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# Human Performance Lab Newsletter, Vol. 1, No. 1

St. Cloud State University

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# Human Performance Laboratory Center for Lifestyle Enhancement

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Volume I, Number 1

November, 1981

## Newsletter

Our laboratory has produced a newsletter similar to the one you are reading for almost ten years. For some reason, however, we have recently been less than punctual at preparing it. In fact, it has been almost two years since our last issue. For this we apologize and are determined to be more consistent in the future. We will be anxious to hear your reactions and suggestions. Please let us know what kinds of information you would like included.

### Advisory Board

John M. Kelly, D.P.E.  
*Laboratory Director  
Chairperson of Advisory  
Board*  
George Gottfried, M.S.W.  
*Social Worker*  
Andy Hilger  
*General Manager/Owner  
WJON/WWJO Radio*  
James Kelly, M.D.  
*Internal Medicine*  
Dave Marquardt  
*President, Marco Business  
Products*  
Robert Murphy, Ph.D.  
*Psychology Professor,  
St. Cloud State University*  
Dorothy Simpson  
*Continuing Education  
St. Cloud State University*  
Anthony Tabor, Ph.D.  
*Clinical Psychologist*  
Thomas Wyne, M.D.  
*Family Practice*

### Advisory Board

Establishing an Advisory Board has been one of the most significant accomplishments our laboratory has achieved since its creation. The Board members, whose names appear in the margin, have agreed to assist with laboratory planning and development. One of the most important problems facing them will be finding alternative ways to fund our expanding program.

### Historical Overview

Before discussing these plans, it might be beneficial to briefly review our program's history for our newest members. The original intent of our activities was centered around a research project that was designed to study what effects a long-term (10 years) exercise program would have on the cardiovascular health of the participants. The program, with the valuable technical assistance of Dr. Thomas Luby and several other physicians was operational by 1972, with approximately 100 individuals in the exercise group and 60 in the control (non-exercise) group. At that time, the laboratory consisted of a converted classroom and was very sparsely equipped.

Within a few years we recognized that many other community members were interested in participating in the program, and it was decided to open the program to the general public. From that point on we became increasingly more interested in the service component of the laboratory. While the research project continues, the major thrust of the laboratory's energies are being focused on the promotion of healthy lifestyles for our community members. Our major activities include exercise, nutrition, stress management, smoking reduction and weight control.

As the years slipped by, our little laboratory soon became too small for us and last year we were blessed with the wonderful new facility that now serves as our home. This exceptional facility is one of the finest in the upper Midwest. Our well-equipped laboratory with its close proximity to the activity center makes it nearly perfect for our programs.

With that brief introduction and historical sketch, you might wonder why additional funding has become necessary. While it is true that our facilities and equipment are ideal, we have insufficient funding for the staff we need. Running the laboratory has been and will continue to be a very interesting hobby for me. That is, I have been performing these duties (with great pleasure) in addition to my regular teaching assignments. Although I am planning to continue my involvement in the program, I have been somewhat disappointed in that we have been unable to reach the community in the way we could. For example, we need professional assistance in the following areas: technical services and logistics, nutrition, medicine, and psychology. Unfortunately, the university has been in a poor position to meet these staffing needs. At a time when education is being forced to cut expenditures, efforts to expand have not been encouraged. Consequently, decisions have been made to seek alternative sources of funding.

We have already had an impact on our staffing needs with the part-time employment of Linda Bettison, our secretary, and Randy Braith, our technician. Funds for these positions have been raised from the fees we charge each of you.

#### Fund Raising Plans

We are pleased to announce that Bob Jennings has enthusiastically accepted our invitation to chair the fund raising committee. We have hesitated to ask our membership and friends for financial assistance for the past ten years, but have reached a point where we no longer have a choice. Each of you will be receiving a communication from Bob in the near future. He will not only be appealing for your donations, but also your involvement and ideas. Please help him in any way that you can.

#### Morning Exercise Program

Hey, early-bird! Come out and join our early morning exercise program. The group meets Monday, Wednesday and Friday mornings from 6:30-7:30 a.m. It was initiated last winter to assist new members in getting their exercise program started. Since that time, we have learned that several of the older members also enjoy the group setting and have been attending regularly. Bruce Johnson, one of our graduate students, is the director of the program and will be here to assist you when you arrive.

The group meets on the indoor track at 6:30 a.m. and participates in a variety of activities. The session starts with stretching and strength building activities and then to walking, jogging, swimming, racquetball or other games. At least once each week Nancy Henderson and Mary Kimble lead a group in aerobic dance.

If you have found it difficult to stay with your program on an individual basis, why not join the group for fun and motivation? Or if you like to get an early start on the day, this is a good way to do it. We'll be watching for you! For more information, call Linda at 255-3105.

#### Aerobic Dance

There's an alternative aerobic exercise available to you! It's happening in the wrestling gym, and it's happening to music. It's a total stretch warm-up for flexibility, aerobic jumping routines for endurance, and strengthening exercises for tone and strength. It's a fun way to fitness! Remember--Monday, Wednesday and Friday at 6:30-7:30 a.m. if we have the interest, classes may be held at other times (8 a.m. and 10 a.m.) If you have questions, ask Nancy at 255-3105 afternoons or 259-9309 evenings.

#### Six-Month Testing Schedule

Our goal is to test everyone in the program every six months. This testing is important for several reasons. Most importantly, it provides individuals with an accurate assessment of themselves and the effects of their training program. For many, this is a powerful motivator and makes their efforts more pleasurable and meaningful.

Furthermore, the testing allows us to accurately monitor your progress--permitting us to make adjustments in your program to enhance your performance. This might include such things as adjusting your target heart zone or providing an update on your optimal body weight. Our laboratory personnel will be in touch with you for scheduling your evaluation in the near future. If for some reason we have failed to contact you, please call us for an appointment (255-3105 or 255-3637).

#### Keeping Your Appointment

Please be on time for appointments. We will make every effort to accommodate you upon your arrival. Should an unforeseen event prevent you from keeping your appointment, please call us as early as possible to cancel. We will be pleased to reschedule you at that time.

#### Calories Replaces Points

By now most of you are aware that we have replaced our old point system for recording exercise with the Calorie system. The Calorie system, measured in kilocalories, adds another dimension to our program. So many of us have concerns about our body weight that it seems natural to be aware of the Calories that we are burning as well as those that we are consuming.

Ralph Paffenbarger, in his study of Harvard alumni, has found that those individuals who burn at least 2,000 Calories per week in aerobic exercise have fewer heart attacks than those who don't. He also found that an expenditure of 1,000 Calories per week seems to be the threshold level required for a beneficial effect. Consequently, we have adopted 1,000 Calories per week as the minimum effort we recommend and 2,000 Calories per week as the optimal energy expenditure required for good health.

You can determine how many Calories you'll need to expend to reach these standards by examining Table I. For example, a 100-pound person needs to expend 750 and 1500 Calories per week to be in the good and optimal range respectively, while the 200-pound person is required to burn 1,250 and 2,500 Calories to receive the same benefits.

From Table II we can determine how far we must walk or run to burn an appropriate number of Calories. For example, the 160-pound person burns 100 calories when covering one mile in 10 minutes. The 1,000 Calories mark could be reached by walking 3 1/3 miles three times per week or the 2,000 Calorie zone by covering 4 miles five times per week.

In the next Newsletter, we will provide a list of other aerobic activities (plus caloric expenditure) you can do.

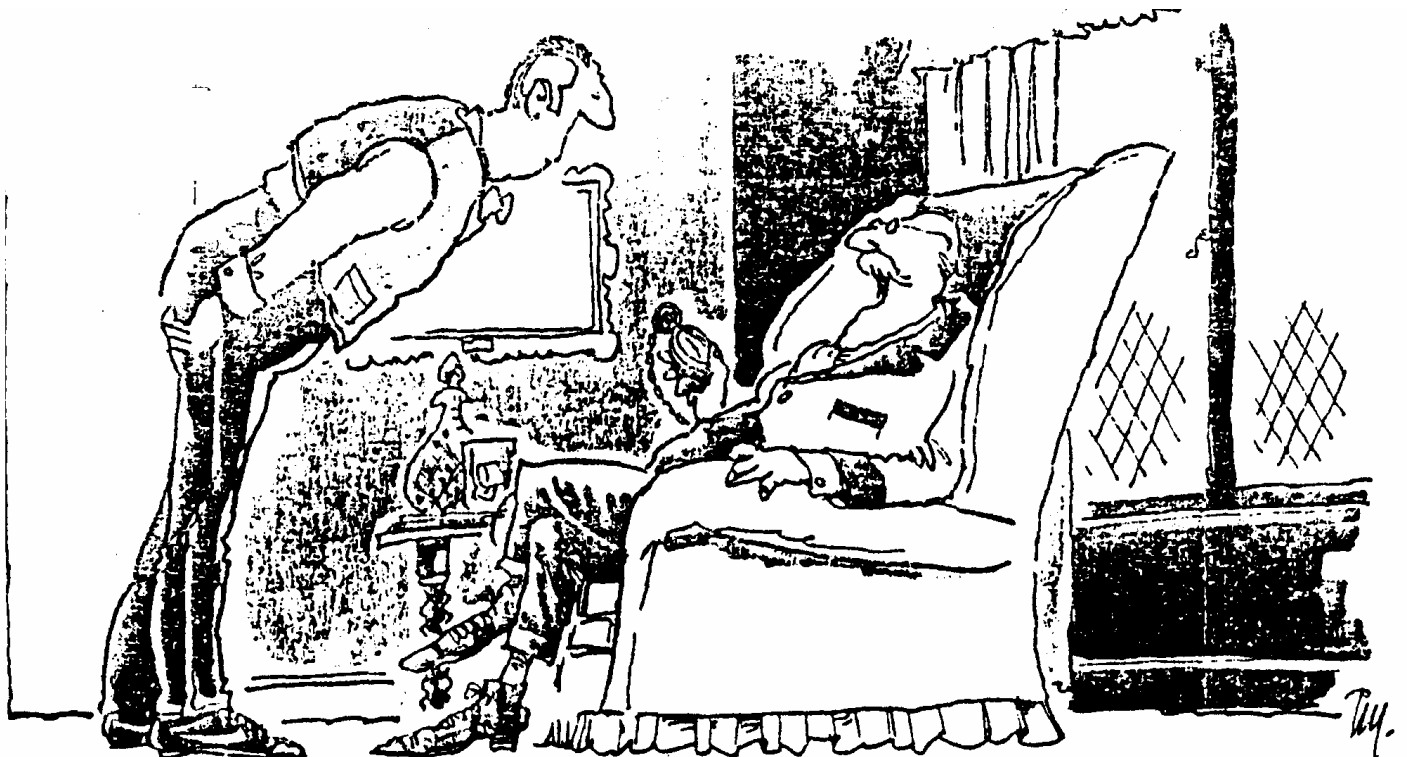
#### Duration of Each Training Session

The duration of your training session is dependent upon how rapidly you can burn calories. This, of course, is determined by your level of fitness. For example, a very fit person may be able to run three miles (300 Calories for 150-pound person) in 21 minutes, while a person with a lower fitness level may need 45 minutes to burn the same number of Calories. Remember, your target heart rate zone is your guide to how fast you are to burn Calories. Also, it is important to understand that each of these individuals receives very similar benefits from the training, even though the exercise duration is quite different.

TABLE I

Weekly Weight Adjusted Caloric Expenditure

Weight	Good	Optimal
100 lbs.	750	1,500
110	880	1,600
120	850	1,700
130	900	1,800
140	950	1,900
150	1,000	2,000
160	1,050	2,100
170	1,100	2,200
180	1,150	2,300
190	1,200	2,400
200	1,250	2,500
210	1,300	2,600
220	1,350	2,700
230	1,400	2,800
240	1,450	2,900
250	1,500	3,000
260	1,550	3,100
270	1,600	3,200
280	1,650	3,300
290	1,700	3,400
300	1,750	3,500



*"Jarvis, its time for my evening exercise.  
Run three miles for me please."*

(Sorry, these Calories don't count!)

Table 11: Calories Used Per Mile of Running or Walking

Weight (lbs)	5:20	6:00	6:40	7:20	8:00	8:40	9:20	10:00	10:40	11:20	12:00	12:40	13:20	14:00	14:40
120	83	83	81	80	79	78	77	76	75	74	73	72	71	70	69
130	90	89	88	87	85	84	83	82	81	80	79	78	77	76	75
140	97	95	94	93	92	91	89	88	87	86	85	84	83	82	81
150	103	102	101	99	98	97	95	94	93	92	91	90	89	88	87
160	110	109	107	106	104	103	101	100	99	98	97	96	95	94	93
170	117	115	113	112	111	109	107	106	105	104	103	102	101	100	99
180	123	121	120	119	117	115	114	112	111	110	109	108	107	106	105
190	130	128	127	125	123	121	120	118	117	116	115	114	113	112	111
200	137	135	133	131	129	128	126	124	123	122	121	120	119	118	117
210	143	141	139	137	136	134	132	130	129	128	127	126	125	124	123
220	150	148	146	144	142	140	138	136	135	134	133	132	131	130	129

NOTE: Expenditure of 3500 calories equals one-pound weight loss.