



Series: Training Tools Get Personal

by Sally Edwards, President, Heart Zones USA

Part 1: Getting Better All the Time

How many gadgets can you fit on your handlebars, to the point that there's no room for your hands? How many devices can you strap onto your chest, your shoes, your arms as you run, that both entertain you with MP3s and collect and report real-time data about your body's response to your running? How many different pieces of data should you use to manage your training program?

Now, you may say, "I'm a triathlete. I'm not happy unless I'm doing at LEAST three things at once." Fair enough, but, as the different types of devices multiply, as the data that they produce turns exponential, some are beginning to say "enough". How is it possible to analyze, appreciate, and understand so much from so many tools?

A training and racing tool should give you a training and racing advantage, whether over another athlete who is training without one or, even more importantly, over yourself without the tool. (And, to be clear, a training tool is any electronic device that provides you with data, whether in real time or delayed, about your performance.)

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The key to taking advantage of this continuously improving and growing world of training tools is to be selective. What's the right tool for you? The first steps in answering that question are to get to know the tools and to know yourself and your needs.

Here is a brief overview of the categories of training tools available today:

- *Tools to measure position: descent and ascent rates, latitude and longitude, and directional information.*
- *Tools to measure your physiology: body temperature, heart rate, sweat rate, blood lactate, and oxygen consumption.*
- *Tools to measure your activity: speed and pace, distance, and elevation changes.*
- *Tools to measure time: event time, elapsed time, split time, count down timers, and lap time.*

Beyond the major categories of training tools, meters and monitors can be divided into classes based on a number of different criteria:

- *Downloadable. Does the device have the capacity to download to the web or to a client for data analysis and interpretation?*
- *Real-time data. Does the tool display the data in real time as you are working out? Using biofeedback for your training is a lot easier when you don't have to wait 'til you get home to see the results of your efforts.*
- *Relative and absolute. Can you see the monitor so that you can look at either the relative (%) number of the absolute number (whole number)?*
- *Internal or external. Is the data stored within the device that has the display or in a second device that records it?*
- *Programmable. Can you program the monitor and put in your unique physiological information such as Threshold heart rate or peak power output?*
- *Multi-task tools. Does the tool collect and/or display more than one type of data, such as a heart rate monitor that is a power monitor as well?*
- *Degree of accuracy. There can be huge differences in accuracy among tools of various types and qualities, which leads us to...*
- *Inexpensive or costly. If you spend more, do you get more quality and functionality and is it the functionality that you need?*

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So, which tools are essential for you, and what data do you really need to know?

Watching data emerge from a tool can be fun and fascinating on its own. But, by itself, the data is just eye candy. Information is power. But, information is only as powerful as it is (1) reliable and accurate, and (2) usefully interpreted and applied.

What you do with the information from a training tool is to manage your training. Should you be increasing or decreasing your training load? What happens when you adjust your training plan, your schedule? To assist in your training management, tools can:

- *Assess and monitor the effectiveness of your training program.*
- *Prescribe training intensities and heart zones.*
- *Create a sport-specific physiological profile of key indexes.*
- *Provide information as to your current sport-specific fitness during different periods in your training macrocycle.*
- *Give an indication as to your optimum racing distances.*
- *Predict your performance.*
- *Test changes in speed, Threshold, aerobic capacity, and heart rate.*
- *Detect and/or confirm acute or chronic overtraining syndrome.*

When we use the best tools for us, with the best of knowledge and awareness, training tools connect us in a way that has never before been possible. The enrichment of biofeedback to the training experience, the mind-heart-body connection is a way of training that cannot be experienced any other way than with the right tool and the knowledge to use it. Tools allow you to connect your mind, with your heart (both the emotional and physical side matter in training), with the body.

When you use your tools for diagnostics, for management, for injury prevention, for emotional connections, for the power of motivation, for keeping a record and logging, for

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analyzing your training plan, for injury prevention, and for so much more, they exponentially morph into *power* tools.

But, remember the training tool “dark side”: Obsessed. Overwhelmed. Over PDA’ed. Yes, this can happen. Your defense is knowledge, so let’s finish with a brief overview of the different types of monitors and meters that are commercially available today. Next month, we’ll

	Category	Tool Types	Measurements	Price Range
1.	Distance Tools	GPS, pedometers, bike computers	Measure how far you have traveled by counting the number of steps, the number of revolutions of your wheel, or using positional data.	\$25-\$300
2.	Altitude Tools	Altimeter instruments	Measures the altitude of an object above a fixed level using air pressure or positioning data.	\$100-\$500
3.	Speed Tools	Bike computers, GPS-devices, accelerometers	How fast you are moving in either pace measurement (time/distance) or speed (distance/time).	\$25-\$200
4.	Heart Rate Tools	Heart rate monitor	Measure cardiac response to physical, emotional, metabolic stress.	\$40-\$400
5.	Power Tools	Power meters	Measure force multiplied by velocity.	\$1,000+
6.	Metabolic Tools	Accelerometer, energy expenditure tools	Measures your EE or energy expenditure by assessing movement, gas exchange, or heart rate.	\$300+
7.	Training Status Tools	Load meters	Measures the total training load to provide physiological assessment of performance status.	\$300+
8.	Navigation Tools	GPS meters	Measure and assess global positioning providing specific location information.	\$100-\$500
9.	Counting Tools	Lap counters, step counters	Measure the number of steps that you take, number of laps your run or swim.	\$25-\$50
10.	All-in-One Tools	Convergent tools	Tools that combine different single instruments together such as distance, altitude, speed, heart rate, energy expenditure, and training status, etc. all into one single device.	\$300+

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Sally Edwards is a former Master's World Record holder in the Ironman Triathlon. From the time she ran the 1984 Olympic Marathon Trials using her heart rate monitor, Sally has been at the forefront of a revolution in fitness training. A founder of the sport of triathlon (and a Triathlon Hall of Fame inductee), most of Sally's recent races have been performed in her role as the National Spokeswoman for the Danskin Triathlon Series.

Next Month: The Big 4 Tools

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