

## ***Entrepreneurship and Fitness: An Examination of Rigorous Exercise and Goal Attainment among Small Business Owners\****

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*In today's society, the benefits of exercise and fitness are given much publicity. However, the relationship between exercise and the attainment of personal and professional goals for entrepreneurs has not been examined. Our study addresses the issue by examining the exercise regimens of 366 small business owners and the relationship of exercise frequency with the company's sales and the entrepreneur's personal goals. Specifically, this study examines the relationship that two types of exercise—running and weightlifting—have with sales volume, extrinsic rewards, and intrinsic rewards. Results indicate that running is related positively to all three outcome variables while weightlifting is related positively to extrinsic and intrinsic rewards but not to sales. Suggestions then are provided for future research.*

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## Introduction

Over the years, researchers have examined various aspects of the entrepreneurial personality, including perceptions (Cooper, Woo, and Dunkelberg 1988), intentions (Bird 1988), behavior (Shaver and Scott 1991; Bhave 1994), risk taking (Brockhaus 1980; Das and Teng 1997; Mullins and Forlani 1998), and alertness (Busenitz 1996). Most recently Kickul and Gundry (2002) examined the proactive personality in relation to small firm innovation. While these studies demonstrate the importance of the different aspects of the entrepreneurial personality, the dimension of physical fitness and its relation to the entrepreneurial outcomes has yet to be examined.

In today's society, health and fitness are given much publicity. Advertisements, magazine articles, and television shows trumpet the benefits of exercise and encourage people to undertake a fitness regimen. The importance of exercise increasingly is being stressed in entrepreneurship periodicals as well. For example, at the turn of the millennium, articles such as "To Your Health" (Spaeder 1999), "Healthy Choice" (Kooiman 2000), and "The Other Bottom Line" (Friedman 2000) were published in *Inc.* and *Entrepreneur*. Indeed, it would make sense that an exercise program may lead to a less stressful and more productive life for the entrepreneur. However, busy schedules and the challenge of maintaining a fitness regimen lead many people to quit these programs soon after starting them and to return to their more sedentary, yet stressful, lifestyles. Attaining excellent physical condition requires developing a mindset that accepts and embraces hard work. If small business owners were willing and able to grant their physical health the same respect they do their financial and professional well-being, most would be in incredible physical condition. Concomitantly, good physical condition

should contribute to entrepreneurs' success in reaching their personal and financial goals. Hence, our research question is

*Research Question: Are entrepreneurs who maintain a fitness regimen of rigorous exercise more effective in goal attainment as expressed by intrinsic and extrinsic rewards?*

While *Inc.*, *Entrepreneur*, and other small business popular periodicals have supported this view, there has been no empirical study in the academic literature to support this contention. We believe that examining the role of exercise in entrepreneurial success is important because of the extreme time constraints and conditions of stress that challenge small business owners (Bird and West 1997; Kuratko and Hodgetts 2004). With personal capital at stake in the running of a small business, there is a possible trade-off between exercise and time spent managing the company. Simply put, time spent exercising is time away from running the business. Also, larger companies—the source for the samples for other studies on exercise—are afforded the luxuries of more coverage of task responsibility, greater access to on-site fitness equipment, and more financial resources and corporate relationships for providing access to fitness club memberships. In contrast, smaller entrepreneurial firms are less likely to be able to afford such amenities. In order to address our research question, we examined the exercise regimens of 366 small business owners and their relationships with the companies' sales and the entrepreneurs' personal goals. We begin this paper by reviewing the current literature on exercise and executives, followed by the literature on goal attainment. Finally, we present our hypotheses, empirical results, and the conclusions derived from our results.

Suggestions for future research also are provided in the discussion.

## ***Research on Exercise and Executive Health***

Exercise is believed to be important for executives for a variety of reasons (Neck and Cooper 2000). First, various research supports the contention that fitness promotes performance. For instance, commercial real estate stockbrokers who participated in an aerobics training program (running once a day, three times a week, for 12 weeks) experienced greater sales commissions during and subsequent to the training program than brokers who did not participate in the exercise program (Gettman 1980). Workers from a hospital equipment firm who participated in a similar aerobics training program (running, swimming, and/or bicycling once a day, four times a week, for 24 weeks) enjoyed greater productivity and job satisfaction than workers who did not participate (Frew and Bruning 1988).

In addition, a variety of studies support the relationship between fitness and mental performance, especially for older individuals, who are the age of many executives. For example, a study of 56 college professors revealed that as people age, those who are physically active process data faster and experience a slower decline in information processing speed than those who are inactive (Lupinacci et al. 1993). There is an abundance of other benefits related to being fit. Individuals who are fit are less likely to become obese (a condition often associated with aging), to possess higher levels of energy, and to enjoy enhanced feelings of well-being (Cooper 1995; Neck and Cooper 2000). Further studies have shown that individuals who participate in aerobic activity tend to enjoy various positive psychological outcomes as well, including a reduction in anxiety, depression, tension, and stress (for example, Brandon and Loftin 1991).

Additionally, there is solid evidence that physically fit people live longer. A recent study published in the *New England Journal of Medicine* of over one million adults during a 14-year period confirmed that being overweight was related to a shortened lifespan and to increased risk in mortality from all causes, including diabetes, cancer, and heart disease (Calle et al. 1999). The findings from this study and others—that is, physical fitness is related to longer life—has tremendous significance for organizations and the executives employed by them. The fitness level of their executives is something larger companies do consider in terms of the companies' success, since the illness or death of a top executive could have far-reaching consequences for the organization (Romano 1994).

As mentioned already, a growing body of research suggests that exercise can play an integral role in reducing stress levels of executives. In fact, the remarks of Ken Resse, former executive vice-president at Tenneco Inc., reveal that he utilized exercise to help him cope with the pressures of being a top executive: “[There’s] no question my exercise program has helped me cope with stress. If it starts to build up, I just go out and run like hell. I’m a morning runner, and that sets the tone for the whole day. By the time I get to the office, I’m relaxed” (Rippe 1989, p. 53).

The current business culture subjects managers to increasing levels of stress arising from the radical changes in technology, the hypercompetitive nature of the global marketplace, and conflicts between personal and corporate values. Difficulties in falling asleep, restless nights, loss of appetite, excessive appetite, irritability, and shortened attention spans are common warning signs that a person is not handling stress in her or his life effectively (Brody 1981). However, a better understanding of how stress occurs may encourage entrepre-

neurs to allot time for an exercise program. For example, many people think that outside events cause stress, but this is only partially true. It is actually a constant process appropriated from both the internal and external problems of individuals. When an outside physical or psychological stimulus exerts pressure on a person, the body naturally attempts to contend with the trauma by bringing back a natural balance through such coping mechanisms as the stiffening of hairs, rapid breathing, and sweating. If these coping mechanisms are not successful in returning the body back to its natural balance, a minor crisis occurs, and a second level of bodily responses, known as defense mechanisms, becomes activated (Patel 1991).

The defense mechanisms, stimulated by greater amounts of adrenaline, may cause a person to become fidgety, to shake, to move faster, or even to curl into the fetal position. If the defense mechanisms have failed to aid the body in reaching its stasis, the final stages of the "fight-or-flight" phenomenon occur. The sympathetic nervous system becomes hyperaroused, and the body sends energy to its muscles and readies them for action. If the energy is not released, it accumulates as stress inside the body and will remain in the muscles as a pocket of tightness, a contraction similar to a cramp. After the threat of the trauma has passed, the parasympathetic nervous system, designed to work closely with the sympathetic nervous system, is initiated in order to promote relaxation and to achieve the proper, normal balance of the body (Shames and Sterin 1978). However, if a person continues to subject himself or herself to endless traumas without allowing the parasympathetic nervous system to operate fully, stress will accumulate over time and can lead to the aforementioned illnesses and diseases (Shames and Sterin 1978).

Given these arguments regarding the mental, physiological, and performance-

related benefits of exercise, it is imperative, according to these studies, for busy executives to afford themselves time in their daily schedules for exercise. Clearly, exercise is an important element of physical health. In addition, studies show that corporate middle managers also benefit from a fitness regimen. However, the question still remains: does exercise benefit entrepreneurs, who have a wider range of responsibilities and pressures than the average businessperson, in attaining their personal and professional goals? Lacking the depth of resources, entrepreneurs must bear the cost of their mistakes while fulfilling a multitude of roles, such as salesperson, recruiter, spokesperson, and negotiator. Owning and operating a business requires a large commitment of time and energy, often at the expense of family and social activities (Kuratko and Hodgetts 2004). Finally, entrepreneurs often are working alone or with a small number of employees and therefore lack the support from colleagues that may be available to managers in larger corporations (Buttner 1992; Rahim 1996). Research has demonstrated that small business owners who attain their goals are more likely to remain motivated and to sustain their entrepreneurial drive (Kuratko, Hornsby, and Naffziger 1997). However, the existing entrepreneurial literature on new venture creation concentrates primarily on the following three areas: (1) the motivating factors that cause people to start businesses; (2) the impact of environmental conditions that may encourage or inhibit entrepreneurship; and (3) the process that people follow in attempting to establish new businesses. A more complete picture of entrepreneurship incorporates an understanding of why people continue to pursue self-employment in light of the sacrifices, stresses, and demands it entails (referred to as sustained entrepreneurship). Researchers such as Bhawe (1994);

Kuratko, Hornsby, and Naffziger (1997); and Kuratko, Hornsby, and Goldsby (2004) study this issue more in-depth. In the following section, goal attainment in the entrepreneurial process—constructs employed later in the paper to measure the relationship of exercise with an entrepreneur's life—is examined in detail.

## ***Goal Attainment and Sustained Entrepreneurship***

The concepts of motivation, goal-directed behavior, and perception of successful outcomes are all important elements in the entrepreneurial process. The decision to create a new venture brings many responsibilities and stresses, and the motivation to continue with these challenges will be dependent strongly on whether a set of goals has been achieved during the process (Baum, Lock, and Smith 2001). In examining the motivational aspects of the entrepreneurial process, the literature shows some goal orientations that commonly are ascribed to entrepreneurs. For example, Boyd and Gumpert (1983) found that entrepreneurs enjoy the opportunity to seek financial and personal rewards. Among the personal rewards cited by entrepreneurs were independence and freedom. Bird (1989) cited a survey conducted by Chemical Bank in which the dominant reasons for going into business included gaining freedom by being one's own boss, controlling one's own future, and satisfying the need for achievement. Burch (1986) identified entrepreneurs as individuals seeking independence, wealth, and opportunity. Kuratko and Hodgetts (2004) discussed the entrepreneurial perspective within individuals and pointed out 17 psychological characteristics most commonly associated with entrepreneurs. The characteristics important for motivation include commitment, perse-

verance, achievement, drive, and opportunity orientation.

Bird (1989) further discussed entrepreneurial values and entrepreneurship as a lifestyle. She described the entrepreneurial path as one that is primarily goal oriented and suggested that entrepreneurs tend to be opportunistic about how they direct their efforts to reach specific goals. Outcomes of entrepreneurship will either be intrinsic (psychological) or extrinsic (tangible) in nature. Extrinsic outcomes will include financial or other tangible rewards, which are made possible by the financial performance of the firm. Intrinsic rewards are those often cited by entrepreneurs, which center around the satisfaction of being one's own boss, being more in control of one's own destiny, and having ultimate responsibility for the success of the venture. All outcomes will have some level of perceived value to the owner because each owner will have her or his own system of valuing outcomes (Kuratko, Hornsby, and Naffziger 1997).

While the literature indicates a wide variety of possible motivational forces, there are a few elements that consistently emerge throughout the writings in the field. One is the importance of extrinsic rewards, perhaps in the form of monetary compensation or in building equity in the firm (Boyd and Gumpert 1983; Langan-Fox and Roth 1995). A second theme involves intrinsic rewards, which accrue to someone through task accomplishment, perhaps satisfying the need for control and achievement (Bird 1989; Johnson 1990). Additionally, many owners indicate that compensation itself acts as an intrinsic motivator because it essentially provides feedback that the public has accepted the entrepreneur's ideas or concepts (Timmons 1976). Third is the freedom and control one realizes by being one's own boss (Knight 1987). Finally, as many owners are "pushed" into entrepreneurship through a "displacement" effect (Kuratko and Hodgetts

2004), for example by losing their jobs in large companies through downsizing, entrepreneurs seek the employment security firm ownership affords for them and their families (Aronoff and Ward 1995).

For the purposes of this study, we utilized the Kuratko, Hornsby, and Naffziger (1997) scale for measuring goal attainment. The scale is composed of 15 items that break into two factors—extrinsic rewards (chiefly, financial rewards and family security) and intrinsic rewards (chiefly, personal satisfaction and independence/autonomy). The anchors on the scales consisted of not at all (1), moderately (3), and to a great extent (5). Kuratko Hornsby, and Naffziger (1997) found that practicing entrepreneurs, not just those engaged in venture startups, possess personally relevant goals. It is through the achievement of those goals that entrepreneurs are motivated to sustain ownership.

## ***Exercise and Goal Attainment among Small Business Owners***

Given that goal attainment is critical for sustaining entrepreneurial activity, it would seem that small business owners should welcome mechanisms that help in attaining this mission. We hypothesize that exercise is one such activity that can play a positive role in helping entrepreneurs achieve their goals. Similar to findings from research studies focused on large corporations, we believe that exercise will help the entrepreneur to attain more energy, to experience less sickness, and to gain the self-confidence that comes with being fit. All these benefits should help the small business owner in the long run. However, as was mentioned earlier, the entrepreneur will have to trade off some time away from the business in order to engage in exercise. In this study, we examine the relationship between sales (an external measure of

the owner's accomplishment), extrinsic rewards (personal measures of the owner's accomplishment), and intrinsic rewards (personal attitudes toward the owner's accomplishment) with the amount of rigorous exercise (running and/or weightlifting) the owner does. We chose running and weightlifting as the primary exercise measures because runners and weightlifters tend to make those activities an integral part of their lifestyle. It is quite common to find runners and weightlifters who exercise almost daily. Rollerblading, basketball, bowling, and other forms of exercise were considered for this study, but average participants of these activities do not define themselves by these sports to the degree that runners and weightlifters do with theirs (Sheehan 1992). Utilizing these measures, the following hypotheses are proposed:

*H1: The amount of running performed by small business owners will be related positively to annual sales, extrinsic rewards, and intrinsic rewards.*

*H2: The amount of weight lifting performed by small business owners will be related positively to annual sales, extrinsic rewards, and intrinsic rewards.*

## ***Methods***

Data for the analysis were collected from 366 entrepreneurs located in the Midwest (Indiana, Ohio, Illinois, and Kentucky). These entrepreneurs and their businesses were selected randomly from Chambers of Commerce directories. Small business owners were interviewed by students in a small business course using a structured interview format that resulted in a questionnaire being returned for each firm. The students were trained in the administration of the questionnaire. The owners were contacted by telephone and were advised

that the study was part of an ongoing university effort to study small businesses. They then were asked to participate, and an interview time was established. Only a few of the owners contacted refused to be interviewed. Those who chose not to participate typically gave reasons such as they were too busy or they never participate in surveys. During the interview, a pretested, structured questionnaire was completed for each firm. A structured survey instrument was used to limit the variation among interviewers. Although more-in-depth probes or open-ended questions would have been helpful to clarify thought processes, a structured approach was used in this study to increase reliability and validity in responses obtained. This data collection procedure has been used in similar studies of entrepreneurial firms (McEvoy 1984; Hornsby and Kuratko 1990; Lyles et al. 1993; Kuratko, Hornsby, and Naffziger 1997).

## **Results**

### **Demographic Breakdown**

The demographic profile of the 366 responding small business owners suggests that a wide variety of businesses participated in the study. Table 1 provides some summary demographic statistics for the respondents and firms. In general, participants were well distributed across owner's age, owner's education, firm age, firm size, and firm sales. The sample does overrepresent male owners (75.7 percent); however, this is to be expected since most business owners are still predominantly male. 78.4 percent of the owners had at least some college experience, with 50 percent being college graduates. As to the firms, 74.7 percent had been in the business more than five years, and 83.1 percent had 25 or fewer employees. The annual sales levels were distributed fairly even—26.2 percent had \$100,000 or less; 25.1 percent were between \$100,001 and \$500,000; 15.6 percent had between

\$500,001 and \$1,000,000 in sales; 8.7 percent were between \$1,000,001 and \$2,000,000; and 18.0 percent were over \$2,000,000 in annual sales. The industry breakdown shows an almost even distribution between retail business (33.9 percent) and service firms (35 percent), with manufacturing firms following at 10.7 percent and construction firms at 6.8 percent. Overall, the distribution of businesses and their owners' demographics represented a good cross-section of American small business.

### **Hypotheses Results**

In order to test our hypotheses, we performed three stepwise regressions in which our dependent variables were regressed upon two control variables, years in business and educational level of the owner, and the independent variable associated with the hypothesis being tested. The results for each independent variable appear in Tables 2, 3, and 4.

H1 was supported for all dependent variables. There was a positive relationship between the amount of running undertaken by small business owners and their attainment of rewards that support their entrepreneurial motivation and goal achievement. Specifically, the entrepreneurs who regularly run were better at attaining personal satisfaction, independence, and autonomy. Their companies also indicate significant improvement in sales over companies managed by nonrunners. H2 also was supported for extrinsic and intrinsic rewards but not for annual sales. Thus, entrepreneurs who regularly lift weights are better at meeting their personal goals as well, although the data indicates no significant relationship with company performance. Therefore, those entrepreneurs whose fitness programs are focused solely on weightlifting may be served best by incorporating some running into their programs as well.

**Table 1**  
**Sample Demographics (*n* = 366)**

	Number of Owners	Percentage of Sample
Owner Gender		
Male	277	75.7
Female	89	24.3
Owner Age		
25 or under	18	4.9
26–35	61	16.7
36–45	95	26.0
46–55	139	38.0
56 or older	53	14.5
Owner Age upon Founding		
25 or under	92	25.1
26–35	140	38.3
36–45	73	19.9
46–55	26	7.1
56 or older	3	0.8
How Became Associated with the Business		
Founder	190	51.9
Family Business	53	14.5
Married into	12	3.3
Bought Firm	61	16.7
Other	48	13.1
Years in Business		
5 or less	92	25.1
6–10	61	16.7
11 or more	211	57.7
Number of Employees		
5 or less	173	47.3
6–10	79	21.6
11–25	52	14.2
26 or more	57	15.6
Educational Level		
High School	79	21.6
Some College	104	28.4
College Graduate	111	30.3
Some Graduate School	18	4.9
Graduate Degree	54	14.8
Annual Sales		
Less than \$100,000	96	26.2
\$100,001–500,000	92	25.1
\$500,001–1 million	57	15.6
\$1–2 million	32	8.7
\$2 million up	66	18.0



**Table 2**  
**Descriptive Statistics**

Variable	Mean	SD	1	2	3	4	5	6	7	8
1 Annual Sales	6.20	3.04								
2 Extrinsic Rewards	10.49	2.71	0.26***							
3 Intrinsic Rewards	18.44	4.13	0.09	0.45***						
4 Years in Business	15.87	14.49	0.22***	0.09	-0.09					
5 Education Level	2.63	1.29	0.14**	0.03	0.02	-0.04				
6 Running	4.71	1.92	0.13*	0.18***	0.14**	0.03	0.15**			
7 Weightlifting	4.21	1.84	0.08	0.16**	0.14**	-0.07	0.10	0.51***		
8 Running or Weightlifting	8.88	3.29	0.11*	0.21***	0.16**	-0.03	0.13**	0.87***	0.86***	

\* $p < 0.05$

\*\* $p < 0.01$

\*\*\* $p < 0.001$

**Table 3**  
**Results of Stepwise Regression with Running as the**  
**Independent Variable**

	Dependent Variable					
	Sales		Extrinsic Rewards		Intrinsic Rewards	
Variables	<i>b</i>	$\beta$	<i>b</i>	$\beta$	<i>b</i>	$\beta$
(Constant)	4.025***		9.059***		17.492***	
Years in Business	0.044***	0.214***	0.015	0.083	-0.027*	-0.096*
Education Level	0.301*	0.131*	0.012	0.006	-0.007	-0.002
Running	0.148*	0.096*	0.246***	0.175***	0.298**	0.139**
$R^2$		0.075		0.038		0.028
$\Delta R^2$ with Running Added		0.009		0.030***		0.019**

\* $p < 0.05$  (all one-tailed tests)

\*\* $p < 0.01$

\*\*\* $p < 0.001$

**Table 4**  
**Results of Stepwise Regression with Weightlifting as the**  
**Independent Variable**

	Dependent Variable					
	Sales		Extrinsic Reward		Intrinsic Reward	
Variables	<i>b</i>	$\beta$	<i>b</i>	$\beta$	<i>b</i>	$\beta$
(Constant)	4.127***		9.068***		17.524***	
Years in Business	0.045***	0.221**	0.018*	0.099*	-0.024	-0.084
Education Level	0.318**	0.139**	0.035	0.016	0.021	0.007
Weightlifting	0.125	0.078	0.247***	0.168***	0.294*	0.131*
$R^2$		0.072		0.036		0.026
$\Delta R^2$ with Weightlifting Added		0.006		0.028***		0.017*

\* $p < 0.05$  (all one-tailed tests)

\*\* $p < 0.01$

\*\*\* $p < 0.001$

## Discussion

Goal attainment has been found in the research to be critical in sustaining entrepreneurial activity among small business owners (Kuratko, Hornsby, and Naffziger 1997). If extrinsic goals (such as personal wealth and family security) and intrinsic goals (such as recognition, challenge, excitement, growth, accomplishment, and independence/autonomy) are attained, owners will be more motivated to continue investing themselves both financially and time wise in the business. Popular entrepreneurship magazines, such as *Inc.* and *Entrepreneur*, have trumpeted exercise as an important tool in helping a small business owner to become successful; however, there has been no systematic study of this premise. This study sought to examine empirically the relationship exercise has with entrepreneurs attaining extrinsic and intrinsic goals. The findings in this study suggest that exercise does help an entrepreneur in goal attainment.

The current study should be seen as a first step. The knowledge that exercise is related positively to goal attainment allows for further investigation into other factors that may interact with these variables. In future studies, the role self-leadership can play in this process should be considered. If indeed exercise is a useful activity for entrepreneurs, some people may be skilled better at staying on fitness programs because they manage themselves better. Yet self-leadership is a process that can be learned and developed. The first step in helping someone become fit may be to help her or him first become better a self-leader, thus improving the chances of making exercise a regular segment of their life. Self-leadership also would be an interesting construct to examine with relation to goal attainment alone. It would seem that those with better self-leadership skills can stay on course better in attaining their goals, as suggested by findings in

larger organizations by Manz and Neck (1999).

Furthermore, there is a wide range of topics that would provide a more robust understanding of fitness and entrepreneurship. For example, the role group exercise can play in a fitness regimen may be worthy of study. Operating for many hours in a more independent fashion than traditional corporate managers, the entrepreneur may undergo bouts of loneliness or disconnection from colleagues. Although entrepreneurs usually are surrounded by others—employees, customers, accountants, and lawyers—they are isolated from persons in whom they can confide. Long hours at work prevent them from seeking the comfort and counsel of friends and family members. Moreover, they tend not to participate in social activities unless those events provide a business benefit. Daily workout partners may provide a more regular exercise schedule and may offer collegial support and camaraderie that they miss by working in a small business environment.

Another interesting possibility for future research is the impact fitness can have on creativity and innovation for the entrepreneur. One of the key stages of creativity and innovation is the incubation stage. However, those managers who spend all their energy running the business may not allow enough time away from the business for ideas and solutions to flow from their subconscious resources. Creativity and innovation benefit from moments of relaxation, meditation, or other states of mind when people suspend critical judgments on ideas. Oftentimes when one is exercising, the focus on the activity brings about a state of mind similar to meditation, providing a basis for novel answers to arise. Thus, the question “Are fit entrepreneurs more innovative than sedentary ones?” would be an interesting study on its own.

Additionally, future research also should examine in more depth the rela-

tionship between stress and entrepreneurial performance and the role fitness can play in possibly alleviating this problem. A great deal of literature is devoted to extolling the rewards, successes, and achievements of entrepreneurs. However, Kuratko and Hodgetts (2004) pointed to a "dark side" of entrepreneurship that also exists. This aspect of the entrepreneurial personality has a destructive component that exists within the energetic drive of successful entrepreneurs. In examining this dual-edged approach to the entrepreneurial personality, Kets de Vries (1985) acknowledged the existence of certain negative factors that may envelop entrepreneurs and may influence their behavior strongly. These factors include confrontation with risk, the entrepreneurial ego, and entrepreneurial stress. Although each of these factors possesses a positive aspect, it is important to recognize the potential destructive vein of these factors. The potential of rigorous exercise to alleviate or to lessen some of the negative aspects of entrepreneurial stress may provide more significance to the overall results of this study. Research studies of entrepreneurs show that those who achieve their goals often pay a high price (Akande 1992; Buttner 1992). A majority of entrepreneurs who were studied had back problems, indigestion, insomnia, or headaches. Thus, it would seem that to achieve their goals, these entrepreneurs were willing to tolerate these effects of stress. While the importance of health and well-being in the workplace is being researched (Danna and Griffin 1999), it would be worth examining how the effects of rigorous exercise impact stress and the degree to which that is a necessary element of entrepreneurial success. We would propose that fit entrepreneurs experience less stress (or better handle the stress they do incur) and achieve greater success than do sedentary entrepreneurs.

## ***Conclusion and Implications***

While it has been written that exercise can help entrepreneurs to become more effective in the various roles facing them, the literature has not provided any empirical evidence for this conclusion. This study was undertaken to examine the legitimacy of these claims. Interest in this study originated from first-hand observations by the authors that many successful entrepreneurs often also are dedicated to a fitness regimen. Also, in recent research by Neck and Cooper (2000), there are anecdotal stories of successful entrepreneurs and executives who follow dedicated exercise regimens. However, the intent of this study was to examine empirically whether small business owners, who experience higher levels of stress and responsibility than the average manager, are committed to a fitness regimen. More importantly, we questioned whether the time devoted to rigorous exercise helped them in attaining their goals. Our findings suggest that exercise in fact does help entrepreneurs in meeting both their intrinsic and extrinsic goals. Therefore, it becomes even more important for entrepreneurs carefully to assess their time devoted to exercise and fitness. In addition, an owner's health is especially critical. Romano (1994) pointed out that in companies in which exist entrepreneurial leaders who are so identified with their company, illness or death could strike at the core of a company's existence.

With the results of this initial study demonstrating a relationship between rigorous exercise regimens and more successful goal attainment by entrepreneurs, it is our recommendation that entrepreneurs use exercise to build their physical fitness. Neck and Cooper (2000) recommended the following for running (endurance) and weightlifting (strength):

- At a minimum, women should be able to walk two miles in less than 30 minutes, six days per week, or run two miles in less than 24 minutes, four days per week.
- At a minimum, men should be able to walk three miles in less than 45 minutes, five days per week, or run two miles in less than 20 minutes, four days per week.
- Strength exercise can be classified into three types of activities: calisthenics, light circuit weight training, and aqua-aerobics training. Activity type encompasses exercise designed to condition three basic muscle groups: arms, shoulders, and chest; abdomen and trunk; and legs and lower back. To benefit from strength exercises, do a minimum of 20 minutes of such exercises three times a week.

These recommendations may only be a beginning. Increasing studies from the U.S. surgeon general and the U.S. Academy of Science state that exercising at least 60 minutes or more per day is most beneficial in increasing metabolism, in boosting fat burning, and in losing weight and keeping it off (Blechman and Fahey 2003), thus providing another endorsement for the rigorous exercise regimens of the average runner or weightlifter. Entrepreneurs also may find great enjoyment in their exercise regimen. Plus, being physically fit actually may lead entrepreneurs to build better ventures. Sheehan (1992) summarized this position when he stated, "Exercise may not give me an extra day of life. It will, however, give extra life to everyday. If it doesn't improve my vital capacity, it will improve my capacity for everything vital. . . . Fitness allows for the full use of the body from sun up to bedtime. Running gives me a body that performs better at everything that I must do during the day. Because of my fitness, I can now accept

the Olympic ideal—as part of my day" (p. 10).

We hope the results of this study will encourage small business owners to follow the fitness regimens mentioned, and future research will be undertaken to learn more about the relationship between fitness and entrepreneurial success.

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