

expectations and the emphasis on thinness in women.<sup>7</sup> Regardless of the reasons, it is quite apparent that these symptoms are much more prevalent than originally suspected.

It would behoove medical professionals to screen carefully for bulimia nervosa in their young female patients. Once these individuals are identified, treatment should be attempted. Limited evidence suggests that bulimia nervosa patients may respond favorably to behavioral psychological approaches.<sup>8</sup> Although the successfully treated cases justify guarded optimism, further controlled research is needed prior to the complete advocacy of these or other treatment approaches.

In conclusion, bulimia nervosa appears to be a prevalent disorder, and further research is needed at the levels of assessment, diagnosis, and treatment. It is hoped that physicians will appreciate the implications of the present study, and that it

will aid them in identifying and assisting patients with the symptoms of bulimia nervosa.

#### References

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## The Clinical Dietitian in Family Practice Residency Programs

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There is increasing emphasis on nutrition education throughout medical education. The American Academy of Family Physicians recently added education in nutrition to its revised special requirements for family practice residency training, which were effective July 1, 1983.<sup>1</sup> How programs will meet this requirement has not been examined. Physicians with a strong background in nutrition may be suitable to teach nutrition, but their scar-

city may have been a compelling force behind this new requirement. The clinical dietitian may appropriately assume this role; however, as yet the scope of the dietitian's involvement has not been established.

The purpose of this study was to define the current role of dietitians in family practice residencies. Specifically, their numbers, educational degrees, and functions were investigated to identify their participation in resident nutrition education.

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#### Methods

In November 1982 a written questionnaire was mailed to the 385 program directors listed in *The*

**Table 1. Dietitian Functions in Family Practice Residency Programs**

Function	Percentage
Counsels referred patients	94
Prepares patient education materials	81
Lectures on nutrition	77
Reviews resident charts	40
Participates on rounds	35
Evaluates residents	18

1982 *Directory of Family Practice Residency Programs*.<sup>2</sup> At three-week intervals the nonrespondents were sent duplicate surveys and then reminder postcards.

The questionnaires were coded to identify the classification of the administrative structure of the responding program as follows: (1) community hospital, unaffiliated, (2) community hospital, university affiliated, (3) community hospital, university administered, (4) university hospital, and (5) military hospital. Completed questionnaires were returned by 89 percent of the programs. When divided into the five different program structures, the proportions of the respondents were similar when analyzed by chi-square.

On the questionnaire those directors having a dietitian on staff were instructed to state the total number of dietitians, their educational degrees, and functions with the number of hours spent in

each function. They were further questioned as to whether their program had written behavioral objectives in nutrition. These questions were analyzed for differences among the responding program structure categories using chi-square, with responses ranging from "not beneficial" to "very beneficial," determined by whether they felt the dietitian was a benefit to their program. Using the same scale, those directors without a dietitian were asked whether they felt a dietitian would be beneficial to their program. The answers to these last two questions were compared by program structure category using two-way analysis of variance and Duncan's multiple range test. Military programs were not included in this analysis because of the small sample size.

## Results

Of the responding programs, 40 percent had a dietitian on staff, and 35 percent of these programs had instituted written behavioral objectives in nutrition, both consistent findings among the differing program structure categories. The highest academic degrees obtained by the dietitians or nutritionists were bachelor's, 52 percent; master's, 43 percent; and doctorate, 5 percent.

Dietitians were found to have a variety of functions in the residency setting (Table 1). Patient service accounted for the top two kinds of work performed, and duties related to resident education made up the remaining four. Counseling of

**Table 2. Perceived Benefit of Dietitians to Family Practice Residencies by Program Directors With or Without Dietitians on Staff**

Program Structure Category	Mean Perceived Benefit*		
	With Dietitian	Without Dietitian	Row Mean
Community	4.94	3.40	4.17
University affiliated	5.25	4.01	4.63
University administered	5.29	4.05	4.67
University	5.81	4.61	5.21**
Column mean	5.32***	4.02	

\*Responses ranked on a scale from 1 to 7, where 1 = not beneficial, 7 = very beneficial  
 \*\*Significant at .01 level, two-way ANOVA, Duncan's multiple range test  
 \*\*\*Significant at .01 level, two-way ANOVA

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**Brief Summary: Contraindications:** The drug is contraindicated in patients who have had allergic reactions to NAPROSYN<sup>®</sup> (naproxen) or to ANAPROX<sup>®</sup> (naproxen sodium). Do not give to patients in whom aspirin or other nonsteroidal anti-inflammatory/analgesic drugs induce the syndrome of asthma, rhinitis, and nasal polyps. Both types of reactions have the potential of being fatal. **Warnings:** Gastrointestinal bleeding, sometimes severe, and occasionally fatal, has been reported in patients receiving the drug. Among 960 patients treated for rheumatoid arthritis or osteoarthritis, 16 cases of peptic ulceration were reported. More than half were on concomitant corticosteroid and/or salicylate therapy and about a third had a prior history of peptic ulcer. Gastrointestinal bleeding, including nine potentially serious cases, was also reported. These were not always preceded by premonitory gastrointestinal symptoms. Although most of the patients with serious bleeding were receiving concomitant therapy and had a history of peptic ulcer disease, the drug has the potential for causing gastrointestinal bleeding on its own. Administer to patients with active gastric and duodenal ulcers only under close supervision. **Precautions: General:** NAPROSYN<sup>®</sup> (NAPROXEN) SHOULD NOT BE USED CONCOMITANTLY WITH THE RELATED DRUG ANAPROX<sup>®</sup> (NAPROXEN SODIUM) SINCE THEY BOTH CIRCULATE IN PLASMA AS THE NAPROXEN ANION. Because anaphylactic reactions usually occur in patients with a history of such reactions, question patients for such things as asthma, nasal polyps, urticaria, and hypotension associated with NSAIDs before starting therapy. If such symptoms occur, discontinue the drug. In chronic studies in laboratory animals, the drug has caused nephritis. Glomerular nephritis, interstitial nephritis and nephrotic syndrome have been reported. Use with great caution in patients with significantly impaired renal function. Monitoring of serum creatinine and/or creatinine clearance is advised in these patients. Certain patients, including those with compromised renal blood flow and some elderly in whom impaired renal function may be expected, should have renal function assessed before and during therapy. Consider reducing daily dosage in these patients. With NSAIDs borderline elevations of liver tests may occur in up to 15% of patients. They may progress, remain unchanged, or be transient with continued therapy. The SGPT (ALT) test is probably the most sensitive indicator of liver dysfunction. Elevations (3 times the upper limit of normal) of SGPT or SGOT (AST) occurred in controlled clinical trials in less than 1% of patients. Evaluate patients with symptoms and/or signs suggesting liver dysfunction, or in whom an abnormal liver test has occurred, for evidence of more severe hepatic reaction. Severe hepatic reactions, including jaundice and cases of fatal hepatitis, have been reported rarely. If abnormal liver tests persist or worsen, if clinical signs and symptoms consistent with liver disease develop, or if systemic manifestations occur (e.g., eosinophilia or rash), discontinue therapy. If steroid dosage is reduced or eliminated during therapy, do so slowly and observe patients closely for adverse effects, including adrenal insufficiency and exacerbation of arthritis symptoms. Determine hemoglobin values frequently for patients with initial values of 10 grams or less who receive long-term therapy. Peripheral edema has been observed in some patients. Each tablet contains approximately 25 mg (1 mEq) sodium, which should be considered in patients whose overall intake of sodium must be markedly restricted. Use with caution in patients with fluid retention, hypertension or heart failure. The antipyretic and anti-inflammatory activities of the drug may reduce fever and inflammation, thus diminishing their utility as diagnostic signs. Conduct ophthalmic studies soon after starting therapy and at periodic intervals if the drug is used for an extended period. **Information for Patients:** Caution should be exercised by patients whose activities require alertness if they experience drowsiness, dizziness, vertigo or depression during therapy. **Drug Interactions:** Naproxen anion may displace other albumin-bound drugs from their binding sites and could likewise be displaced itself. Studies failed to show that the drug significantly affects prothrombin times when administered to individuals on coumarin-type anticoagulants, but use caution since interactions have been seen with other nonsteroidal agents of this class. Observe patients receiving the drug and a hyalantoin, sulfonamide or sulfonylurea for signs of toxicity to these drugs. Some drugs of this class inhibit the natriuretic effect of furosemide. Increased plasma lithium due to inhibition of renal lithium clearance has been reported. This drug and other NSAIDs can reduce the antihypertensive effect of beta-blockers. Probenecid given concurrently increases naproxen anion plasma levels and extends its plasma half-life significantly. **Drug/Laboratory Test Interactions:** The drug may decrease platelet aggregation and prolong bleeding time. The drug may result in increased urinary values for 17-ketogenic steroids because of an interaction between the drug and/or its metabolites with m-dinitrobenzene used in this assay. Temporarily discontinue therapy with the drug for 72 hours before adrenal function tests are performed. The drug may interfere with some urinary assays of 5-hydroxy indoleacetic acid (5HIAA). **Carcinogenesis:** A two-year study in rats to evaluate the carcinogenic potential of the drug showed no evidence of carcinogenicity. **Pregnancy:** Teratogenic Effects: Pregnancy Category B. Do not use during pregnancy unless clearly needed. Avoid use during late pregnancy. Non-teratogenic Effects: In rats, pregnancy was prolonged when the drug was given before the onset of labor; labor was protracted when the drug was given after labor had begun. **Nursing Mothers:** Avoid use in nursing mothers. **Pediatric Use:** Pediatric indications and dosage recommendations have not been established. **Adverse Reactions:** **Incidence Greater Than 1%: Gastrointestinal:** The most frequent complaints related to the gastrointestinal tract: constipation,\* heartburn,\* abdominal pain,\* nausea,\* dyspepsia, diarrhea, stomatitis. **Central Nervous System:** Headache,\* dizziness,\* drowsiness,\* lightheadedness, vertigo. **Dermatologic:** Itching (pruritus),\* skin eruptions,\* ecchymoses,\* sweating, purpura. **Special Senses:** Tinnitus,\* hearing disturbances, visual disturbances. **Cardiovascular:** Edema,\* dyspnea,\* palpitations. **General:** Thirst. \*Incidence of reported reaction 3%-9%. Reactions seen in less than 3% of the patients are unmarked. **Incidence Less Than 1%: Probable Causal Relationships:** The following adverse reactions were reported less frequently than 1% during controlled clinical trials and through voluntary reports since marketing. The probability of a causal relationship exists between the drug and these adverse reactions: Abnormal liver function tests, gastrointestinal bleeding, hematemesis, jaundice, melena, peptic ulceration with bleeding and/or perforation, vomiting, glomerular nephritis, hematuria, interstitial nephritis, nephrotic syndrome, renal disease, eosinophilia, granulocytopenia, leukopenia, thrombocytopenia, depression, dream abnormalities, inability to concentrate, insomnia, malaise, myalgia and muscle weakness, alopecia, skin rashes, hearing impairment, congestive heart failure, anaphylactoid reactions, menstrual disorders, pyrexia (chills and fever). **Causal Relationship Unknown:** Other reactions have been reported in circumstances in which a causal relationship could not be established. However, in these rarely reported events, the possibility cannot be excluded. Therefore these observations are being listed to serve as alerting information to the physicians: agranulocytosis, aplastic anemia, hemolytic anemia, urticaria, angioneurotic edema, hyperglycemia, hypoglycemia. **Overdosage:** May be characterized by drowsiness, heartburn, indigestion, nausea or vomiting. Life-threatening dose is not known. If patient ingests many tablets, empty stomach and employ usual supportive measures. Animal studies suggest that the prompt administration of 5 grams of activated charcoal would tend to reduce markedly drug absorption. It is not known if the drug is dialyzable. **Caution:** Federal law prohibits dispensing without prescription. See package insert for full prescribing information. August 1983 Rev. 24

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referred patients and preparing patient education materials ranked as the two most frequent patient services of dietitians. Of the direct resident education functions, the leading activity was lecturing, performed by 77 percent of dietitians. If 40 percent of programs have a dietitian and 77 percent of these lecture, then at least 31 percent of the responding programs utilize a dietitian for resident education. This calculation does not include possible lectures to residents by dietitians not on staff and other educational functions performed such as chart review, attending rounds, and evaluating residents.

Program directors expressed significant differences regarding their perceived benefit of a dietitian to their programs depending on whether they already had a dietitian (Table 2). Those program directors with dietitians perceived a greater benefit than those directors without. Furthermore, university program directors indicated a greater benefit regardless of their employment of a dietitian.

## Comment

Dietitians are contributing to the nutrition education of family practice residents. Their predominant role, however, is still centered on patient service. Written nutritional behavioral objectives are used in teaching residents in only slightly more than one third of programs having dietitians on staff, suggesting that despite the participation of a dietitian, nutrition education may remain unorganized in many residencies.

The most interesting aspect of this study is the more positive feeling toward the benefit of a dietitian by directors who already have a dietitian on staff. This response suggests that programs may not have a dietitian for reasons that are not entirely financial or due to the lack of a suitable candidate, but in part attitudinal.

These study findings were generated prior to the initiation of the new special requirements. What impact these requirements or the continuing evolution of nutrition education will have remains to be seen.

## References

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