

## View From The Researcher - Part I

The process began months in advance. Each week presented different challenges; some were successful while others classified as setbacks. The final kickoff date was nearing. Years of preparation came to a head the weekend of Friday, September 26, 1997.

Flashing back to that weekend, I flew to the destination early Friday morning eager to begin a process that I have worked on for nearly two years. The test subject picked me up at the airport and before I knew it we were off the University. It is not without precedent that I mention this type of project has yet to be completed within the bowling community. A first in the making. My job, well you guessed it, to see the project maintains the highest research integrity while compiling the data and results.

Ok let me fill you in. For a couple years I have worked toward creating a bowling-specific exercise routine. A sport specific exercise program fashioned for the bowler-athlete. Over the course of the 1996/1997 academic year, I work in academia for now, I completed the protocol and prepared for it to be tested. That time has arrived.

The project you are reading is a one-year case study of my bowling-specific exercise program. The study is using a single test subject who has willfully committed to an exercise and diet lifestyle overhaul. The purpose to this study is to validate or refute my bowling-specific exercise routine while providing baseline values to begin comparison for manipulation and future research. The study consists of a pretest, experimental treatment, intermittent test, experimental treatment, and a post-test. The time frame is from September 1997 through September 1998.

The pretest, intermittent test, and post-test consist of several batteries of subjective and objective evaluations. The experimental treatment is the exercise and diet program including frequency, intensity, duration, and specificity of exercise. I will use some descriptive statistics to interpret the data along with a host of other statistical methods to evaluate the results. Bowling performance will be evaluated based on current normative standards and subjective assessment by the subject. Inferences will be fashioned from the statistical results and subjective appraisals. Recommendations will be provided for future research.

Several test subjects were screened for this project with the final selection occurring in early August. Complete confidentiality of this individual will be maintained throughout the project, though you will see monthly news releases of our progress & setbacks. Look for a monthly **View from the Researcher** section to stay unobtrusively involved. I encourage you to follow closely with this project for this subject, who we won't reveal, may be one of your bowling friends.

The following three sections (preparation, pretest, & treatment) will introduce you to the initiation of the case study and our subject.

### Preparation

The test subject was selected from a pool of applicants and willfully committed to a year of exercise and dietary lifestyle changes. This subject's family was informed of the importance of the project and is providing their continual support and compliance. The subject's physician was notified providing verbal clearance.

The next step was some phone work on my part. I spent two weeks locating several exercise facilities in the subject's hometown. Fortunately, we had a lot to choose from and finding those adequate to our project was easy. Selecting the exercise facility weighed heavily on the following requirements established by the researcher and subject:

- a reasonable location and distance from home or place of employment.
- specific equipment satisfying the demands of the program.
- early morning hours to accommodate the subject's schedule.
- a cooperative management willing to work with the project and myself.

We delimited the list of probable exercise facilities to three viable options. I negotiated an extremely low yearly rate with each club's management and left the choice up to the subject. Together, we visited each facility upon my arrival and chose the most adequate one.

### The Pretest

I arranged for a major research institution to perform a series of physiological, biochemical, and musculoskeletal tests on the subject. We spent nearly four hours at the testing site Friday afternoon completing the evaluations. Baseline values were derived for body weight, body fat percentage, lean body weight, blood pressure, resting heart rate, cholesterol level, HDL cholesterol, LDL cholesterol, triglyceride level, upper body strength, lower body strength, bowling-hand grip strength, girth measurements, lumbar-hamstring flexibility, bowling shoulder flexibility, sliding leg/hip flexibility, resting heart rate, VO2 MAX, training range, and perceived exertion. These specific test values are pertinent determinants of the case study and will be used for evaluation, comparison, and future research. The following tables present the subject's current results of the pretesting. Each item will be defined at greater lengths in future editions.

Date	Body Weight	Body Fat	Blood
09/26/97	258 lbs.	31%	132/82 mmHg

Cholesterol	HDL	Triglyceride	LDL
253 mg/dL	47 mg/dL	142 mg/dL	178 mg/dL

Resting HR	Training Range	VO2 MAX	Sit-n-Reach
88 bpm	129 - 156 bpm	34 mL/min	13"

Upper Body Strength	Lower Body Strength	Grip Strength
170 lbs.	230 lbs.	63 pounds

Based upon review of these physiological, biochemical, and musculoskeletal indicators of fitness, it is my determination that the subject is at risk for coronary heart disease and otherwise deemed in poor physical condition. The particular numbers of concern include 31% body fat composition, 88 bpm resting heart rate, 253 mg/dL cholesterol count, 47 mg/dL HDL count, and a VO2 MAX (aerobic fitness) of 34. These determinants were expected by the subject and were not alarming when made aware of the results. In fact, these indicators are currently being used as reinforcement motivators for completing the program. Again, these will be explained at greater lengths in upcoming issues.

## Treatment

The primary goal of treatment (exercise & diet) is to improve the overall quality of the subject's fitness bowling performance. I have hypothesized that direct improvements in the above fitness and wellness indicators will enhance the subject's quality of life and bowling performance. My rationale is centered on the bulk of research found to prove increased fitness enhances wellness and my personal study of bowling's sport specific physical requirements. The connection I plan to make rests in the specificity of the program and its enhancement of bowling-specific muscles groups and fitness components.

After selection of the training site and purchase of membership, demonstration of the routine was in order. I reviewed the routine with the subject on multiple occasions over the phone, internet, through written materials, and in general conversation. We spent three days together talking more fitness & wellness stuff than the subject probably cared to hear. My confidence was high that the subject knew the routine and was highly motivated to follow through with the commitment.

The time had arrived to begin training. We went to the Powerhouse Fitness facility early Saturday. The subject was again familiar with the routine and was extremely excited about getting started. We began the aerobic component of the

program and quickly acclimated the subject to the recumbent bike. From there, eleven stationed exercises were performed under stringent strength-training guidelines. We spent time adjusting the various machine's settings seat heights and recording all the information on an exercise training card I created. The card will guide the progress of the subject in my absence as well as provide a daily recording for the project.

After our first training session, the subject was exhausted and hungry. We proceeded to grab a bite to eat and initiate some of the dietary habits. I believe the subject's greatest challenge lies in the ability to maintain the dietary habits provided. These will also be spelled out in later issues. The subject noticed only slight muscle soreness directly after the routine and up to 24 hours beyond the workout.

Before my flight out the next morning, we had enough time to go through the routine again. This time I had the subject take me through the entire sequence. I was confident the subject was prepared for this endeavor. We successfully trained together one last day before my departure. It was a joyous occasion for me to watch my subject successfully face the challenge knowing I would be gone for all but a few weekends of the year. I was satisfied my subject had learned the routine well enough to complete it alone. I felt as though I surpassed my first hurdle.

It was a sad moment for me to depart from someone whom I placed a large amount of trust and confidence. This subject is a special friend and I plan to help this individual complete the program. Today, we currently communicate 2-3 times weekly with our next meeting and combined training session scheduled for November.

If you feel somewhat uninformed after reading this review, then you've grasped all that is currently available. I could spell it out in about 15 pages, but that's just not practical. Each month this section will follow and highlight the project. Future issues will describe the value of the testing, evaluate the subject's initial fitness level, define the exercise and dietary program, and report on our monthly progress or setbacks. Look for this and much more through an exciting research project. See you next month