

the fostering of those personal traits highlighted by the graduates - self-motivation, self-organization, perseverance, time management, etc.

The results of this survey challenge us to evaluate the form and content of our curricula in terms of how they contribute to the career success of our graduates. The structural changes in the market place should be taken into account when revising our curricula. We must be aware that we no longer, if we ever did, train students only for positions in highly specialized or technical careers. Rather our students are encountering a work world that demands interpersonal and integrative skills for success.

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## Combatting Teaching and Administration Stress With Good Nutrition

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### Abstract

*Today's college level agricultural teacher and administrator is likely to face psychological or emotional stress related to workload, budget cuts, tenure concerns, student evaluations, time pressures, work relations with peers and perhaps personal relations concerns. Managing stress is a combined nutritional-psychological task. Understanding this relationship can help faculty and staff successfully cope with work and home environments.*



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## Symptoms of Stress

Symptoms of stress include:

|                     |                |
|---------------------|----------------|
| irritability        | stomach upset  |
| fatigue             | frequent worry |
| intestinal cramps   | insomnia       |
| withdrawal          | restlessness   |
| high blood pressure | backache       |
| headache            | muscle spasms  |

(Lawhon, 1982; Rossman, 1981; and Cherrington, 1983)

People react in different ways to stress. A person may have one or more symptoms and the severity of the symptoms may vary. Many persons are slow to recognize the symptoms as they are more concerned with the demand that is causing the stress.

### Nutritional Implications of Stress

In general, the nutritional effects of the stressed individual are influenced by previous nutritional status, as well as heredity, illnesses, and health abuses. These same factors affect the amount and type of nutrients lost from the body. Furthermore, the nature, frequency, intensity, and duration of the stressor influence the nutritional status of an individual. The three ways in which nutrition and stress can interact are:

1. A nutritional deprivation itself can evoke a stress response.
2. An individual's nutritional status can affect his/her response to a stressor.
3. Stress can produce nutritional deficiencies.

Recommended Dietary Allowances (RDAs) have been established by the Food and Nutrition Board of the National Academy of Sciences/National Research Council (1980). Amounts of specific nutrients are recommended for various age groups and for males and females within the various groups. Nutrients identified in research as affected by or affecting stress include: kilocalories, protein, and possibly vitamin C and calcium.

Research has shown that stress such as fever, immobilization, burns, or surgery, increases the kilocalorie requirement of the body (Beisel, 1976). These types of stress are sometimes called physical stress, excluding physical exercise. Carbohydrates, fats, or proteins may furnish the kilocalories required for the increased metabolic needs. Normally, protein is not used for energy needs, but is spared for its special functions of building and maintaining cells and regulating body processes.

If a person has long-term physical stress, there will be a loss of nitrogen, indicating protein is being lost from muscles and organs to be used for energy instead of carbohydrates and fats (Whitney and Cataldo, 1983). This occurs even if there are sufficient carbohydrates or fats in the body to provide the additional kilocalories required.

The best defense against excessive protein loss is good protein status. This isn't achieved overnight, but a person who consistently has good protein intake as recommended by the RDAs will be in a better position to handle the nitrogen-protein loss during periods of emotional stress.

The protein RDA for an adult male is 56 g and 44 g for an adult female. This amount can be met by including two glasses of milk or two servings of other items from the milk group and two servings from the protein group.

Although there are no RDAs for fats and carbohydrates, these nutrients are implicated in physical and emotional stress. In America, an average intake of fat is around 42% of the daily kilocalories (Whitney, Hamilton and Sizer, 1985). The Dietary Guidelines and the American Heart Association recommend decreasing the percentage of kilocalories from fats to 30-35% of daily kilocalories. Sufficient carbohydrates and fats need to be present in the diet during stressful times to ensure adequate amounts of kilocalories. Avoidance of excessive amounts of saturated fats and cholesterol is recommended because they are risk factors for heart disease for certain individuals.

Since vitamin C is important in the proper functioning of the adrenal glands and the demands on the adrenal glands are high during stress, it is recommended that the RDA for vitamin C be met (Hamilton, Whitney and Sizer, 1985). The RDA for Vitamin C is 60 mg per day for adults. This amount can be met by including ½ cup of citrus juice or a fortified tomato juice with the breakfast meal. Other sources include citrus fruits, broccoli, strawberries, cabbage and fresh potatoes.

Minerals that tend to be lost in increased amounts during stressful periods include: calcium, zinc, copper, and magnesium. For individuals with diets meeting the RDAs, these losses will not impose any additional risk (King and Parham, 1981).

Some drugs associated with contributing to stress are caffeine, nicotine, medications and excessive alcohol consumption. The intake of these should be minimized or eliminated during stress. Not only do these substances contribute toward stress, but they may interfere with nutrient effectiveness in the individual.

### **Eating Patterns During Stress**

Eating patterns vary during periods of stress for different individuals. Some individuals have an increased appetite coupled with the increase of energy fuels in the blood may lead to increased body fat and increased body weight. Unfortunately, the intake of food does not usually relieve the stress and may even add to the stress because the person now feels guilty for having eaten the food.

For other individuals, stress effects a decreased appetite and/or decreased digestive function. Chronic stress for these persons causes a decrease in body weight.

### **Chronic Emotional Stress**

Chronic emotional stress involves the "fight or flight" reaction occurring frequently with no physical response undertaken to use up the energy that is released. When the alarm reaction of the "fight or flight" reaction is experienced too often or too long, the body may remain in a constant state of mobilization. This includes rapid heartbeat, high blood pressure, high amounts of lipids in the blood, either increased or decreased appetite, and problems with digestion. This is when damage may occur to the heart

and circulatory system, as well as the immune, digestive, and nervous systems.

The circulatory system is certainly affected by the "fight or flight" response. The heart speeds up, blood pressure is increased, and lipids and carbohydrates are plentiful in the blood.

The long-term effect of elevated lipids in the blood may eventually contribute to a form of heart disease. The buildup of fatty plaques in arteries is termed atherosclerosis and these plaques may lead to a blood clot, high blood pressure, aneurysm, or hemorrhage.

The person with a "Type A" personality may be more likely to develop heart disease (O'Flynn-Corniskey, 1979 and Friedman and Rosenman, 1974). The "Type A" personality is manifested in a very competitive, time conscious, workaholic-type individual. This type of personality experiences more stress than the easy going "Type B" personality.

Serious chronic stress can decrease the effectiveness of the immune system so the person is more likely to get sick. The situation can become a vicious circle with the individual under stress requiring good health to fight off the effects of stress and yet the effects of stress are causing decreased resistance to disease.

Stress has been related to gastrointestinal disorders. Ulcers, colitis, and lower bowel syndrome are examples of gastrointestinal problems that are caused by or affected by stress (Whitney and Cataldo, 1983). Even though stress has been implicated in these multifactorial diseases, it is very difficult to differentiate between the effects of stress, heredity, and other causative factors.

Effects of stress on the nervous system include migraine headaches, emotional instability, insomnia, as well as muscle tenseness and spasms. Some of these reactions are the result of continued stimulation of the nerve impulse from the stress reaction.

### **Managing Stress**

Managing stress can be done in several different ways: (1) eliminate the stressor, (2) relaxation techniques, (3) social support systems, and (4) physical exercise. During these times of emotional stress, some specific suggestions for reducing stress include:

Meet recommended nutritional needs

Minimize or eliminate caffeine, nicotine and alcohol

Minimize or eliminate drugs that contribute to stress

Keep physically fit

Take breaks from work

Learn to say "no"

Minimize interruptions and distractions

Establish priorities

Give up perfectionism

Schedule reasonable deadlines

Improve problem solving techniques

Managing stress is not only a nutritional task, but also a psychological task. It should be kept in mind that different stress management techniques work better for various individuals. With daily and long-term emotional stress it's important to meet and control nutritional needs in order to avoid negative effects of stress along with negative effects of poor nutrition.

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## OSU CASE STUDY

# Faculty Burnout Measured

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### Introduction

Faculty in higher education face increasingly greater challenges in their work. Agriculture faculty are no exception. Edgerton (1980) indicated that a recent study showed that 96% of faculty believe that students are seriously deficient in basic skills. This forces faculty to increase time spent on remedial instruction and student advising. In addition, many faculty in agriculture are frustrated with the fact that an increasing number of students lack an agricultural background thereby making group instruction more difficult.

Role ambiguity also characterizes the faculty situation. This is especially true with agriculture faculty with split appointments in research or extension. With role ambiguity comes frustration which leads to strain.

Future career prospects also have an influence on the vitality of faculty members. The academic career of the university faculty of today is different from that of the 1950's or 1960's. "During the 1950's and 1960's, the size of college and university faculties increased dramatically to accommodate the boom in enrollment. Faculty enjoyed a high degree of mobility and, with it, the leverage for increasing salaries and perquisites" (Novotny, 1981, p. 2). Faculty members can tolerate present positions as long as they think they can move on to better positions. Unfortunately, faculty are becoming more immobilized. According to Edgerton (1980), the demand for services is lessening, and a large percentage (48%) of the faculty are in the middle age category between 35 and 50. Of these, 56% of the full-time faculty are tenured. These conditions lead to limited turnover and, therefore, less job mobility. Current faculty members may spend the next 25 years in their present positions. In a sense, they are trapped.

The combination of tight economic times, decreased job mobility, role ambiguity, job overload,

lower job satisfaction, frustration and a need for personal growth make faculty members prime candidates for "burnout."

### Problem Statement

The purpose of this study was to determine the extent of burnout among faculty in the College of Agriculture at the Ohio State University. Additionally, the study sought to determine the relationship of job satisfaction and coping skills to burnout.

### Objectives of the Study

The study was designed to answer the following research questions:

1. What is the extent of burnout among faculty in Agriculture at the Ohio State University?
2. To what extent is burnout correlated with job satisfaction and coping skills?
3. What differences are there in levels of burnout among three groups of faculty, i.e. 100% resident instruction, >50% research with remainder of appointment in resident instruction, and <50% research with remainder of appointment in resident instruction?

### Procedure

#### Population and Sample

The population for the study consisted of all faculty in the College of Agriculture on the Columbus campus with appointments in resident instruction and/or research (N = 88). The population was stratified into three groups: faculty with 100% resident instruction appointments, 50% or greater research appointments (combined with resident instruction), and less than 50% research appointment (combined with resident instruction). A census was conducted for the 100% resident instruction group (N = 15) and the >50% research group (N = 31). A 50% random sample was drawn from the >50% research group (n = 21). Thus, the sample consisted of 67 people. The response rate from this group was 94%.

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