

Functional Training!?

In gyms and parks throughout the land, we are witnessing a shift towards 'functional' training. That is, exercises that are ground based, proprioceptively challenging, involve 2 or 3 planes of movement, employ heavy clubs, weighted bags, kettlebells, ropes, ropes with balls on, or even suspension systems are quickly becoming the norm.

The labelling of these new (and old) exercises as 'functional' seems to have made them irresistible. By default, exercises such as the humble seated chest press, leg press or seated row are sadly regarded as non-functional and therefore somehow inferior.

Is this true? Are there criteria that must be met for an exercise to be classed as functional?

What the experts say

As the eminent Dr. Mel Siff maintained, there is no such thing as a functional exercise; it's only the outcome that's functional.

But what constitutes a functional outcome? For the majority of individuals, embarking upon an exercise regime, their desired outcome, or goals, are typically toning up, losing weight (body fat), generally getting fitter, increasing core strength and some even aspire to athletic events.

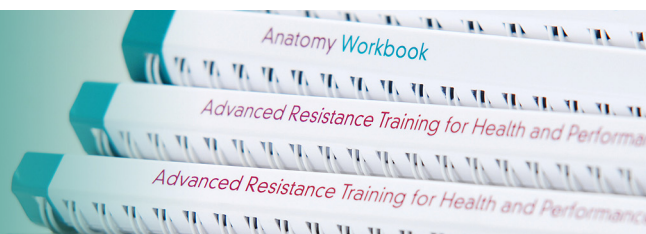
These 'typical' goals can largely be achieved by increasing an individual's capacity for work and their general fitness; this is 'general preparation' training. For those with more athletic aspirations their performance can best be improved through 'specific preparation' training.

Worryingly, the "functional is best" mantra is increasingly applied regardless of an individual's goals, phase of training or ability. Improvements in general fitness would often best be achieved with humbler, less technical exercises. The development of strength, a key component of health related fitness, is reliant upon a certain intensity or resistance – this should be the focus of progression during the 'general' phase. In contrast, the 'functional' approach places the emphasis not on intensity but complexity.

Consider a slightly overweight and de-conditioned man

A leg press, seated row and seated shoulder press would provide maximum opportunity to achieve overload of some major muscle groups. The heavy resistances that can be safely applied will maximise the calorie expenditure of the workout, and help to maintain overall lean mass during a period of weight loss. On the other hand, a one-legged Romanian deadlift, or complex kettlebell exercise, whilst working a number of the sling systems simultaneously, are unlikely to overload in the desired way – their complexity will detract from the necessary intensity. Furthermore, how many individuals turn up on day one with the alignment and motor skills to perform the complex tasks accurately and safely?

It is often cited that the 'functional' exercises are superior in maintaining ideal alignment, good form, correct muscle firing patterns, motor skills etc. over the likes of a chest or leg press; this is unquestionable. But are they the tools of choice to achieve these capabilities in the first place? Probably not, there are a plethora of well documented techniques to stretch and strengthen before an individual attempts complex lifts which otherwise might exacerbate any existing musculoskeletal problems.



Considering the spinal loads

As the prevalence of back pain in the UK rises, the loads that are placed upon the spine, in the quest for health related fitness or athletic performance must be considered.

Compression, axial torque, bending stresses and shear can all play a part in positively adapting the spinal structures, but how much load can the 38 year old's spine take after 20 years bent over a desk? Many of the so called functional exercises impart some staggering loads. Whilst these may be appropriate in due course, it probably wouldn't be wise to start with them or work towards a programme that consists predominantly of high load exercises.

Do you know?

A straight forward press up imparts 1838Nm (Newton/metres) of compression to the disc at L3/L4. This is well below the figure of 3300Nm set by the National Institute for Occupational Health and Safety for safe repetitive loading.

Placing both hands on a ball; a common so called functional progression, increases the load to 2840Nm. Still below the limit for safe repetitive loading, but a 50% increase none the less.

Two further examples: a fast concentric press up – 3905Nm and a one handed press up – 5848Nm serve to demonstrate the 'load cost' of acceleration, deceleration and resisting axial torque, which many of the so called functional exercises require.

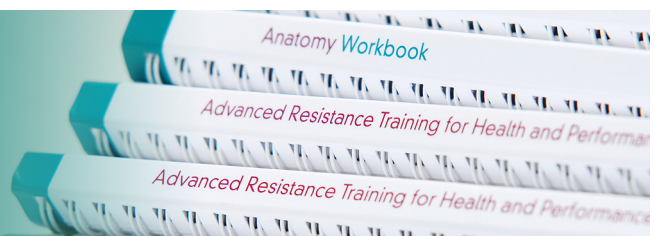
The delivery of so called functional exercise

Accepted practice in the industry is often fraught with problems. The delivery of so called functional exercise is no exception. For example:

- Individuals with varying requirements, exercising as a group, all attempting the same exercises makes a mockery of the specificity rule.
- Individuals with varying requirements, exercising individually with a trainer, all attempting the same exercises makes a mockery of the specificity rule.
- Conditioning circuits, a commonly used format, should be comprised of non-technical exercises that are safe as participants fatigue and lose form.

Furthermore, any training gains will largely be in aerobic capacity and local muscular endurance to the detriment of strength and muscle mass, which are essential for most athletic activities. Remember, strength is the key, getting strong will help everything else; doing everything else won't make you strong.

- Finally, repeatedly applying a complex training method session after session simply won't deliver the gains a fully periodised programme can. It may however lead to over training syndrome.



Should the public and athletes train alike?

The rise in so called functional training has also spawned the concept of athletic conditioning for all – “if it’s good for the athletes’ it must be good for the public”; there are endless reasons why this is not the case. But we’ll stick to the main points that relate to this topic, specificity, form, motor skills and requisite general conditioning.

Your model athlete will already have a good base level of conditioning, so the strength is in place, the motor skills for their chosen activity are likely to be honed, and form during training is expected to be exemplary. Finally, their professional coach will have selected drills with appropriate movement patterns, velocities etc. The coach will also have planned which periods during an overall training cycle each training method should be employed.

Whether working out individually, or in a group, the public fitness enthusiast is likely to be attempting a generic set of exercises, similar exercises 2 or 3 times a week, every week. Their general conditioning, motor skills and technique may often be inadequate to complete the sessions safely, let alone realise the benefits. It’s questionable whether the public enthusiast needs to undertake so called functional exercises to achieve their goals – remember the ‘load cost’ that accompanies many of them.

My point is unwittingly demonstrated by a leading supplier of functional training systems. A quick search on the web finds an official video clip of an athlete in training. The movement pattern seems to relate to his activity (my knowledge of grid iron is limited), his form is exemplary and he goes on to explain when, during his training, the drills are employed.

The very next clip is of a gym class. The usual suspects are present; there are rounded shoulders, pelvic misalignments and more than a pinch of excess body fat. When the session commences the purposefulness of the first video has been replaced by a cross between Morris dancing and the Hokey Cokey. It’s no joke. This second clip is also an official video!

The suspects in the second clip are subjected to all the risks, possibly more as their form is not as good (putting it politely) and yet they stand to reap little in the way of benefit.

The intelligent perspective – key points

- Any exercise can play a role in achieving a functional outcome
- Exercises should be chosen carefully
- General conditioning can be safely achieved with general exercise
- Strength is a requisite for health related fitness and most athletic activities
- Strength is the key, getting strong will help everything else; doing everything else won’t make you strong.
- Specific conditioning is best achieved through periodised programming
- Periodisation helps prevent overtraining
- Consider carefully the ‘load cost’ of each exercise
- Circuits should be comprised of non-technical exercises