

Biggest - yes, but best?

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The annual conference of the American College of Sports Medicine (ACSM) is the largest sports medicine and science event in the world, with 2006 setting a new record of just over five and a half thousand attendees. ACSM draws delegates not just from all parts of the United States but also from most parts of the globe. Australian sports medicine and science is always strongly represented. Attending ACSM means an opportunity for me as CEO of Sports Medicine Australia to meet more SMA members face to face than a year of travelling around Australia.

This article is a summary of impressions from the 2006 conference.

The conference was dominated by presentations on physical activity and chronic disease, with papers on every possible health condition that is affected by physical inactivity – from obesity and diabetes to arthritis and dementia – and covering the entire spectrum from genes through cells and tissues to whole populations.

But despite this quantum increase in research, the rates of inactivity and obesity in the USA continue to rise to extremely alarming levels, a fact very forcefully made by two of the Conference keynotes, Dr Steven Blair and the US Surgeon General, Dr Richard Carmona.

Like many physical activity advocates, Steve Blair started his career as a physical education teacher and from there moved through studies in sports science to become a professor of public health. The US Surgeon General was a high school drop out and street kid who, after enlisting in the US Army, became an army medic, then a nurse, doctor, trauma surgeon and before his current appointment had managed to polish all the handles so carefully that he was a Vice Admiral in the US Navy.

Two extremely diverse backgrounds produced a single message for the conference: obesity is the greatest danger currently facing the USA.

This was an especially compelling statement from the Surgeon General – whose CV also includes the facts that, as well as his military service, he has also served as a medical director of police and fire departments and is a fully-qualified peace officer with expertise in special operations and emergency preparedness, including weapons of mass destruction. Despite his military and law enforcement background and even though he was a direct appointment of President Bush, the Surgeon General took pains to stress that he considered obesity a greater threat to American society than the war in Iraq - or terrorism.

The Surgeon General also said that health disparities added greatly to the disease burden in the USA. Those at the lower end of the economic scale don't have a voice and don't have access to the same levels of health care under the American system.

“The debate about the health care crisis is really about who pays – and while we argue this, the disease burden continues to rise.”

“The common currency for success in these problem areas is health literacy. We have the best science in the world, but how do we turn that into behaviour change?” (1. *Personal notes of speech by Dr Richard Carmona, US Surgeon General titled “The State of the Nation: Celebration of the 10-Year Anniversary of the Surgeon General’s Report on Physical Activity and Health”, ACSM conference, Denver, 31 May 2006*)*

Steve Blair was quite specific about one aspect of what is needed: “No research grants should be awarded for any obesity study unless physical activity is taken into account.”

For many years, Blair has produced papers detailing the benefits of physical activity for sufferers of chronic disease and for increasing quality of life and the life span. At the same time, he has railed against the tendency of many obesity researchers to take an exclusively diet-focused approach to the issue.

His 2006 ACSM presentation added new data on the benefits of physical activity for breast and gastric cancer survival (Japanese study), recovery from hip fracture (US nurses study), warding off dementia, reduced rates of ADD in children, prediction of CVD, risk of admission to nursing home, avoiding gestational diabetes and many more. On the way through Blair took a few more swipes at sacred cows, criticising an obsession with randomised controlled trials over observational studies when the evidence was obvious (pointing to smoking and thalidomide research outcomes as examples where public health interventions did not wait for RCTs) and firing off a parting shot at the US medical profession for preferring angioplasty to exercise regimes in treating coronary artery disease when exercise had been demonstrated to have a 20% better outcome. Why? Because there was less income for the medical profession in prescribing exercise.

For prospective researchers, Blair listed the areas he considered the new research frontiers. These included dose response, behavioural interventions, environmental policy, a combined approach to nutrition and activity, genes and resistance training. (2. *Personal notes of the Joseph B Wolfe Memorial Lecture, “Physical Activity and Public Health: From Karvonen, Morris and Paffenbarger to Behavioural and Environmental Interventions” delivered by Dr Steven Blair, ACSM conference, 31 May 2006*).

The conference had many other fascinating papers, including:

- A study of obesity trends in industrial workers in the US which showed an average increase in weight of ten pounds per person from 2000 to 2006. In that period the number of normal weight (BMI less than 25) workers decreased by 30%, the number of overweight (BMI 25-30) remained static and the number of obese (BMI greater than 30) increased by 32%. According to the presenter, 45% of the applicants for physically demanding jobs in the USA will be obese by 2010 and, by definition, probably incapable of undertaking this type of work. (3. Thomas B. Gilliam. "Comparing Obesity Trends from 2000 to 2005 in 72,846 Industrial Workers". Notes of presentation and abstract published in *Medicine & Science in Sport and Exercise* 38:5 May 2006 Supplement. Abstract 813.) This paper was a perfect back up to the paper by the Surgeon General.
- A success story: An intervention in an Illinois primary school that restructured the school day to allow for 15 minutes of teacher-led physical activity each morning, a free breakfast for all and a reversal of lunch hour that made the children have a play period before they ate lunch. After five years of the program school attendance improved significantly: there was a 67% decline in visits to the school nurse, a 58% decrease in discipline referrals and the school moved from below average to above average on the state achievement tests (reading, writing, maths, science, citizenship). Interestingly, this presentation attracted an almost rabid level of hostile questioning seeking

to attack every aspect of the purpose, method, results and conclusion. It was almost as if the questioners were upset that someone dared to present results of a successful intervention. This was an interesting illustration of Blair's point about the tendency for researchers in the field to want to live exclusively in their own silos. If the answer did not lie in their silo, the world might end! (4. Benjamin A Sibley. "Effects of an Environmental Intervention to Improve Diet and Increase Physical Activity on School Performance." Notes of presentation and abstract published in *Medicine & Science in Sport and Exercise* 38:5 May 2006 Supplement. Abstract 604.)

- Yoga is eastern religion by stealth! Two separate presentations mentioned protests from parents at proposals to teach yoga as a physical activity option. Apparently this would have been the thin edge of the wedge to the teaching of "eastern religions" to American children and this was totally unacceptable. One study managed to sneak yoga back into the program by calling it "stretching". There was also a fascinating poster detailing the significance of living close to a church for differences in physical activity. The science was a little lost on me, especially as the study didn't determine whether any of the subjects actually attended a church. The Christian deity was probably invoked less at ACSM than most American gatherings, but its occurrence is frequent enough to make most Australians realise they are in an alien society.

Australians, New Zealanders, Brits and Europeans were also represented, but often shoved in the far corners or awkward times of the Conference. Despite its international nature, for many Americans, ACSM is all about them. For the rest of us, their insularity can be a bit staggering.

This attitude is also to their detriment. A number of Australian clinicians attending reported that, for them, there was little new or innovative coming out of the US. Attendance at ACSM was all about catching up with old mates and reassuring themselves about the quality of their own clinical skills and knowledge.

However, despite this, ACSM is still a fabulous experience and should be a must for all sports medicine and science and public health practitioners. If nothing else, scale can be an awesome and beautiful thing – and you usually get to go to the baseball!

**One for the trivia buffs. The 1996 "Surgeon General's Report on Physical Activity and Health" – one of the most cited reports in the field of physical activity – was NOT issued by the Surgeon General. In 1996, the US did not have a Surgeon General. The Surgeon General appointed by Bill Clinton in 1992, Joycelyn Elders, was forced to resign after only 15 months in the position as a result of a controversial remark about sex education (the benefits of which were obviously lost on her appointer). A new Surgeon General was not appointed until 1998. The 1996 "Surgeon General's Report on Physical Activity and Health" was actually issued by the US Secretary of Health and Human Services, Donna Shalala.*



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