Editorials

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Pain

How does one measure how much it hurts? Does one person's pain hurt more than another's? Can the intensity of pain be determined, and is it of any importance to do so? Is mental pain comparable to physical pain? Is there really any difference? Some answers are found in the report by Dr. H. Osmond, Dr. R. Mullaly and Dr. C. Bisbee on *Mood Pain: A Comparative Study of Clinical Pain and Depression.*

Severe pain is one of the most distressing symptoms I have been called upon to treat and can produce severe depression. For the past three years I had failed to help an elderly woman who suffered severe facial pain for the past twenty years. She had ill-fitting dentures yet not one of a succession of good dentists was able to help her. She had failed to respond to any treatment ever given to her, including mine. The only reason she retained any faith in me was because I had treated her schizophrenic son to full recovery. Even a series of ECT failed to help her.

Just before Christmas 1984 she was so depressed she was admitted to hospital to protect her against suicide. She had lost a lot of weight; had not slept in three days and continued to suffer excruciating pain.

Several days after being admitted I received an evening call from her nurse who was very concerned over her lack of sleep. On the spur of the moment I ordered 50 mg of Thorazine just to get her some sleep. The next morning I found a different patient. She had her first good sleep in weeks, was cheerful, relaxed, smiled and was able to eat. The pain, she said, was there but not a problem. She is still on this tranquilizer.

What went right? She had failed to respond to twenty years of treatment, to my psychotherapy, to Orthomolecular psychiatry, to ECT, to a variety of anti-depressants, to being admitted to hospital, to treatment at a pain center. What was her pain? Why did a small amount of Thorazine produce this miracle?

Perhaps her pain was ten parts physical and ninety parts emotional. Perhaps Osmond et al.'s paper will one day lead to some answers.

The other day, as a patient freed of depression left my office he spontaneously remarked, "Dr. Hoffer, I would rather lose

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an arm than have this depression again." Today I saw a young schizophrenic, well after two years, and asked him which he would rather have, his depression back or lose his arm. He immediately replied he would sooner lose his arm. Then he thought about it and said, no, not the arm. Finally he said he would be willing to lose two fingers, but not three, never to be depressed again.

Developmental Defects

Pregnant women given a multivitamin preparation containing small quantities of some of the B vitamins no longer gave birth to children with neural tube defects. Each day, beginning thirty days before conception and continuing for about six weeks (until neural tube closure), these women received Vitamin A 4000 IU, Vitamin D 400 IU, B-l 1.5 mg, riboflavin 1.5 mg, Pyridoxine 1 mg, niacinamide 15 mg, ascorbic acid 40 mg, folic acid 0.36 mg, ferrous sulfate (75.6 mg iron) and calcium phosphate 480 mg. Previously they had had one or more infants with neural tube defects. Out of 178 infants or fetuses only one had NTD; out of a control group of 260 untreated 13 infants had NTD. A further study yielded similar data; only two children with NTD were born to 254 mothers supplemented while 11 were born to 219 women not given vitamins. For both studies the incidence for supplemented women is 0.7% (from 454 women) and 4.7% from 519 controls.

These results are so astonishing they have generated a vigorous debate. Neural tube defects include spina bifida and anen-cephalus and are the commonest severe congenital defects. Attempts to deal with this grave problem included surgical repair and prenatal detection followed by therapeutic abortion. Any reasonable person would conclude that anything as safe as these small quantities of vitamins which prevented NTD ought to be urged upon every pregnant woman and before pregnancy occurred. Yet, physicians have as much trouble accepting this conclusion as do the tobacco companies that smoking causes lung cancer. Elwood (1983) complained: (1) the samples were not randomized, (2) the study was not double blind, (3) the control group was not given placebo. Of these criticisms he believed the second one was most serious, and his final conclusion was "better evidence of efficacy and safety" were needed.

Smithells (1984) vigorously rebutted Elwood's criticisms, pointing out that even if double blind controls were not used, the two groups were equivalent in social class and in amounts of some vitamins in blood before supplementation.

In my opinion, women who expect to become pregnant or have become pregnant should supplement their diets immediately with adequate quantities of B vitamins. But the diet should also be Orthomolecular, i.e. whole, fresh, non toxic, variable and, if possible, indigenous. Let the professors argue in their ivory towers about controls, double blinds and whether more studies are needed. No family can afford to risk having a child with a neural tube defect.

Literature Cited

ELWOOD, J.M.: Can vitamins prevent neural tube defects? *Can. Med. Assoc. J.,* 229:1088-1092, 1983. SMITHELLS, R.W.: Can vitamins prevent neural tube defects? Can. Med. Assoc. J., 131:273-276, 1984.

Vitamin Safety

Dr. John Marks recently reviewed the safety of vitamins used in Orthomolecular doses. The review is distributed by the Vitamin Information Service of Hoffman-La Roche. It contains information about thirteen vitamins and has a vitamin safety bibliography containing 117 papers. In his introduction Dr. Marks writes, "Sometimes the intake has assumed heroic levels. In consequence cases of alleged adverse reactions to vitamins are reported periodically in the press with support ranging from the anecdotal to the scientific. These in turn are frequently reiterated by well-intentioned writers without any case details or adequate scientific report increasing the implied credibility."

After reviewing eleven papers and reviews Marks concludes:

1. "There is no satisfactory internationally accepted standard for advised intake of vitamins."

2. Levels of vitamins normally used by the majority of the general population are safe. The risk of adverse reactions appears to be greater when high doses are taken

without professional advice.

3. "There is a considerable margin of safety with most of the vitamins."

4. "The safety margin is particularly true for water soluble vitamins."

5. With "exception of certain adverse reactions from ingested vitamins A and D the rare cases of vitamin side-effects that occur are rapidly reversible on withdrawal of the supplementation and leave minimal or usually no lasting effects."

Orthomolecular physicians and subjects using vitamins in large doses are interested particularly in Pyridoxine, niacin and/or niacinamide, and ascorbic acid.

A review of twelve reports dealing with Pyridoxine led to the conclusion it was safe with doses under 2,000 mg per day. It does not cause liver damage, it does not interfere with riboflavin activity, nor does it cause a dependency state.

A review of fifteen papers on Vitamin B-3 (not including any of mine) shows it is safe. Marks wonders whether the flushing effect should be considered an adverse reaction since it is a natural reaction to niacin and is used therapeutically.

A further review of twenty-seven papers on Vitamin C (not including any papers by I. Stone, L. Pauling, me, or any Orthomolecular physicians) proves it is safe. Marks states, "Although the scientific evidence for these uses is increasing steadily there are still critics of high-dose administration. They have alleged that the substance causes kidney stones, interference with Vitamin B-12 metabolism, rebound scurvy, excessive iron metabolism and has a mutagenic effect," and "an extensive and very thorough analysis of the data during the past years has disproved all serious allegations."

Marks lists the following RDAs and a ration of High Safety/RDA.

Vitamin	**RDA (mg.)**	**Ratio**
Pyridoxine	22	+++
Vitamin B-3	18	+++
Vitamin C	60	++++

+++ Safety level 50 to 100 times RDA. ++++ Safety level at least 100 times RDA.

John Marks is rather conservative in his estimates by a factor of two or three. Ascorbic acid has been used in doses much higher. I do agree that these high doses
should be supervised by physicians who know the vitamins and what they can do.

Unfortunately, the vast majority of physicians will not read Marks' excellent review. I try to help a bit. *The Canadian Medical Association Journal* will carry a letter I have written, to appear early in 1985. There I refer to the medical literature showing that in the original method for measuring oxalate, ascorbic acid is converted to oxalate in *vitro.* This removes every vestige of the original suggestion that ascorbic acid would increase the risk of oxalate kidney stones. Even this is not necessary since no cases of oxalate kidney stones caused by ascorbic acid have been reported. Any physicians who can now continue to believe ascorbic acid causes kidney stones will believe they can fly by flapping their ears.