較厚,產生良好保溫的保護 作用, 並有助增加身體在水中 的浮力,有利女性參與冰雪類 和游泳運動。

由於女性的肌肉和韌帶彈 性較好,關節活動的範圍較男 性大; 肩膊窄而盆寬, 造成女 性身體重心較低,所以適合參 與平衡力需求高的體操項目。 至於月經對女性做運動會否造 成障礙? 狺是因人而異的, 般認為, 在月經期間運動負荷 量不宜過大,適可而止。

#### 2010年5月17日



在中國傳統的產前護理觀念 運動是孕婦的禁忌。但研究顯 示適量的運動能紓緩孕婦於懷孕期 間的身心不適,更能令分娩過程更 順暢,加快產後復元,對母親和胎 兒都有莫大的益處。

#### 日做30分鐘帶氢運動

帶氧運動能促進血液循環,對 懷孕初期的孕婦最為有益,當中包 括游泳及散步

建議孕婦每天進行不多於 30 分 鐘的輕量帶氫運動,如孕婦能在運

## 逢周一刊出

動期間自如地交談而不感到氣喘, 即表示運動的強度適中。但應注意 因受荷爾蒙影響,孕婦的韌帶組織 較為鬆弛,容易扭傷,所以運動前 的熱身尤其重要。

參加產前運動練習班,以紓緩懷孕 的不適症狀。背肌及腹肌運動可以 減輕因胎兒重量而產生的背痛; 而 小腿運動可減少腳腫及預防抽筋。

此外,產前運動能幫助孕婦準 備生產,透過學習呼吸方法來紓緩 牛產禍程的陣痛。孕婦更應於產前 開始強化會陰肌肉,並於分娩後繼 續練習,以預防產後失禁。

自然分娩的孕婦一般可在產 後第二天開始輕量的步行及伸展運 動,剖腹生產的孕婦官先詢問醫生 在懷孕第 16 周後,建議孕婦 的意見,確保傷口的癒合情況理想 才開始運動。

> 產後運動可以幫助孕婦收身, 同時保持心境開朗,預防產後抑 鬱,加快身心復元。運動能促進母 嬰健康,但切記要量力而為,如有 任何不適,應立即停止,並向醫生 查詢。

#### 2010年6月14日

## 逢周一刊出 運動太子典

兒童階段是骨骼生長的重 要時期。在兒童時期,一些舊 的骨骼會不斷的被新的骨骼取 代。因此,兒童及青少年是骨 骼保健的黃金時期。其間均衡 的鈣質、運動及陽光是養成健 全骨骼不可或缺的三大要素。

一般家長較認識鈣是骨骼 健康的重要營養素,兒童每天 只要吃一些鈣質豐富的食物, 如花椰菜、芝士、乳酪、豆 腐和牛奶等, 鈣的攝取量就足 夠。

#### 每天運動量約一小時

至於甚麼運動對於兒童骨 骼的發育是最好?答案就是載 重式的身體活動。簡單來説除 游泳外,所有運動都屬於載重 式運動,如步行、跑步、遠足、 跳舞、體操及各種球類活動。 處於骨骼生長黃金時期的兒童 青少年,運動應多元化,培養

他們參加運動的興趣和習慣, 因為興趣和習慣是終身堅持運 動的基礎;另外也可避免過早 發展某種專項,如長期游泳可 能影響骨質生長,故應配合其 他運動加以平衡。

兒童青少年由於年齡差異 較大,身體的發育水平明顯不 同,所以制訂統一的運動處方 幾乎不可能,一般來說,幾 乎所有年齡層的兒童皆需要每 天約一小時的運動量,身體發 育正常的少年兒童,按照喜好 及身體條件,參加不同形式的 體育運動。兒童活潑好動,注 意力不易集中,因此,每種活 動持續的時間不宜過長,活動 的形式要多樣化;運動量也要 適當,不應超過身體的負擔能 力,以免過勞受損。兒童處於 骨骼成長期,充份利用這時期 進行適宜的鍛煉,對人體骨骼

健康將產生深遠有利的影響。

#### 2010年6月28日

逢周一刊出

運動可強身健體外, 更能預防及治療各種疾病, 例 如冠心病、高血壓、中風、糖尿病、癡肥、退化性關節 炎和各種情緒病。用甚麼正確方法做運動才能夠帶出以 上功效? 這就是今天要談的運動處方。

(一)運動可分為帶氧運動,例如步行、緩跑、行山、 游泳、單車、跳舞及各種球類運動。這些都是耐力運動, 對心肺功能,調節體重最有功效。

(二)肌肉訓練運動,例如舉重,掌上壓、以及各類 阻力健身器械,都是利用負重去增強肌肉力量,改善身 體線條,有助增加自我照顧能力,預防跌倒和骨質疏鬆。

(三)至於要有幾多運動量才足夠?成人最好每周有 150分鐘中強度帶氧運動,例如每周五天,每次30分鐘 至於中強度也就是運動時開始感到有些吃力,心跳加快, 出汗,呼吸用力但仍能如常説話。

(四)實際上,只需根據個人需求,興趣、身體狀況 和資源,便可作出一個合理選擇。例如青年人最喜歡足 球運動,一星期踢兩場波便能提供足夠運動量。又像-群退休長者,每早上山晨運,然後一同嘆早茶,有體能 鍛煉及精神交流,對身心大有裨益。而肥胖及膝頭退化 關節炎患者,則不應跑步,但可作游泳或單重運動。

(五)最後可請教你的家庭醫生,為你提供專業指導。 萬事起頭難,請不要遲疑,即日開始分享運動益處。 註:《運動大字典》專欄完結

#### 2010年6月21日



逢周一刊出

運動員為了參賽 時間和努力,充份表

現出他們對體育、比賽和觀眾的 ping 尊重,但有些理则具何了。 現而使用俗稱「興奮劑」的藥物,

我們稱為 Doping,做法違反了公平比賽原則。

Doping 這個字可能源自荷蘭一種用葡萄皮 釀製的酒「Dop」,據説當時的戰士喜歡在打仗 前飲用這種酒以提高戰鬥力,現在「Doping」 則指運動員利用藥物或其他人工方法提升表現。

#### 身體有不同程度損害

大家或會記得80年代加拿大百米飛人莊 遜,打破百米短跑世界紀錄和漢城奧運金牌, 但之後被驗出尿液中對類固醇有陽性反應。「類 固醇」是其中一種最常聽見的濫用藥物,因「代 謝類固醇」能幫助肌肉生長及刺激紅血球生產, 提升運動表現,故在未有藥檢的70年代,東歐 運動員使用類固醇是頗常見的。但伴隨着獎牌 和名利而來的是身體的不良影響,如器官受損、 荷爾蒙失調及不育。

近年,反興奮劑工作迅速由藥物轉移到「血 液興奮劑」。有運動員在大賽前數個月,像捐 血般提取自己的血液,然後在臨近比賽前再接受「輸血」 提高攜氧血紅蛋白的水平,從而增加帶氧量和運動表現, 更有運動員注射促紅細胞生成素 (EPO) 以提高紅血球的 水平。這些利用人工的方法以提高攜氧血紅都被國際奧 委會視為「血液興奮劑」,於1990年後全面禁用

使用「興奮劑」雖可能提高比賽時的表現,但不同 的藥物或方法會對運動員身體造成不同程度的損害,也 對對手造成不公,他們不但欺騙了賽會,更欺騙了對手、 觀眾甚至自己,所以我們應當支持「乾淨」(無興奮劑) 的體育世界。

香港運動醫學及科學學會 會員 何溥仁醫生



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## **N**elcome to share your news

If you have any news related to sports, sports medicine and sports science, please do not hesitate to send us an email. Upon approval, your notice will be published in our newsletter. We are looking forward to receiving updates from you!

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