

Natural Strategies to Reduce Pediatric Toxicities* from Annie Appleseed Project

Here's one study (we are sharing these so you can share with the doctors) **indicating the value of these natural approaches for children with cancer:**

[J Altern Complement Med.](#) 2013 Feb 28. [Integrative Care for Pediatric Patients with Pain.](#)

[Young L, Kemper KJ.](#)

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Abstract Objectives: Although pediatric patients with chronic pain often turn to complementary therapies, little is known about patients who seek academic integrative pediatric care. Design: The study design comprised abstraction of intake forms and physician records from new patients whose primary concern was pain.

Setting/location: The study setting was an academic pediatric clinic between January 2010 and December 2011. Subjects: Of the 110 new patients, 49 (45%) had a primary concern about headache (20), abdominal pain (18), or musculoskeletal pain (11). Results: The average age was 13±4 years, and 37% were male. Patients reported an average pain level of 6±3 on a 10-point scale, and most reported more than one kind of pain; parents had an average of 7±3 health concerns per child, including fatigue (47%), mood or anxiety (45%), constipation/diarrhea (41%), and/or sleep problems (35%). Most patients (57%) were referred by specialists; 71% were taking prescription medications; and 53% were taking one or more dietary supplements at intake. **Of those tested, most (61%) had suboptimal vitamin D levels.** All families wanted additional counseling about diet (76%), exercise (66%), sleep (58%), and/or stress management (81%). In addition to encouraging continued medical care (100%) and referral to other medical specialists (16%), frequent advice included continuing or initiating dietary supplements such as vitamins/minerals (80%), omega-3 fatty acids (67%), and probiotics (31%). Stress-reducing recommendations included biofeedback (33%), gratitude journals (16%), and yoga/t'ai chi (8%). Other referrals included acupuncture (24%) and massage (20%). Discussion: Patients who have chronic pain and who present to an integrative clinic frequently have complex conditions and care. They are interested in promoting a healthy lifestyle, reducing stress, and using selected complementary therapies. Conclusion: Patients with chronic pain who seek integrative care may benefit from the kind of coordinated, integrated, comprehensive care provided in a medical home.

Reiki (pronounced "ray-kee") is a therapeutic technique in which healing energy is channeled, or conducted, through a practitioner's hands into the person receiving the treatment. It is believed that Reiki brings the body into emotional and spiritual balance, supporting the body's natural ability to heal itself.



Yoga is used for fatigue, insomnia, depression, general quality of life. It can reduce high blood pressure. There are children's programs – DVDs or YouTube.com. Examples: <http://www.gaiam.com/yoga-dvds/yoga-kids/90-0072,default.pd.html?start=1&cgid=3010200&prefn1=dvdType&prefv1=Kids>

<http://www.livestrong.com/article/99029-yoga-poses-children/>

[Holist Nurs Pract.](#) 2012 Sep-Oct; 26(5):262-71. doi: 10.1097/HNP.0b013e318263f2ed.

[Yoga for youth in pain: the UCLA pediatric pain program model.](#) [Evans S, Moieni M, Sternlieb B, Tsao JC, Zeltzer LK.](#)

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Abstract Children, adolescents, and young adults do not typically feature in clinics, studies, and mainstream notions of chronic pain. Yet many young people experience debilitating pain for extended periods of time. Chronic pain in these formative years may be especially important to treat in order for young patients to maintain life tasks and to prevent protracted disability. The Pediatric Pain Program at the University of California, Los Angeles, is a multidisciplinary treatment program designed for young people with chronic pain and their families. We offer both conventional and complementary medicine to treat the whole individual. This article describes the work undertaken in the clinic and our newly developed Yoga for Youth Research Program. The clinical and research programs fill a critical need to provide

service to youth with chronic pain and to scientifically study one of the more popular complementary treatments we offer, Iyengar yoga.

AND:

[Pediatr Phys Ther](#). 2011 Winter;23(4):375-9. doi: 10.1097/PEP.0b013e318235628c.

Feasibility study: the effect of therapeutic yoga on quality of life in children hospitalized with cancer.

[Geyer R](#), [Lyons A](#), [Amazeen L](#), [Alishio L](#), [Cooks L](#). Seattle Children's Hospital, Seattle, Washington, USA.

RESULTS:

Statistically significant differences ($P < .05$) were found in child perception of gross motor function.

CONCLUSION:

These feasibility study data suggest that therapeutic yoga positively affected child perception of gross motor function measured on the PedsQL 4.0. Further studies are needed, including a randomized control trial and with a larger number of participants, to clarify and confirm the effect of therapeutic yoga.



Exercise

has been studied in adult cancer patients and found to reduce fatigue DURING treatment with chemotherapy and radiation therapy. Walking, biking, swimming, etc.

[Cochrane Database Syst Rev](#). 2013 Apr 30;4:CD008796. doi: 10.1002/14651858.CD008796.pub2.

Physical exercise training interventions for children and young adults during and after treatment for childhood cancer.

[Braum KI](#), [van der Torre P](#), [Takken T](#), [Veening MA](#), [van Dulmen-den Broeder E](#), [Kaspers GJ](#). Department of Pediatrics, Division of Oncology/Hematology, VU University Medical Center, PO Box 7057, Room 6 D 120, Amsterdam, Netherlands, 1007 MB

AUTHORS' CONCLUSIONS:

The effects of physical exercise training interventions for childhood cancer participants are not yet convincing due to small numbers of participants and insufficient study methodology. Despite that, first results show a trend towards an improved physical fitness in the intervention group compared to the control group. Changes in physical fitness were seen by improved body composition, flexibility, and cardiorespiratory fitness. However, the evidence is limited and these positive effects were not found for the other assessed outcomes, such as muscle strength/endurance, the level of daily activity, health-related quality of life, and fatigue. There is a need for more studies with comparable aims and interventions, using higher numbers of participants and for studies with another childhood cancer population than ALL only.

Aromatherapy used for nausea (being taught at MD Anderson Cancer Center in Houston, TX). It can stimulate lymphatic flow, reduce fatigue and anxiety. Example: Lavender for headaches, insomnia, high blood pressure, Orange for insomnia, constipation, depression, anxiety, peppermint as a digestive aid, Rosemary for fatigue, Ylang-Ylang for calming.

Acupressure for reducing nausea, fatigue, keeping blood counts normalized, pain, much more.

<http://annieappleseedproject.org/tradchinmed.html> Older kids may have acupuncture.

[J Altern Complement Med](#). 2012 Apr;18(4):334-40. doi: 10.1089/acm.2011.0102.

Reduction in nausea and vomiting in children undergoing cancer chemotherapy by either appropriate or sham auricular acupuncture points with standard care. [Yeh CH](#), [Chien LC](#), [Chiang YC](#), [Lin SW](#), [Huang CK](#), [Ren D](#).

School of Nursing, University of Pittsburgh, Pittsburgh, PA, USA.

BACKGROUND: **Over 40% of children with cancer have reported that chemotherapy-induced nausea and vomiting (CINV) are the two most distressing side-effects of treatment even when antiemetic drugs have been used.** (ear acupuncture)

[Evid Based Complement Alternat Med](#). 2012;2012:450150. doi: 10.1155/2012/450150. Epub 2012 Feb 9. Hematopoietic cell transplant and use of massage for improved symptom management: results from a pilot randomized control trial.

Protection for Radiotherapy – fish oil! (comes in berry or citrus-flavored liquid versions for kids)

1) In vitro studies showed that curcumin/turmeric increases tumor cell apoptosis, decreases cell growth rate, and reduces the number of clonogenic cells in a dose-dependent manner. (This is a spice in human use for thousands of years)

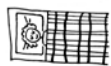
Hiroshi Inano at the Research Center for Radiation Safety, National Institute of Radiological Sciences, Japan, says the results are very interesting and that he hopes to be able to use curcumin/turmeric in clinical application, particularly given its low toxicity and strong antioxidant activity.
[12/10/2002; Lancet Oncology]

"In both healthy individuals and osteosarcoma patients, high interindividual variability in pharmacokinetics and nonlinear dose dependency was observed, suggesting potentially complex absorption kinetics. Overall, good tolerability was noted in both healthy and osteosarcoma groups". [J Agric Food Chem](#). 2010 Feb 24;58(4):2095-9. doi: 10.1021/jf9024807.

2) **CONCLUSION:** Calendula is highly effective for the prevention of acute dermatitis of grade 2 or higher and should be proposed for patients undergoing postoperative irradiation for breast cancer. *Journal of Clinical Oncology*, Vol 22, No 8 (April 15), 2004: pp. 1447-1453 (find Calendula in drug or health food stores)

3) Tea extracts are an efficient, broadly available treatment option for patients suffering from acute radiation-induced skin toxicity. "The molecular mechanisms underlying the beneficial effects are complex, and most likely not exclusively dependent on effects of tea polyphenols such as epigallocatechin-gallate". *BMC Medicine* 2006, 4:28 doi:10.1186/1741-7015-4-28 (tea products now come in skin creams too).

4) Aloe vera as cream or directly from (a more-than two-year old plant) can be used on burned skin, including sunburns).



Insomnia (sleep issues – for parents and kids)

1) Pumpkin seeds are "more likely to attract the sand man than warm milk, a book or Lavender scents on the pillow". Like Turkey, Butternut Squash Seeds and pumpkin seeds have high concentrations of the compounds that tend to make guests sluggish after a Thanksgiving meal. Could include poppy seeds in the diet -natural sleep aid. Ayurvedic

2) Herbs such as Valerian, with Calcium/Magnesium, skullcap (**not for really young children**)

3) Massage the soles of the feet (Dana Ullman, Homeopath suggests); (older kids - hypnotize self starting with the feet – feel total relaxation, then move on up)

Create a warm bath in which a couple of drops of one or more essential oils such as orange blossom, meadowsweet, or hops are added

4) Wool blankets are better able to regulate skin and body temperature than synthetic blankets. This comfortable comforter may help promote sleep

5) Raw, organic honey – 1 teaspoon before bed may help better sleep

6) Use a Mantra - A mantra is usually a one or two syllable word that can be repeated over and over again. It is used as a way to calm the mind, though it can also clear the mind and encourage sleep

7) Music to relax by

Many medicines keep you awake. Talk to your doctor.

Neuropathy

- 1) "Our results indicate that the behavioral symptoms of neuropathic pain states can be treated successfully, and that partial to complete reversal of associated morphological and neurochemical changes (are) achievable with artemin". *Nature Medicine* November 2003 Volume 9 Number 11 pp 1383 – 1389 (herb from health food stores)

- 2) Alpha-lipoic acid (a dietary supplement) Considered safe Regul Toxicol Pharmacol. 2006 Oct;46(1):29-41. Epub 2006 Aug 14. Also protective for the liver "The results of the study revealed that -lipoic acid could offer protection against chloroquine-induced hepatotoxicity. -Lipoic acid had a better protective effect when compared with silymarin, a reference drug"
Journal of Applied Toxicology Volume 24, Issue 1 , Pages 21 - 26
Vitamin B12 (from an article by syndicated columnist Dr. Paul Donohue, To Your Health, in the Palm Beach Post). "The recommended daily allowance for vitamin B12 is 2.4 micrograms. Huge doses of vitamin B12 can penetrate the intestinal wall. (But) B12 deficiency is an uncommon cause of burning feet." B vitamins usually come as a combo (BEST) or as Brewer's Yeast – a tasty powder that can be sprinkled on foods.
 - 3) "Conclusions: Urea containing preparation appears to be an excellent choice for the prevention and treatment of capecitabine induced hand foot syndrome. This minimizes drug delays, schedule interruptions and maintains the dose density. Owing to reduced morbidity, the drug tolerance and acceptance is considerably improved". ASCO 2004 Abstract No: 8105
 - 4) Oral Glutamine is "effective for preventing Oxaliplatin-induced Neuropathy in Colorectal cancer patients" The Oncologist, Vol. 12, No. 3, 312-319, March 2007; doi:10.1634/theoncologist.12-3-312
 - 5) Journal of Alternative and Complementary Medicine 2004;10(3):449-455. A study published in a recent issue of the Journal of Alternative and Complementary Medicine has found that acupuncture can reduce pain and peripheral neuropathy in HIV-infected individuals, especially when treatment is directed at a patient's specific symptoms.
 - 6) While nerve conduction velocity did not improve, vibration perception increased. Clinical symptoms also improved in groups treated with acetyl-L-carnitine compared to placebo. Participants who received 1,000 milligrams acetyl-L-carnitine thrice daily demonstrated significant improvement in pain at the study's midpoint and conclusion.
 - 7) Neuroprotective Conclusion: "Supplementation of patients receiving cisplatin chemotherapy with vitamin E decreases the incidence and severity of peripheral neurotoxicity". Journal of Clinical Oncology, Vol 21, Issue 5 (March), 2003: 927-931
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Nausea: Ginger, ginger, ginger – recent studies PROVE it! Use it even if on meds. (Ginger is a spice in continuous human use for thousands of years. One Source - http://shop.traditionalmedicinals.com/Organic-Ginger/p/TDM-001641&c=TraditionalMedicinals@Digestive?utm_source=bing&utm_medium=cpc

Protect the heart – CoQ10 (dietary supplement), or L-Carnitine, Hawthorne berry, grapeseed extract



EAT MORE fruits and veggies every single day – try to avoid sugars, NO SODA!



Compiled from studies and articles, many of which can be found on www.annieappleseedproject.org (artwork donated by Anita Lovitt, Delray Beach artist) This entire article is © by Annie Appleseed Project



The Annie Appleseed Project (561) 749-0084 Delray Beach, FL 33446-2215 Presenting the Patient Perspective on natural approaches for people of all ages with cancer. We're an all-volunteer 501c3 providing information only.

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