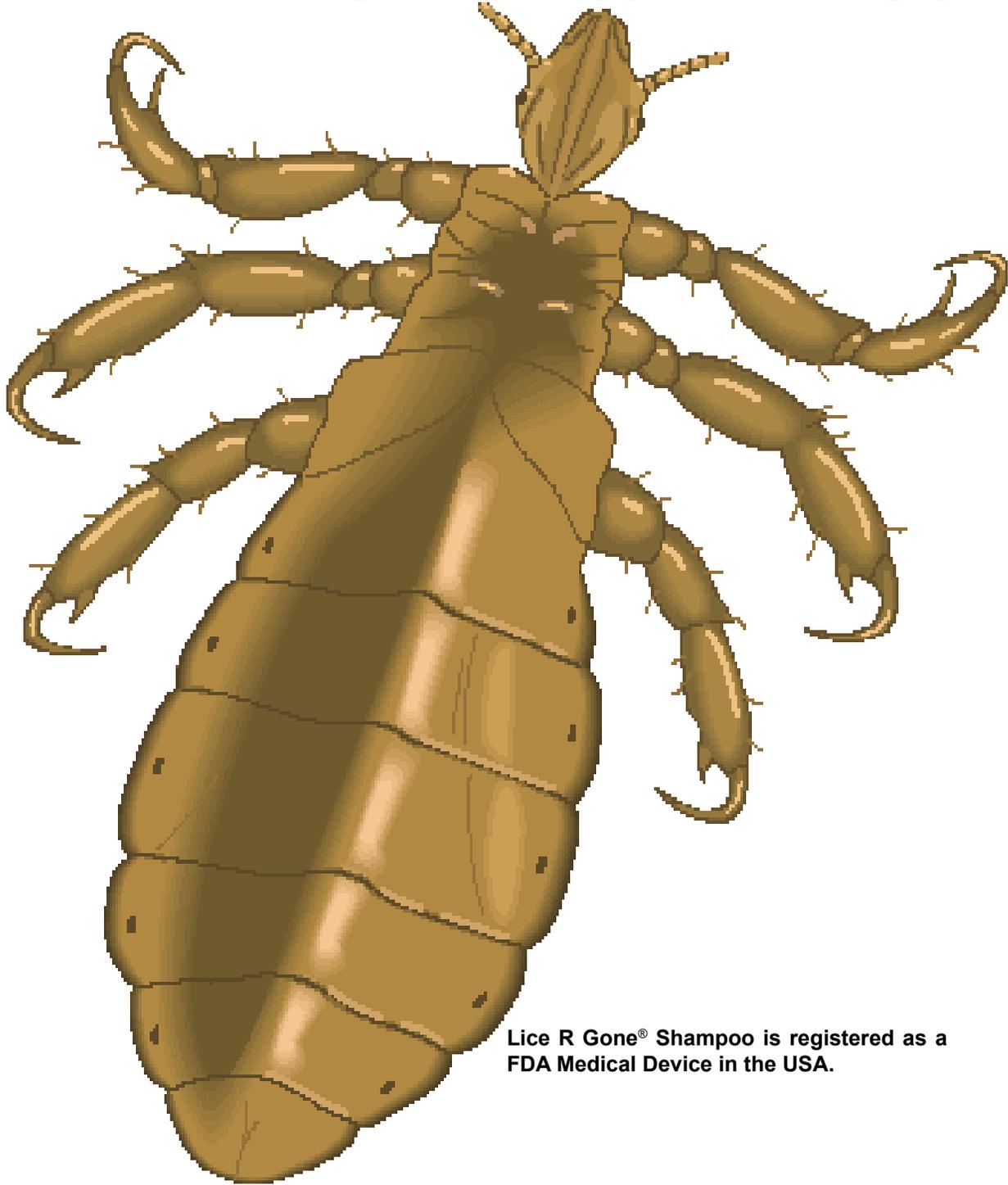


CHAPTER 16

THE BEST CONTROL FOR HUMAN LICE AND SCABIES



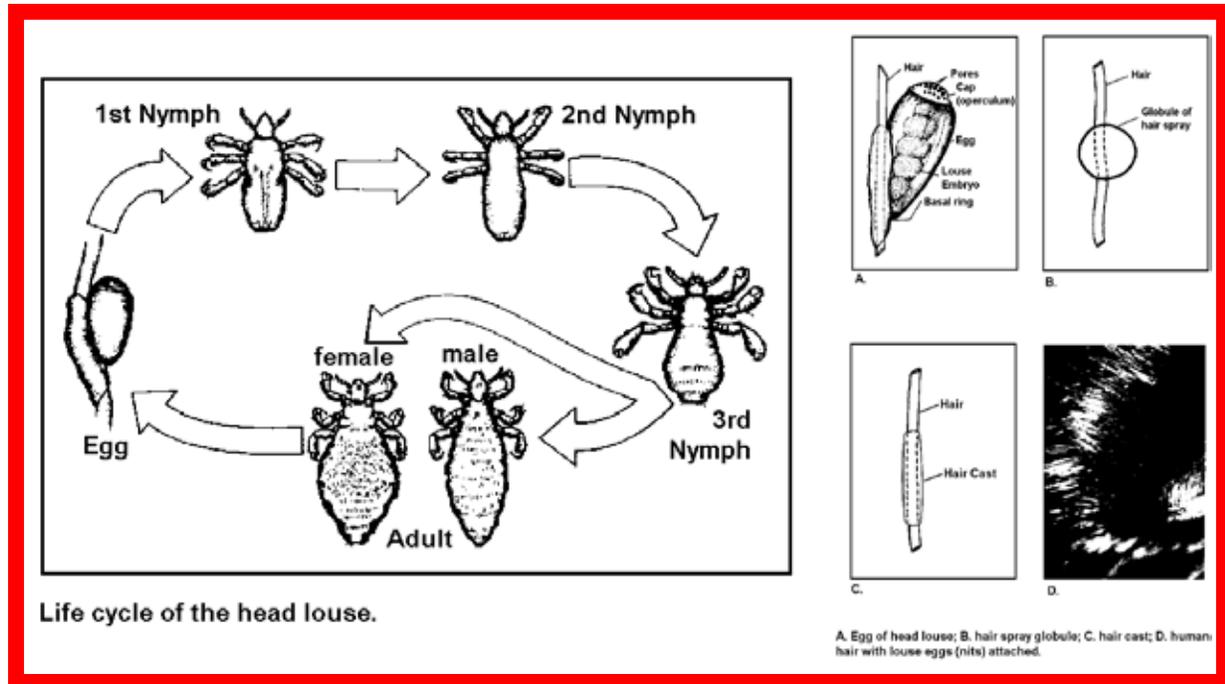
Lice R Gone® Shampoo is registered as a
FDA Medical Device in the USA.

ORDER ANOPLURA

FAMILY PEDICULIDAE

Three Types of Human Lice

Are you having a lousy time?



The head louse (*Pediculus humanus capitis*) (DeGeer), **the body louse** (*Pediculus humanus humanus*) (Linnaeus) and **the crab louse** (*Phthirus pubis*) (Linnaeus) all occur on humans. All three cause considerable skin irritation as they feed on human blood or crawl on the body. Typhus, impetigo, trench fever and relapsing fever have all been transmitted by body and head lice. Scratching can lead to secondary bacterial infections leaving children feeling achy, feverish and/or lethargic. Human lice can establish and maintain themselves only on humans. A louse cannot hop or jump. They can, however, crawl fast. They are usually transmitted only through close personal contact. They are less frequently transmitted through the sharing of personal articles or toilet seats. For head lice, this includes combs, brushes and other grooming aids, hats, headbands, helmets, caps, headrests, wigs, curlers or other headgear, especially when these items are stored in shared lockers. They spread or infest by crawling, they live by biting and sucking blood from the scalp and can survive for up to 48 hours off a human head, and the nits on a hair shaft can survive from 4 - 10 days - so vacuum thoroughly and/or spray/clean with diluted enzyme cleaners or peppermint soaps. Head lice infestations have been a problem a long time - Pliny, a Greek naturalist (23-79 AD) suggested bathing in viper broth. Montezuma paid people to pick nits off his subjects, dried them and then saved them in his treasury. W. Coles in his 1657 book Adam in Eden: or Nature's Paradise noted that the oil from hyssop (*Hyssopus*) "killeth lice." Nicholas Culpeper in his 1681 The English Physician Enlarged recommended tobacco juice to kill lice on children's heads, a very early reference to the use of tobacco as an insecticide poison. Medical historians trace head lice infestations back 9,000 years! In the U. S. head lice are not "known" to spread disease or cause serious injury - they are only considered to be "repugnant". Like other U. S. public health agencies, the National Center for Disease Control and Prevention have never tracked head lice outbreaks, said official, Tom Skinner. Sometimes called "mechanized dandruff." **Head lice may be nasty, itchy and very contagious, but the poisons sold to get rid of lice are even worse.** Among the reactions to poison shampoo or lice "treatments" are seizures, mental retardation, many different allergies and respiratory problems, strange tingling, burning, itching, attention deficit disorders, brain tumors, leukemia, cancer and death. **The Author does not suggest the use of poisons to control lice.**

Head lice and body lice, which are different forms (subspecies) of *Pediculus humanus*, are very similar in appearance. Lice are wingless insects whose legs have claws that grip and hold onto hair shafts. Their abdomens are distinctly longer than they are wide. They are 6 pairs of breathing spiracles. Their color, which varies from dirty-white to rust to grayish-black, usually approaches the hair color of the host. Head lice almost always occur on the head where they attach their eggs (nits) to the hair; body lice prefer to live in the seams and linings of unwashed clothing, blankets and sheets from which they periodically crawl onto the skin to feed. Although body lice usually deposit their nits on unwashed clothing fibers, the nits are sometimes found on body hair as well. Head lice can change to become the color of the host's hair.

Crab lice live only on the hairy portions of the body. Their legs are adapted to grasp hairs which are rather widely spaced, and for this reason, these lice prefer the pubic and perianal regions. However, they can be found in eyelashes, head and arm pit hair.

Female head lice produce from 50 to 150 eggs (6 to 10 nits per day) which they usually attach to hair behind the ears, on the nape of the neck and occasionally to other body hairs. Nits may also be found in sports headgear, hats, combs, barrettes, scarves, brushes, etc. and other common means of infecting a host. The incidence of infestation is greater among persons with long or dense hair, particularly when regular and thorough grooming and washing is neglected. The eggs hatch in 5 to 10 days, and the young, which resemble the adults except for size, mature in 8 to 22 days during which time they undergo three skin molts to allow for their ever increasing body growth. Adults normally live only about 3 weeks or more, depending upon conditions. They do not resist starvation well - at 75° F. all head lice die after 55 hours without a blood meal.

HUMAN LICE - Three species of lice feed on man and both males and females (immatures and adults) require blood meals to complete their development. The antennae have no more than 5 segments; the head is narrower than the thorax and the thoracic segments are fused with the abdomen. The head louse or "cootie" is bluish-gray to whitish, wingless, up to 1/8" long, usually found among the hairs of the scalp. The eggs, or nits, are attached to hairs close to the skin. The body louse is similar to the head louse but is found mainly in seams of clothing, worn close to the body. Body louse eggs or nits are attached to unwashed clothing. The crab louse is a short, broad, thick-legged insect about 1/5" long is normally found in the crotch or arm pit or other body areas with pubic hair. The eggs or nits are also attached to these pubic hairs. Except for the common cold, head lice infestation is a more common infestation than all the other childhood communicable conditions combined (6 - 20 million people become infested each year with a *treatment* cost of approximately \$367 million dollars and untold contamination problems). All three lice suck human blood and are not found on birds, dogs, cats, farm animals or other hosts.

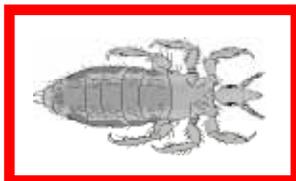
THE POISON RESISTANCE PROBLEM - Contemporary Pediatrics, Vol. 15, No. 11 noted: in the UK, children treated for head lice four years earlier with pyrethroid compounds (permethrin and phenothrin) needed at least 16 to 20 times the usual dose to eradicate another infestation. Laboratory-bred lice in this experiment died within two hours of exposure to 0.1% permethrin but lice from the heads of children who had been exposed to pyrethroid products took as long as 72 hours to die. In Israel, clinically significant resistance to permethrin occurred within 2.5 years of its introduction, a time span corresponding to approximately 40 generations of lice... Perhaps the most striking increase in resistance to permethrin has been recorded in the Czech Republic, where the concentration of permethrin required to kill 90% of head lice increased by some 500 times between 1981 and 1992!"

Christina Beckwith, Pharm D noted in her Head Lice: New and Improved?, "The Harvard School of Public Health (HSPH) is conducting a US study to determine the incidence and extent of resistance and plans to publish their results. Preliminary results, released by the NPA without the investigators' permission, appear to indicate some US lice are resistant. In a preliminary in vitro study with 209 lice from 57 children, 100% survived in petri dishes containing varying permethrin doses!"

The Spring, 1996 issue of the National Pediculosis Association's (NPA) Progress noted that for the past year the NPA has been averaging 50 calls a day reporting commercial product treatment failure - in spite of this - the continued use of these toxins - dog flea and tick shampoos, lice sprays, kerosene and/or other dangerous alternatives including Lindane are (still) being used repeatedly. Lindane was the cause of at least 70% of the reported serious health reactions to lice poison shampoos. Lindane is described by its Manufacturer as a powerful contact and internal poison. Lindane has been banned in 18 countries and severely restricted in 10 others.

The FDA recommends lindane only be used where other treatments are ineffective. The majority of treatment failures involved Nix® and Rid®. Children still have live lice right after the poison shampoo. **In thousands of uses Not Nice to Lice-UK® and Lice R Gone® have controlled resistant lice/nits safely.**

Historically, the disease typhus, with the causal agent, *Rickettsia prowazekii*, is transmitted by body and head lice, was common where people were confined together and could not wash or delouse their clothing. This disease became epidemic within confined populations such as cities under siege or armies limited to trenches or on the move and unable to simply wash and, thereby, delouse their clothes. Typhus is a fatal disease and was so pervasive it, more than wounds of war, determined who was victorious and who was defeated in wartime. Widespread louse epidemics actually ceased being a problem when DDT dust became available in World War II. Although body lice quickly became resistant to DDT when it was intensively and repeatedly used, other synthetic pesticide poisons were then tried. (Typhus epidemics are not known to be caused by crab louse infestations.) Even with the elimination of the large scale lice infestations, people are still puzzled and alarmed when small, persistent louse outbreaks occur. Common examples of small infestations are head louse infestations among elementary school aged children, body louse infestations on people who are unable to care for themselves, and/ pubic louse infestations resulting from sexual intercourse with an infested partner. Try washing with Safe Solutions, Inc. Lice R Gone® or Not Nice to Lice-UK® Shampoo products (and if you have stubborn nits, with Tangles R Gone® Hair Conditioner), diluted enzyme cleaners and/or peppermint soap or neem soaps, combs and saunas, or even plain soap with some borax, before using any synthetic poison shampoos. Neem extracts will also eliminate human lice. Caution: Before you apply any synthetic pesticide poison shampoos to people, first try a sauna (if your doctor permits) and/or wash the infested area with Lice R Gone® or Not Nice to Lice-UK® enzyme shampoos - it goes farther; then comb out all nits with a metal lice or flea comb; allow wet enzymes to remain on the infested area and work for 10 - 15 minutes or until you feel the nits loosen and pull away from the hair shaft; thoroughly rinse and apply a good conditioner. If any nits remain, apply baby oil to hair and let soak overnight under a shower cap, or apply Tangles R Gone® Hair Conditioner for 15 minutes. Then comb out remaining nits with a metal nit or flea comb. Repeat treatment(s) if necessary. You can be very helpful as a consultant on louse infestations and can provide a great service by discouraging any pediculicidal (poison) use other than as a last resort. Leaving decisions on pediculicide choices with parents, school medical personnel, physicians, or the infested individual strengthens everyone's confidence in the your technical understanding and discourages the application or spraying of any dangerous, volatile, synthetic pesticide poisons. However, it is not morally wrong to try to convince people to first try **Intelligent Pest Management®** nontoxic (personal) controls before using dangerous/useless poisons. Especially when entire families are washing everyone's hair with these poisons "just to be sure" they do not get a head louse infestation. Would you give everyone in your family penicillin as a "preventative" so they won't get strep throat? Note: Pyrethrum- or permethrin-based **pediculicides should not be used** by persons with asthma or that are sensitive to ragweed, should not be inhaled or swallowed or used near the eyes or allowed to come in contact with mucous membranes, e.g., the eyes, nose or mouth. Note: Pyrethrum and pipernoyl butoxide are now considered to be carcinogenic. Lindane has been identified as both neurotoxic and carcinogenic and is already banned in 18 nations around the world. **No pediculicide poison should be used on infants, pregnant women or nursing mothers or on cut or abraded scalps.** No poison should ever be used to "treat" lice twice if it failed the first time, clearly indicating the lice may, at the very least, be resistant or immune to that particular product/poison. **There are no poisons in the Pestisafes® Not Nice to Lice-UK® Shampoo, Lice R Gone® Shampoo, Tangles R Gone® or Safe Solutions Enzyme Cleaners with or without Peppermint.**



HEAD LICE
Pediculus humanus var capitis

Adult - Head lice spread easily and infestations often occur at all social and economic levels, especially among school children who are in close daily contact. At least 10 million children are infected each year. Infestations are called pediculosis, which is a communicable disease. They vary in color from dirty white to reddish-brown to rust to grayish black in color. If the nymphal stages are passed on a person of blonde or light coloration, the adult louse is light in color, but if they are passed on a person of dark hair coloring, then the resulting wingless adult is more pronounced in coloration. They are small - about the size of a sesame seed. They need a warm, moist habitat. They spread by crawling. We have had some reports of a strain that appear to 'jump'. They live by biting and sucking blood from the scalp and **can not normally survive for more than 2 days unless they are on the human head.** **Head lice aren't nice.**

Egg - Eggs or nits (that look like tiny white or tan dots) are usually laid by the female close to the base of the hair near the scalp and they are firmly cemented to the hair. The eggs (and the empty shell) are known as *nits* and are always oval- or tear-shaped, and are glued at an angle to the side of the hair shaft. They are usually tan when alive and pearly or grayish white in color after dying. The nits usually occur near the scalp (clustered in groups), but can often be found nestled behind the ears and at the nape of the neck. The hatched egg is easily identified by its opalescent and translucent appearance. Just before hatching the eyes and other structures of the embryo can be made out through the translucent shell. On hatching, the top of the egg opens like a lid. Live nits may be occasionally found anywhere on the hair shaft, but normally they are found near the scalp and they are “super-glued” on and do not flake off like dandruff. They are so hard to remove we invented the term “nitpicking” to describe the difficulty. One louse can lay 150 nits a month (normal lifetime). They hatch in about 10 days, depending on the climate. Nits need at least 82° F.; and 70% humidity to incubate. During the incubation time the respiratory passages of the louse shut whenever the nits are immersed in water and they can survive under water for over 24 hours. Nuttall (1917) found 80% laid on hair and 20% laid on flannel. The top of the egg or operculum supplies air and humidity to the developing louse.

Nymphal stages - There are three nymphal stages, all of which resemble the adult except in size and possession of sexual organs, but they do have some change in color. During the first stage the nymph is a pale straw color and has no central nervous system (CNS) and, therefore, can not be killed using volatile, synthetic pesticide neurotoxins or by poisons that attack the CNS. The poisons and the “inerts” in these volatile pesticides can and do, however, attack your CNS! The gut of the nymph is clearly visible through the almost translucent cuticle, and when the first-stage nymphs have taken a meal of blood they are shining red in color, like *rubies*. Afterwards the blood darkens and thereafter the gut appears purplish-black. The young nymph is able to feed almost immediately after emergence and after this feeds regularly, at least twice daily. The nymphs and adults feed by pressing the front of their heads against the skin of their hosts; a series of curved teeth around their mouths then fasten on to the skin and the piercing stylets are released from a pouch where they are normally invisible, to pierce the skin. Saliva from the salivary glands lubricates the stylets and they begin to feed on you. Enzymes create an extra “molt” they weren’t anticipating and will quickly destroy live lice and help remove nits/glue. **Lice can not become resistant (immune) to Pestisafes®, e.g., Lice R Gone® or Safe Solutions, Inc. enzyme cleaners with peppermint or salt or borax or heat.**

Length of life cycle - The egg hatches within 8 - 9 days and the nymphal stages take approximately the same length of time. The life cycle takes place, therefore, every 18 days. The length of the adult stage in the male is about 10 days and in the female can vary from 9 - 22 days. A maximum of about 6 to 10 nits/eggs are laid each day by each female and the maximum hatch rate has been found to be 88%. All lice feed on blood every 3 - 6 hours and can only survive about 20 - 48 hours without a blood meal. Nits are the size of the period at the end of this sentence. At cooler temperatures (50° - 68° F.) eggs may hatch up to 30 days later.

***Pediculus humanus capitus* (DeGeer)** - Adult head lice are gray and about 1/8 inch long about the size of a sesame seed. They often have a tiny dot on their backs. They thrive only on human hair and scalps. Hatching occurs about one week after attachment. Since lice go through a gradual/simple metamorphosis, the tiny nymphs resemble adults. They grow to maturity in about 10 days. Adult lice mate and the female can lay about 50-150 eggs, but often falls short of that in her life of only several weeks. Wetting the hair and rubbing the scalp with a towel irritates the adult lice and makes them move about, aiding in their detection. You may wish to simply shave off the hair and thus remove the infestation, or you may soak the hair with baby oil until you feel the nits “move” or loosen and then use a lice comb and then shampoo, or sauna and/or wash your hair with Lice R Gone® Shampoo, diluted Safe Solutions, Inc. enzyme cleaners, peppermint or neem soap or salt water and vinegar and/or borax laundry powder before trying anything more toxic. Wash your hair with Lice R Gone®; leave on for 10 minutes or until you feel the nits move freely off the hair shaft, then rinse or comb with a metal lice or flea comb if you wish. If any nits remain, then use Tangles R Gone® Hair Conditioner and comb them out. Then go to your public health practitioners for an examination. In the United States, lice live in the head hair of pre-schoolers and of children of elementary school age (only rarely on adolescents or adults). This could simply be because little children hate having their hair shampooed with soap. Lice scuttle about on the scalp between hairs with much more speed than expected of a small, soft, wingless insect with slender hair grasping claws on the end of blunt legs. They are very sensitive to dry heat, so we advise saunas and/or hair dryers rather than poison head/hair treatments. They are sensitive to oil, so we also advise adding a conditioner and/or soaking the hair with olive, coconut or baby oil to kill the lice and help remove the nits. Pestisafes® such as Safe Solutions Enzyme Cleaner with Peppermint or Lice R Gone® contain basically dish soap or baby shampoo, peppermint oil and

meat tenderizer, all things to which lice are sensitive. (Be sure you are not sensitive too!) Salt water will also kill lice, but will not remove the nits. Hair dryers will kill lice and nits in 30 minutes or less.

Close adaptation locks head lice into the human scalp in several ways. First, louse claws grasp human hair so firmly that they do not fall or wander out of it and yet they can crawl fast. Second, head lice suck blood by grasping the scalp with tiny hooks that surround their mouth, and painlessly pierce the skin with slender stylets. (Head lice feed several times a day but do not engorge themselves.) Most importantly, head lice neatly glue their eggs (called nits) to the hair shaft, usually within ¼ inch of the scalp. The tiny, pearl-like eggs (they look like miniature wax tear drops) stick alongside the hair so tightly that they can be dislodged only by being torn from their neat sleeve of biological glue by fingernails or a metal lice comb or Safe Solutions Enzyme Cleaners. Usually nits found further away from the scalp than ½ inch will have already hatched; what is found is the empty shell which remains attached. The easiest way to remove cemented eggs is to cut them out or try to soak the hair in vinegar or baby oil or in diluted Lice R Gone® for 10 - 30 minutes; then comb out with a metal nit or flea comb. If any nits still remain, apply Tangles R Gone® Hair Conditioner and recomb. How head lice are spread from child to child other than crawling is not well known, but they do not jump off or freely wander onto coat collars or hats, since they are restricted to humans with a scalp surface temperature of around 80° F. or a little more, but head-to-head contact and sharing of clothing, hair ornaments and grooming materials are thought to be the normal routes of invasion. Temperature preference and perhaps humidity is so critical that lice easily die at elevated temperatures and from excess salty perspiration - so sauna! Conversely, at lower surface temperatures (about 50° F.) lice become torpid and do not move or feed. A reasonable speculation is that head louse nymphs hatch from nits on hair shafts snatched by brushes and deposited on knit hats. The tiny nymphs then move toward the warmth of the next head covered by the cap or brushed by the brush. This normally limits transmission to siblings that have their hair brushed with a "family brush" or children who share knit hats or hair brushes of friends. Get your own brush and cap and become "selfish".

Louse infestations are often discovered by school teachers who are watching for the signs of itching heads and/or frequent scratching, but classroom neighbors are not as likely to be infested as are brothers and sisters or close friends that sleep over with head-to-head contact or share combs and hair brushes and/or head gear. (American) head lice have been shown by surveys in several large eastern cities to infest the heads of Caucasian and Oriental children but they very seldom infest those of African Americans (whose hair may be more oily and flattened). If you are using Lice R Gone® - wash your hair again in 5 - 10 days with the same protocol, if necessary. Be sure not to confuse nits with hair debris such as irregularly-shaped clumps of dandruff stuck to the hair shaft or elongated segments of dandruff encircling the hair shaft - that are easily dislodged. **You have to get rid of all the nits on the hair shafts to prevent a reinfestation; use a bright light, a magnifying glass and metal (nit/flea) comb.**

South Florida kids have been kept out of school 68 days at a time per Terry Meinking, B. A. at a Hyatt Regency meeting in Tampa on 5/4/99. For every 4 children found to be infested with head lice by the comb method, only 1 child was found to be infested by the visual method. The punctures the lice make while feeding and people make by scratching will transfer bacterial infections, which explains the statement "feeling lousy." Vaseline, which is a mix of mineral oil and wax, can be applied 5 times a day for a week to eyelashes if eyelashes are found to be infested with head or crab lice, **but Vaseline® is very flammable!**

Head Louse Control - The diagnosis can be difficult as the insects tend to hide among the hair shafts in response to light or disturbance. Use a comb with parallel teeth spaced 0.3 mm or less apart and examine under a bright light or in sunlight. A study in Israel found 70% of infested children had only 1 - 10 lice. The real control problems are the nits that remain on the hair shaft (even if no longer on the head) and can hatch and "reinfest" for up to 10-20 days later, so soak your head with olive oil or baby oil overnight and cover with a shower cap; then use a metal nit comb and then shampoo with a conditioner in the a.m. or simply wash your hair with Lice R Gone® Shampoo for 10 minutes or until the nits pull away, and then rinse off the enzyme solution, lice and nits. If any nits remain, apply your Tangles R Gone Hair Conditioner and recomb. When combing out nits, work with small sections (1" or smaller) of hair. Keep the metal comb's teeth deep into the hair from the scalp to the end of the hair. Clean your louse comb after each stroke in dilute enzyme cleaners or hot soapy water. Keep the hair moist (use a spray bottle of diluted enzymes). Adding baby or olive oil or vinegar and/or Tangles R Gone® Hair Conditioner may make the combing of nits out of the hair easier. Only after trying all of the alternatives, and then only as a **last** resort, there are several over-the-counter (OTC) poison preparations that can be used to **try** to eliminate louse infestations, but we believe they are all equally ineffective and dangerous even when

used according to label directions. Look at your over-the-counter head lice shampoo warnings and ingredients very closely. The Rid® 0.5% permethrin spray says, **“THIS PRODUCT IS NOT FOR USE ON HUMANS OR ANIMALS.** Avoid breathing spray mist. Avoid contact with skin. Use only in well ventilated areas. Avoid spraying in eyes. In case of contact wash immediately with soap and water. Vacate room after treatment and ventilate before re-occupying.” The Nix 1% permethrin shampoo (which is twice as strong) says leave on the (child’s) hair for 10 minutes but no longer and notes, “This product may cause breathing difficulty or an asthmatic episode in susceptible persons, etc.” The 1995 Physician’s Desk Reference notes that in all 3 mouse studies there was an increased incidence of pulmonary alveolar - cell carcinomas and benign liver adenomas in female mice at a concentration of 5000 ppm of the active ingredient permethrin in their food. This shampoo also has several interesting “inert” ingredients including isopropyl alcohol, propylene glycol, etc. The propylene glycol MSDS says, **“Avoid skin contact”**; it is used in industry as antifreeze, airplane de-icer and brake fluid. It can cause skin irritation, dermatitis, erythematous plaques, CNS depression, stupor, seizures, nausea, stinging, irritation, redness, etc. The isopropyl alcohol MSDS notes it can enter into people through inhalation, skin and/or ingestion and may cause irritation to eyes and to the respiratory tract, is an anesthetic and may also cause CNS depression. Both MSDS sheets for these “inerts” require respirators or air supplied masks in confined areas and goggles and protective gloves! Propylene glycol suggests impervious clothing and equipment! The California Department of Health Sciences warned in a 1996 report there is “circumstantial evidence” of increased head lice resistance to poisons. School health workers all over the U. S. have been saying for years the pesticide poisons “registered” for scalp use were not working any more. Prescription poison preparations, e.g., lindane, may permanently harm the patient in the attempt to kill the eggs as well as live lice. **The poison “cure”, obviously, is far worse than the “disease”.**

We do not believe any of the over-the-counter **poison** preparations are safe or that they even control lice - recently some “health” directives, e.g., The Children’s Hospital Oakland Highlight Nov. 1996 - also said these poisons do not work as directed and they have mislead people by saying you must leave these poisons on for 3 - 8 hours (under a shower cap)! **See Chapter 13 and Chapter 1 on Permethrin as a poison.** An Israeli study published in the British journal “Medical and Veterinary entomology” in 1995 noted that Israeli scientists blamed permethrin in particular for the head lice resistance they found. “The results suggest that resistance to pyrethroids has developed rapidly among head lice since permethrin was introduced (in Israel) in 1991.” The first application supposedly *kills* all of the live lice. Viable nits hatch in 6 - 10 days and the second application supposedly *kills* that *new* population. These lousicides (poisons) are applied to wet hair and after a short waiting period they are shampooed out. (Remember, most researchers and health officials will tell you virtually **any** olive oil or soap shampoo, or peppermint soap or natural soap without these poisons will kill or wash away the lice, so simply wash your head with any shampoo daily for 2 weeks.) Advise family members they should first try: hand removal with a metal nit or flea comb, a baby oil treatment, washing their hair with salt water and/or vinegar, a hair dryer or sauna, (if your doctor permits) and/or washing with natural soap, neem soap or diluted peppermint soap, or with diluted Safe Solutions enzyme cleaners, or (better yet) with Lice R Gone® Shampoo (it goes farther) and a metal lice or metal flea comb and then rinse off and apply Tangles R Gone® Hair Conditioner. Repeat the same process in 10 days at least be careful to not get any Lice R Gone® Shampoo in the eyes - **even natural soap burns the eyes.**

- Wash bedding and towels in hot water and knit caps in cold water and diluted enzyme cleaners and borax and dry at least 20 minutes in a clothes dryer to be sure any nits on fallen hairs are killed or removed.
- Vacuum all surfaces where children lie or play (including stuffed toys). (In day care centers and kindergartens, napping mats should be wiped with diluted enzyme cleaners and/or routinely vacuumed.) Discard the bag. Routinely mop and clean with diluted Safe Solutions Enzyme Cleaners and/or borax.
- Daily vacuum and clean rugs or simply quarantine them for 10 - 14 days after vacuuming. Remember, never apply synthetic pesticide poisons to rooms, toys, or furniture surfaces. Store all other exposed items in bags for 2 weeks or dry clean. Don’t forget to vacuum the car and all (upholstered) furniture.
- Try hand or manual removal of nits using Lice R Gone® Shampoo, bobby pins, hair-clips, grooming combs, nit/flea removal combs, safety scissors, tweezers, scotch tape and a magnifying glass and a bright light, etc. Then disinfect by soaking these items and all other hair ornaments, brushes and combs in 130° F. hot water (or diluted Safe Solutions, Inc. enzyme water) for 15 minutes.
- Thoroughly check all family members at the same time and treat only those who are infected.
- It is very interesting that usually only young children get head lice and that even regular soap shampoos have removed head lice (but not their nits). Little children hate to wash their hair and cry when the soap gets in their eyes; as we get older and wash our hair more often and use a hair dryer, the incidence

of head lice declines dramatically. **Even if they cry, thoroughly and routinely wash the children's heads with diluted peppermint soap, soap with anise oil, neem soap, salt water with vinegar, natural soap or Lice R Gone® Shampoos. Be careful to keep all such materials out of the eyes!**

Safety is the most important factor in your choice of lice removal techniques because the infestation does not present a real (USA) health risk to the host. Pediculicides are all classified as neurotoxin agents (nerve gas). There are no pediculicide poisons in the Lice R Gone® Shampoo and/or Safe Solutions, Inc. enzyme products.

Caution: 90% of all commercial soap shampoos use a detergent called sodium dodecylsulfate (SDS) or sodium laureth sulfate (SLES) and/or sodium laurel sulfate (SLS) that can be retained in tissues up to 5 days even after a single drop. Dr. Keith Green noted (SLS) causes improper eye development in children. SLS has a tendency to react with other ingredients to form NDELA, a nitrosamine and potent carcinogen. Researchers actually estimate the nitrate absorption of one soap shampoo is equal to eating a pound of bacon! The FDA has recently warned shampoo manufacturers of unacceptable levels of dioxin in products containing SLES. SLS may be a skin irritant that can penetrate and impair the skin barrier.

Remember, decisions on the formulation/use of dangerous lousicide, treatment of head infections from extensive infestations, and so forth, are decisions that still should be made by parents and physicians. If you suspect a personal infestation, first try Lice R Gone®, Prell and/or salt water with vinegar before going to the doctor. All reported louse infestations of adolescents and adults should then be investigated by a physician; if live lice are not seen, the nits (if any) should be examined through a microscope to verify that they are not symptoms of other scalp conditions. Spend most of your time vacuuming and working on the infested person - not on cleaning or spraying the area with toxic poisons. If you clean, thoroughly vacuum and then use diluted enzyme cleaners or diluted peppermint soap. We do not recommend **any** volatile pesticide poisons. **Caution: when the “normal” poison treatments don’t work, some physicians prescribe stronger doses of permethrin, a synthetic pyrethroid, a 5% solution rather than the 1% in Nix®. But, if lice become resistant to the weaker solution, it is likely they will also resist the stronger dose (eventually) as well...and remember...the warning on the box of Rid® and/or Brite-Life® regarding “their” synthetic pyrethroid, “Not for use on humans or animals!”** Some over-the-counter shampoos warn you not to put these poisons on scalps that have been cut or scratched, yet virtually everyone scratches their head when they are infested with head lice. If you want some interesting reading, read the MSDS for all of the unregistered, untested “inerts” in these poisons.

BODY LICE

Pediculus humanis var corporis

Appearance - The body louse is very similar to the head louse; the body louse is usually 10% - 20% larger, has thinner antennae, not as deep abdominal indentations, with better developed abdominal muscles than the head louse.

Life Cycle

Egg - This again is generally similar to that of the head louse. The eggs are glued to fibers of clothing and are sometimes found stuck to body hairs. Most eggs are usually found in the seams of clothes which come in contact with the skin where the adults and the nymphal stages are to be found. The body louse lays about twice as many eggs as the head louse and the nits can remain dormant for a period up to 30 days.

Nymphs - Body louse nymphs spend the greater part of their time in the clothing, and feeding on the host only takes place when the host is resting or sleeping. All stages of the body louse congregate together, being attracted to each other by smell, e.g., the odor of the excrement. Body lice crawl about the clothing, generally keeping close to the host's body, although in heavy infestations they may be seen crawling outside on the outer garments. **Length of life cycle** - The body louse adults live about twice as long as head lice, are more resistant to starvation and exhibit less mortality during development.



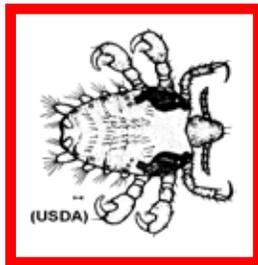
Body lice females may deposit 200 or more eggs, usually attaching them to clothing fibers. The development period is similar to that of head lice, but they may remain dormant for up to 30 days. The life history of crab lice is also similar except that the young require 2 to 2-½ weeks to mature and the adults normally live about a month.

Human lice usually cannot survive for long when separated from their host. Head and body lice leave the host or clothing voluntarily only when the host has died or becomes hot with fever or has gone into a sauna, or when they try to avoid strong light or to transfer to another host in close personal (sexual) contact. Human lice are completely dependent upon human blood for sustenance. Lice feed frequently, usually every 3 to 6 hours, and can not usually survive more than 48 hours away from the human body. Their bites cause bad itching and red spots about the size of a mosquito bite - but remember it may take as long as 2 - 3 weeks (or even more) for some people to experience the intense itching associated with an infestation of pediculosis.

CRAB LICE

Phthirus pubis (Linnaeus)

Appearance - This insect is easily differentiated from the head louse and body louse by the strong thick claws of the mid and hind legs, while the claws of the fore legs are long and fine. The body is broader than long, contrasting with both other species of *Pediculus humanus*.



Life cycle - The egg is slightly smaller than that of *Pediculus* and it is glued to a body hair with more cement. The egg hatches in 7 - 8 days. The three nymphal stages do not wander far from the hair, which is grasped with the tarsal claws. Several hours are usually taken to complete each bloodsucking meal. They occasionally are found on eye lashes and eye brows.

The nymphs become adults in from 13 - 17 days and it seems probable that the length of adult life is not more than one month. Fewer eggs are laid than *Pediculus*. The adult is thought to be unable to survive longer than 24 hours when removed from its host.

Crab lice usually die within 24 hours if separated from their host. This short survival and their sluggish movement inhibit the spread of crab lice, except through intimate (sexual) personal contact or in extremely crowded living and sleeping conditions where they can and do spread readily. Crab lice may be (but rarely are) spread by nits on loose hairs left on bedding, towels and toilets by infested persons.

Head Lice Overview

Many diseases affect our children today, but few are as communicable and as wide spread as head lice (*Pediculosis humanus capitis*) and few involve the repeated direct exposure of young children to dangerous, synthetic pesticide poisons - that do not even control resistant lice - some *health* departments and physicians have been misled to believe children should keep these toxins on their heads - under a shower cap - for 3 - 8 hours!

Head lice attach each nit (egg) to the hair shaft at the scalp with a waterproof cement-like substance. Although lice and nits are most commonly found at the nape of the neck and behind the ears, they can be found anywhere on the scalp or hair shafts. The grayish-white nits are shaped like an elongated football with a cap at one end to admit air and allow the young insect to escape. The young nymphs have a head plate with sharp toothlike spines (the egg-burster) they use to open the egg shell. Head lice can sometimes be found on pubic hair, eye lashes and eye brows. They can normally move about 9" in a minute at room temperature. Nuttall (1917) noted lice can survive under water for 24 hours at room temperature. People say a lot of things that are lice related, e.g., "nitpicking", "gone over with a fine-toothed comb", "a lousy time", "the nitty gritty", and "wash or get it out of your hair". Hopefully, they will soon be saying they are easily removed with a good hygiene program and/or Lice R Gone® Shampoo and/or Tangles R Gone® Hair Conditioner.

The presence of nits does not always mean that a person still has a current infestation. The nits may be left from a past infestation that no longer needs to be treated. To determine whether a person is currently infested with head lice, there must be a louse visible or usually there must be nits attached to the hair shaft 1/4" or less from the scalp. **If there is no evidence of live infestation, do not treat with any poison! Simply wash with a nit remover, e.g., Lice R Gone® Shampoo and/or Tangles R Gone® Hair Conditioner.** The

position of nits on the hair shaft usually can distinguish between current and past infestation because female lice attach their eggs to the hair shaft at the scalp. In 1 week, the time it takes for a louse egg to hatch, the average human hair grows about 1/4", carrying the egg with it. Therefore, nits more than 1/4" from the scalp usually either have already hatched or will never hatch. They may remain attached to the hair shaft for months, but play no role in the transmission of head lice. Simply cut out or remove these dead or empty nits with a lice comb and/or wash with Lice R Gone® and Tangles R Gone®.

Itching is the most common symptom (caused by the blood sucking and bacterial infections, e.g., impetigo), but many people with very light infestations may experience no initial symptoms at all. Therefore, you cannot always rely on itching or frequent head scratching to detect head lice. A thorough examination of the hair and scalp is necessary to detect head lice and/or nits. Persons infested with pubic lice should be examined for accompanying venereal diseases, because there is a strong possibility that one is present with the other. Persons who think they are infested with lice should seek assistance from a physician, the health department or the school nurse and follow their instructions. These instructions may include a regular scheduled use of non-toxic Lice R Gone® Shampoo, the regular use of a sauna, daily bathing, the routine laundering of bedding, clothing and towels in hot water; and the daily washing of combs and brushes in diluted Safe Solutions, Inc. enzyme cleaners and/or borax. The entire family and all close school contacts should be routinely inspected and undergo simultaneous treatment(s) if necessary. **Try every non-toxic control including metal nit or flea combs and Lice R Gone® Shampoo and Tangles R Gone® Hair Conditioner products first.**

A home or school should never be sprayed, dusted or otherwise treated with insecticide poisons even when an occupant has an active head lice infestation. Lice live on their host and do not hide in wall crevices and floor cracks like cockroaches and other household pests. Treatment of homes, schools or any other dwelling with insecticide poisons would, therefore, be useless and dangerous. Cleaning of carpets, furniture, drapes, floors, etc. should be limited to simple vacuuming, or you can rinse-and-vac with enzyme or borax. Vacuuming is the safest and easiest way to remove lice or fallen hair shafts with attached nits from upholstered furniture, rugs, stuffed animals, (child) car seats, mattresses, carpets, bedrooms, mats, cots, and anything else that might have had contact with an infested child, when done - when finished vacuuming, put the vacuum cleaner bag outside in the trash. Even soap and water or borax will kill lice in bed linens, pillows, blankets and clothing if the water is hot enough (130° F.). All clothing and bedding used during the 2-day period prior to treatment should be laundered and dried in a hot dryer. Such high temperatures may be suitable for laundering purposes, but not for shampooing the head or for bathing the body. Dry heat, steam cleaning or pressing with a hot iron will also destroy all lice because they can survive only a few minutes at 130° F. Most home water heaters supply water at sufficient temperatures to kill lice and their nits. Washing in cold or lukewarm water will not harm them. An alternative method (if you can not wash or dry clean some items) is to seal clothing and other articles, e.g., stuffed animals, hats, and helmets etc. in a plastic bag for 2 weeks. Place the plastic bags outdoors on a porch or deck or in the garage even if the lice hatch in the bag - they can not survive if they are not fed. This will also kill all lice and their nits or you can simply wash all infested articles with diluted enzyme cleaners and borax. Combs, brushes and similar items can also be treated by soaking for 1 hour in Lice R Gone® Shampoo or by soaking them for 5 to 10 minutes in a pan of water heated on the stove to 130° F., or by soaking and/or washing in diluted Safe Solutions Enzyme Cleaners with Peppermint and/or borax. **Isn't it interesting** that the EPA *registered* .5% permethrin Rid® label for lice control on bedding and furniture warns "avoid contact with skin, eyes or clothing. **"This product (poison) is not for use on humans."** Vacate room after treatment and ventilate before reoccupying. Do not allow children or pets to contact treated area until surfaces are dry." While the Nix® FDA *registered* lice treatment with 1% permethrin (twice as much poison) says "Saturate hair and scalp (especially behind the ears and nape of the neck) and leave (the poison) on for 10 minutes!" **Do you really want to use poison on your kids?**

Least-Toxic Head Lice Control

- **To help identify a lice infestation,** Jennifer Campbell, LPN of Bad Axe, Michigan has the following suggestion for identifying a lice infestation. Place a piece of cellophane tape, sticky side out, on the index finger of your dominate hand. Taking a comb and gently lift up sections of hair checking for any movement. If you seen anything unusual on the hair or in the section, gently press the tape on the object and lift off. Then remove the tape and stick it on itself, trapping the object/louse and write with a ballpoint pen on the back of the tape where and when and on whom you collected it. This should assist many in identifying whether the object is a piece of dandruff or a louse.

- **To avoid becoming infested with head lice**, family members should daily shampoo and use a hair dryer; then everyone should be regularly inspected and be taught not to share other people's combs, brushes, scarves, etc. At school, children's clothing and other personal articles should be kept separate from those of other students, e.g., on pegs, in separate lockers or storage areas or on the backs of chairs). A school screening program can help keep head lice from becoming an epidemic. To help avoid personally becoming infested when you examine and/or shampoo someone else, make a cuff of duct tape (sticky side out) on each arm 7" - 9" above the wrist.
- **Do not panic and spray the school or home with any synthetic pesticide poisons.** Try washing with Lice R Gone® Shampoo and Tangles R Gone® Hair Conditioner, oil of balsam, olive oil or Peppermint Soap or Safe Solutions Enzyme Cleaner with Peppermint, neem soap, dish soap and/or borax. Note: Lice R Gone® not only removes the nits - it also safely removes the lice; wash again in 5 - 10 days and/or use shampoo as a (non-poison) prophylactic treatment. Note: freezing and even moderately elevated temperatures are lethal to body lice and their nits, e.g., lice die at 115° F. or 1 hour, 121.1° F. for 30 minutes, or 124.5° F. for 5 minutes, eggs less than 5 days old are killed in 5 minutes at 128.3° F. So take a sauna. Black people in the U. S. are rarely infested with head lice. This is thought to be because their hair is more oily. So, an alternative treatment is to saturate hair with baby oil at night to kill lice and nits. Wrap your head in a towel to prevent staining bed clothes. Wash hair thoroughly in the morning. Use a metal nit or flea comb to remove dead lice and nits. Routinely treat/inspect every member of the family. Daily shower with soap shampoo and practice proper personal hygiene. Avoid using other individuals' combs, hats, towels or hairbrushes, and wash or sanitize these items frequently. Bedding and clothing should be changed and washed at temperatures at least 130° F. with soap and borax and dried in a dryer frequently. Daily vacuuming of carpeting, rugs and floors and routine sanitation of locker rooms with diluted Safe Solutions Enzyme Cleaners and/or borax and proper laundering can help reduce the incidence of lice.
- **Educate yourself**, your child and others about the biology of head lice, the probability of infestations and appropriate nontoxic methods for eliminating the problem. Watch for head scratching. When head lice infestations are common at school, check your child's head nightly with a bright light and comb. Begin treatment with Lice R Gone® Shampoo and/or regular soap shampoos with hair conditioner and olive oil while combing with a specially designed metal head-lice (nit) comb as soon as infestations are detected.
 - A. **If schools have a "no nit" policy.** It would be better if children with nits could simply undergo weekly scalp exams to make sure they have no lice. The May 2001 Issue of Pediatrics noted: "Most children with nits alone will not become (lice) infected." Students should be sent home immediately with a letter explaining their infestation, the school policy and suggested controls, e.g., Lice R Gone® Shampoo and/or metal nit combs. They should be re-examined by the school nurse **before** re-admission - if still infested they should be sent home again with a second note. Upon the third notation the lice and/or nits have not been removed, we advise you direct follow-up to the local health department and/or simply have the entire family treated with Lice R Gone® Shampoo. Remember schools do not get lice - people do.
 - B. **Remove all nits** - this assures total lice control. Shave the head or give a really good G.I. or brush haircut or wash with Lice R Gone® Shampoo and then with Tangles R Gone® Hair Conditioner; separate hair into small sections and remove any remaining attached nits with a metal flea or lice comb, baby safety scissors, or your fingernails. **Repeat every 7 days until all the lice and nits are gone.**
- **Provide each child with separate storage area for head coverings or other clothing at home and at school. Don't share towels, combs, brushes, head phones, scarves, hair ornaments, etc.**
- **Do not use any volatile, synthetic pesticide poisons** in locker areas or other places. Vacuum and mop daily with diluted Safe Solutions Enzyme Cleaner and borax.
- **Daily wash all of the bedding and clothing** of the infested child in diluted enzyme cleaners and/or borax and place them in a clothes dryer at the hottest setting for 30 minutes at the same time the treatment of the hair and scalp is undertaken. Dry-clean garments that cannot be washed or store in plastic bags for at least 4 weeks.
- **Follow a program** that combines daily soap or salt water and vinegar shampoos or Lice R Gone® Shampoo and/or regular soap and/or oil of balsam or olive oil and/or peppermint or neem soaps and combing out lice at least once a week for at least 3 weeks. Have the child lie on the kitchen counter with their head in the sink with their face up. This allows you to spend sufficient time and to be comfortable as you work and helps keep the material out of their eyes. You can also use the sink's spray hose to rinse. Soak combs and brushes for an hour in dish soap and ammonia in water or a in salt water or heat in a pan on the stove, or better yet, diluted Safe Solutions, Inc. enzyme solution. The NPA had serious con-

cerns about using boiling water and/or Lysol 2% or better because they have had reports of 3rd degree burns and/or of adverse reactions from people who have done this.

- **Use insecticidal poison shampoo preparations only as a last resort (never preventively), only after combing and shampooing with non-poisons, e.g., regular soap and olive oil or Lice R Gone® Shampoo or salt water and vinegar and metal flea or lice combs and saunas have proven ineffective. Remember, there are no safe pesticide poisons! Lice R Gone® has never failed to remove lice!**
- Pyrethrin-based pediculicides active ingredients may be less hazardous to humans than those containing lindane, **but no pesticide poison is safe and they can be considered to be carcinogenic.**
- It is best never to use lindane or any other volatile, synthetic pesticide poison.
- On Tuesday 11/05/96 we were told another IPM success story - one of our schools had a teacher who unsuccessfully tried 3 different head lice poison "treatments" on her own children and continually changed and/or bought new bed linens, etc. - all of which was dangerous and/or expensive and did not work, because her children **still** had head lice. The superintendent's secretary, who had been at one of our in-service meetings, told her to wet her children's heads and shampoo for 10 - 15 minutes with ½ oz. of enzyme cleaner - she did, and of course, Safe Solutions, Inc. (nontoxic to people) enzyme cleaner - not only removed the lice, it removed the nits - now everyone in that school district is very excited about "alternative" pest control. Remember, enzyme cleaners, e.g., Lice R Gone®, especially those that contain protease enzymes, will quickly and safely destroy insect exoskeletons - when insects molt they inject protease enzymes into the "seam" of their exoskeletons to naturally open the exo-skeleton up - so they can "step out". Obviously, protease enzymes like those in Lice R Gone® Shampoo will never create immune or resistant insects like volatile, synthetic pesticide poisons do and they are virtually nontoxic to people and pets. So, we suggest you shampoo with Lice R Gone® Shampoo - that "makes the hair so slick they can not stick." **Cover the eyes with a towel in order to protect them. The last ingredient in Lice R Gone® Shampoo and Tangles R Gone® Hair Conditioner/Safe Solutions, Inc. products is "peace of mind".**
- If you really want a shock - compare just the active ingredients in several over-the-counter (commercial) head lice (poison) shampoos with a can of Raid® - the Raid can that warns you not to let the contents touch the skin - usually has less active ingredients/poisons! (Note: Both pyrethrin and piperonyl butoxide are now considered to be carcinogenic!) There is twice as much piperonyl butoxide (PBO) in the head lice shampoo as the Raid. There is only 0.4% pyrethrins in the Raid® poison can and the can cautions you not to get **any** of the spray on you or your clothing, but the head lice poison shampoo tells you to put it **all** on your child's head! Pyrethrin poison formulas with 5% concentrations of permethrin are now being prescribed with some physicians recommending leaving the **entire** permethrin poison shampoos on your child's head for 1 - 2 hours instead of the 10 minutes suggested on most labels. **Stronger poisons and increased exposure time makes toxic reactions far more likely!** Would you spray your child's head with Raid? Then, why would you use an even stronger poison with which to soak your child's head? for 10 minutes, 3 - 8 hours or longer? **Will that really give you peace of mind?**
- Be sure you routinely clean all bedside furniture, classrooms, ambulances, and school buses with diluted Safe Solutions, Inc. enzyme cleaners. You can spray the furniture and floors with Not Nice to Bugs™, an EPA exempted formula or lightly dust with food-grade DE.
- **Salt** - Simply swimming or bathing in the ocean or simply bathing and/or shampooing with salt water once a week on a routine basis will control all lice infestation, but not the nits. Use a hair dryer to help kill the lice and nits.
- **Cider Vinegar** - Helps loosen/dissolve nit glue so the nits can be combed out.
- **Hair Spray** - Clark County Health Department suggests using hair spray every day and pulling hair back to help prevent head lice.

Note: Confusing nonviable eggs with living nits is common, as is prescribing insecticide poisons over the phone without any inspection of the scalp or eggs with a lens or microscope. Both situations may result in unnecessary exposure to a toxic pesticide poison and should not be tolerated.

Crab or Pubic Lice Overview

***Phthirus pubis* (Linnaeus)**

Adult crab lice are only a little over half the size of body or head lice, rarely more than 1/12" long; their last two pairs of legs terminate in hooked mitts that resemble crab claws. These lice are confined to coarse pubic hair and sometimes armpits, eyebrows and eyelashes. Pubic lice move very little in the pubic region and produce few eggs. The most common method of transmission of crab or public lice is by sexual intercourse. When infested pubic hair detaches, lice can hatch on underwear, towels, in beds, or on toilet fixtures. If their immediate environment is above 50° F., a pair of public lice could infest another person without personal contact.

Crab or Pubic Lice Control

Accurate, calm communications are invaluable in explaining pubic louse infestations and making recommendations for their control.

- Use diluted Safe Solutions Enzyme Cleaner with Peppermint to clean and Lice R Gone® Shampoo or neem soaps, or borax and/or sauna.
- Routinely wash bedding and underwear. Use 2 oz. Safe Solutions, Inc. Enzyme Cleaners with Peppermint and ½ cup of borax.
- Use detergents, diluted Safe Solutions Enzyme Cleaners, ammonia and/or disinfectants in bedside furniture, toilets, seats, floors and/or general clean-up.
- Daily vacuum and then mop with diluted Safe Solutions Enzyme Cleaner and borax.

Least-Toxic Crab or Pubic Lice Control

- **If your pubic area itches, seek diagnosis immediately;** there is no reason to suffer unnecessarily. Moreover, if you wait, you may infect others. Note, however, that itching does not necessarily indicate pubic lice - there are other, noninfectious causes of itching in this area, including heat.
- **If pubic lice are diagnosed,** wash bedding and clothing in diluted enzymes and/or borax and/or place them in a hot clothes dryer. If you apply an insecticide poison to your pubic area (very dangerous) do so only as a last resort, or because your doctor has prescribed them. Simply going into a sauna or shaving the affected area and then washing the skin vigorously each day with plain old hot soapy water will usually eliminate the lice. Coconut- or olive-oil-based soaps, e.g., diluted peppermint soaps, have natural insecticidal properties and should be used first. Small infestations may also be cut or shaved off and/or combed out and/or try Lice R Gone® Shampoo, neem soaps, diluted Safe Solutions Enzyme Cleaners and/or oil of balsam or oil of anise and/or some diluted peppermint soap with salt and/or borax laundry powder or simply salt water.
- Pyrethrin pediculicides or the pyrethroid NIX are supposedly more effective than lindane (gammabenzene hexachloride) and are less toxic. Pyrethrins are available over the counter in local drug stores; NIX with permethrin is only available by doctor prescription. **Use "registered" poisons only as a last resort.**
- **Make sure your sexual partner(s) are alerted to the problem,** educated about the infestation, examined and treated, if necessary.

BODY AND HEAD LICE OVERVIEW

***Pediculus humanus* (Linnaeus) and/or *Pediculus humanus capitus* (DeGeer)**

Body and head lice are virtually indistinguishable in appearance and life cycle; however, their behavior is very different: Both suck blood, but body lice engorge themselves, feeding to the point that their abdomens become purple and distended. Body lice are easily reared on rabbit blood after a period of assimilation but head lice can only be successfully reared on humans. Body lice harbor on clothes, hiding along seams and moving to the body to engorge. They do not usually deposit their eggs on body hair or head hair but on clothing. While body louse epidemics can be controlled on humans by emergency applications of dangerous synthetic pesticide poisons (dusts usually), we believe control is best maintained by daily baths and daily cleaning and washing of clothes using diluted Safe Solutions Enzyme Cleaners and/or borax and (if your doctor permits) saunas. Try using diluted enzyme cleaners and/or borax to wash infested clothing. Note: Safe Solutions enzyme cleaners and shampoo products may "eat" some natural dyes.

Body lice, historically the most common human louse, are now very rare in the United States. Infestations appear on those who cannot take care of themselves like homeless individuals who can not or choose not to daily bathe and to daily remove their clothes for cleaning and washing. Infested clothing passed from one individual to another also is a common method of transmission. Wash with Lice R Gone® or enzyme cleaners or peppermint soap with borax. The body louse's preference for tight places in clothing earns it the nickname "seam squirrel."

Body Louse Control

Some general application volatile, synthetic pesticide poison formulations are labeled for spraying but are of little value and very dangerous. Try using salt, diluted Safe Solutions Enzyme Cleaner with Peppermint and/or Lice R Gone® Shampoo first.

- Clean or wash clothing, bedding, etc., with detergents or diluted enzyme cleaners and/or borax to kill lice.
- Daily bathe with diluted Safe Solutions, Inc. enzymes to detach and kill moving lice on the body.
- Use detergents, Safe Solutions Enzyme Cleaner or shampoos and/or disinfectants and/or borax to clean bed frames, bedside furniture, ambulances, ambulance and hospital equipment.
- Counsel occupants carefully to control emotionally-charged situations and prevent louse reinfestations.

Least-toxic Body and Head Lice Control

To control body lice daily change into clean underwear and clothing - remember, simple laundering kills lice in 5 minutes, eggs or nits in 10 at 130° F. With daily showers and frequent changes of properly laundered clothing, a body lice infestation will eventually end without any pesticide poison treatment. For head lice: Never borrow and use anyone's hat, helmet, wig, scarf, comb or brush. Use diluted Safe Solutions, Inc. enzyme cleaners and/or oil of balsam or oil of anise, and/or borax and/or peppermint (especially with enzymes) or neem soap and/or Lice R Gone® Shampoo. **Be sure you are not sensitive to any of the above-mentioned products.**

Uncomplicated Scabies (See <http://www.scabie-solutions.com>)

Uncomplicated scabies is a contagious (catching) disorder of the skin caused by very small, wingless insects or mites called the Human Itch mite or Scabies itch mite *Sarcoptes scabiei* var. *hominis* (Hering). The female scabies mite is only .35 millimeters long. (Note: One full millimeter is only .04 inch.) The female scabies mite burrows into the skin, making a short serpentine tunnel where she lays 1 - 3 eggs daily. The tunnel looks like a thin red and/or gray line. A very small, hard to see, zig-zag blister (or pearl-like bump) usually marks the trail of the insect as she lays her eggs. Scratching will pop the little blister at the end of the track where the female has laid her eggs, may cause even more mites to feed upon you. Other more obvious symptoms are an intense itching (especially at night) and a red rash that can occur at the area that has been scratched. The most common locations for scabies are on the sides of fingers, between the fingers, on the backs of the hands, on the wrists, heels, elbows, armpits, knees, nipples of women, the genitalia of men, the lower part of the buttocks, inner thighs and around the waist (belt line). Babies may have burrows on the soles of their feet, palms of their hands and faces. They also infest various body orifices including noses, ears, etc. Anecdotal comments have noted they are more visual between 4 - 6 p.m. If untreated, the female will continue to lay eggs for about five weeks. The eggs hatch and the new mites begin the cycle all over again. The mites themselves are too small to be seen without magnification. One of the great problems with scabies always has been misdiagnosis. The impregnated scabies mite is spread by personal contact, e.g., by shaking hands or sleeping together or by close contact with infected articles such as clothing, bedding or towels. It is usually found where people are crowded together or have frequent contact, and is most common among school children, families, roommates, and sexual partners. Scabies can be spread by the mite itself or by the egg. Prompt action is required to rid a person of the mites and eggs. Sulfur has been used (6 - 10% in lotion or cream) since Roman times as a scabicide, but you might be allergic. Note: Celsus used sulfur mixed with liquid pitch to control scabies as early as 25 A.D. Today you can mix 6% sulfur in Vaseline®. Castor oil or olive oil continually applied for 8 hours may suffocate the females. The intense itching, or puritus, is thought to be due to a reaction within the skin to the feces of the mites. This itching usually becomes worse at night and/or after a hot shower. Take Not Nice to Toxins® and 1 teaspoon of food-grade DE daily. An antihistamine will help stop the itching as will Calamine lotion or diluted enzyme cleaner.

If you think your child or someone else in the family has scabies - Try a sauna and/or try bathing, washing or soaking in diluted Lice R Gone® Shampoo or diluted Safe Solutions, Inc. enzyme cleaners, sulfur and/or borax - then **call your medical provider to be sure you are no longer infected.**

- Try Lice R Gone® Shampoo and/or Not Nice to Skin Irritations™ and/or Safe Solutions Enzyme Cleaners with Peppermint and borax or salt or a sauna first. Adding vinegar to a salt bath will help prevent scratches from becoming secondarily infected with bacteria.
- We have anecdotal testimonies that taking Not Nice to Toxins® along with diluted Safe Solutions enzyme treatments speeds the control of scabies.
- Carefully make any application of any poison lotion only according to the doctor's specific written instructions. **Do poison "treatments" only as a last resort.**
- Examine all other family members carefully for the presence of scabies - use a magnifying glass.
- To avoid reinfestation, all clothing, towels and bedding should be thoroughly laundered once all those with scabies begin their treatment. Use hot water over 120° F. (equal to hot tap water in most homes). Try washing in diluted Safe Solutions Enzyme Cleaners or 2 oz. of Lice R Gone® and ½ cup of borax.
- Combs, brushes, barrettes and anything with which your child has had contact should be soaked in hot water (over 120° F.) and Safe Solutions enzyme cleaners or shampoos or borax for at least 15 minutes.
- Periodically check your child for symptoms which may indicate reinfection. Expect the rash to take at least two weeks to clear up. Try Lice R Gone® Shampoo and Tangles R Gone®.
- At 82° F. scabies mites not on a host die in 24 hours from desiccation.
- Most normal infestations of scabies are caused by no more than 15 mites altogether and scratching helps remove them.
- In most cases your child can return to school after the first treatment and after all clothing, towels and bedding have been washed and dried in a clothes dryer.

Prevention - Good hygiene is essential for the prevention of scabies.

- In May 2002 the Centers for Disease Control included scabies as one of the sexually transmitted diseases.
The adult scabies mite can only survive for 1 -3 days (a nymph for 2 - 5 days) when it leaves the skin.
- Occasionally, the mite that causes mange in dogs may infect people, but these mites can not live long on people.
- Try routinely using a sauna - try bathing in salt water, soaking or washing in diluted Safe Solutions Enzyme Cleaners and/or borax and/or sulfur with ½ cup of olive oil and coconut oil for 3 days and lightly cover the body with olive oil and coconut oil after drying off with a clean towel. Caution: Coconut oil is known for its ability to penetrate skin. Olive oil is known for its ability to smother insects.
- Regularly change and wash all clothing, bedding, towels and under wear with borax and enzyme cleaners; practice proper sanitation.
- When laundering towels, clothing and bedding use hot water and Safe Solutions enzyme cleaners and/or borax or store them in sealed plastic bags for 2 weeks.
- Children should not share clothing or other personal articles such as hair brushes, combs or towels with one another.
- When an outbreak of scabies is reported be alert for symptoms in all members of your family.
- If your child has scabies, please notify the school authorities so the school will be alerted to check for any outbreak.

The above measures are suggested to help prevent reinfestation. However, even the medicated (poison) lotion treatment for scabies does not provide long-term protection and resistance and/or reinfestation is always possible. So watch and practice proper prevention - Remember to try to avoid the use of poison on your person or child at all costs. This will lower your and your child's immune system. There has been some discussion of using ivermectin (orally) to control scabies. Try Not Nice to Toxins® and Safe Solutions Enzyme Cleaners and Lice R Gone® first.

Please also see Chapter 20 and/or <http://www.scabie-solutions.com> for more on scabies.

Norwegian or Keratotic or Crusted Scabies - Infestation of high numbers of mites occurs when no treatment is made including scratching, or when an individual has a weakened immune system (Read Chapter 40.). These

major aggressive infestations are referred to as Keratotic Scabies, Crusted Scabies or Norwegian Scabies. Infected patients have thickened, crusty areas all over their bodies, including their scalps. Their skin appears scaly and their fingernails may become thick and horny. Most patients who become so heavily infected do not scratch, have weakened immune systems due to diseases, e.g. aids, leukemia, diabetes and/or are exposed to pesticides or medicines such as those given in chemotherapy or after they have received a transplanted organ, drink heavily and/or live in institutions, e.g., nursing homes, hospitals, residential facilities, prisons and other communities; they may be debilitated and/or malnourished or elderly, mentally retarded, physically infirm and/or have other diseases that affect their skin's ability to feel sensation.

Testing - According to the American Academy of Dermatology the most common test involves applying a drop of sterile mineral oil to the suspected lesion. The site is then scraped with a scalpel and the scrapings are transferred to a slide. Under a microscope, the doctor should be able to find scabies mites, their eggs and/or feces. Another option is an ink test, in which the doctor applies a blue or black felt-tipped pen to the suspected areas. Then the skin is cleaned. Mite burrows can be revealed if the ink sinks into them.

Spot Treatment(s) - Take ½ oz. of Safe Solutions Enzyme Cleaner or ½ oz. of Lice R Gone® and dilute in a cup of water. Put a (1" x 1") gauze pad over the infested area(s) and keep the pad(s) moist (using an eye dropper) for at least one hour (or spray as needed). Use this technique on the infested area(s) daily for at least 2 weeks and/or as needed. You can also make a mix of 1 oz. enzyme cleaner per quart (32 oz.) of water and spray as needed.

A paste made from two herbs, neem (*Azadirachta indica*) and tumeric (*Curcuma longa*) applied to the infected area(s) daily for 2 weeks (or as needed) will help heal scabies.

Bathing - If you decide to use Lice R Gone® or diluted Safe Solutions Enzyme Cleaner, use 2- 6 oz. per bath (You can also add ½ cup of borax or kosher salt and ½ cup of vinegar to your bath water.), add body temperature water (not hot) up to your hips and soak for at least 30 minutes. Use a wash cloth and keep the entire body wet. **Keep out of eyes.** Bathe in solution at least once a week for 2 - 3 weeks and/or as needed.

SEVERAL "LAST" TOXIC CONTROL CAUTIONS/WARNINGS

Resistant lice infestations are so common now that people are using these dangerous over-the-counter poison shampoos for far longer periods or more frequently than they should and if you think this is "bad" - on 11/1/96 Warner Lambert manufacturer of the product Nix® received FDA approval to market this poison as a prophylactic agent! Lice are already resistant to permethrin poison as reported in the U. S., Canada, the U.K., Israel and Czechoslovakia, but children are not resistant to these poisons. In the Winter/Spring/1997 issue of NPA's Progress a mother who lost her son to leukemia after she repeatedly shampooed his hair to "prevent" lice found an issue of Chemical Engineering News (in order to find a correlation with Nix® and Lindane) which had an article on the phasing out of chlorinated hydrocarbons. It included a specific chart which included a listing of endocrine disrupters. Synthetic pyrethroids such as permethrin found in Nix® were included in the chart with different herbicides, fungicides and pesticide poisons. **They were all in the same category in terms of the health effects - and the negative effects were many!**

"Treating" actual lice or scabies infestations with lindane can cause many adverse health problems including permanent seizure disorders and severe mental retardation. In February, 1993, Barre National, a generic lindane lotion manufacturer, settled the Santiago family's Massachusetts lawsuit for severe brain injury. Previously the pharmacy that sold the poison had settled with the family. In 1986, a pediatrician prescribed 2 ounces of Kwell (1% lindane) lotion to treat Jose Santiago's scabies infestation. (The Kwell brand product has been withdrawn from the market.) The pharmacist sold Mrs. Santiago 4 ounces of a generic brand. Mrs. Santiago applied it to her baby nightly for a week. Today, 9-year-old Jose has a permanent seizure disorder and has only developed to the level of a 3-year-old. Lindane is an organochlorine pesticide poison in the same family as the banned carcinogens DDT and chlordane. Lindane has been linked to serious brain injury and seizure disorders, and it is suspected of causing cancer, birth defects, fetal toxicity, developmental neurotoxicity, blood dyscrasias and reproductive disorders. In 1983, Public Citizen's Health Resource Group petitioned the FDA to ban all medicines containing lindane, as more seizures and brain damage kept being reported.

The National Pediculosis Association (NPA) had an article in the spring 1994 NPA's Progress written by a school nurse, Judy Magee. In 1992 she conducted a survey of 27 families with 119 children. She found: (1) 23% of

the children had been “treated” with (doctor-prescribed) lindane. Only one of the six families said they used the lindane as prescribed. Most used this dangerous carcinogen more frequently, left it on longer or incorrectly used it with an oil based product. (2) Over the counter lice control products containing pyrethrins or pyrethroids were used on over 90% of the children during the past year. Only 18% of the families surveyed used the poisons according to label direction. (3) 32% of the children were “treated” with dangerous “home remedies.” One mother rubs Black Flag Roach Killer into her children’s hair every day. Raid, flea soap, kerosene and/or the illegal roach product Chinese Chalk were also used. (4) The label directions on common lice poison products are written at a ninth or tenth grade reading level. One-third of U.S. adults read at or below the eighth grade level. One-quarter of the families Judy Magee surveyed could not read English.

The June 1998 issue of the *Landscape* noted: **6-year-old girl serious after hair washed in pesticide.**

Oklahoma City (AP) — A six-year-old girl whose hair was washed in an agricultural-strength pesticide was in serious condition Friday in the hospital. The man who washed the child’s hair Wednesday told police he didn’t realize the potency of the Diazinon he used to try to kill head lice. The chemical was intended for licensed commercial use only. It has a neuromuscular paralyzing agent that is extremely toxic to humans. The child went into cardiac and respiratory arrest after her mother’s friend washed her hair at the kitchen sink. The man called 911 when she stopped breathing and police used CPR on the child until they could reach paramedics. The doctor who treated the girl said it could be weeks before they can assess any permanent damage. “The girl had CPR very quickly and that is beneficial,” he said. “But she received a very large dose on an absorptive surface, so it will take a while until the poison runs its course. We washed her hair over and over again and she still smelled strongly of the chemical.” The detective investigating the case said the girl’s mother told him she got the container of Diazinon while cleaning an empty real estate property. The container was clearly marked with poison warnings.

In May, 1994, the federal German Environmental Protection Agency issued a warning about the indoor use of any insecticide sprays containing pyrethroids. Pyrethrins are derived from a chrysanthemum flower; 2000 years ago the Chinese use dried flowers containing pyrethrum to kill fleas and lice. Synthetic pyrethroids were initially developed to be synthetic analogs to pyrethrins, but molecularly their structures have greatly diverged. Pyrethroids kill by affecting the nervous system, and their mode of action appears to be similar to DDT’s. Many pyrethroids contain halogens, e.g., chlorine, bromine or fluorine atoms and as the German EPA warns they also attack human health. Permethrin, resmethrin, allethrin, tetramethrin, cyfluthrin, fluvalinate, fenvalerate and phenothrin are all synthetic pyrethroid poisons. The unregistered roach killer Chinese Chalk appears to contain a very toxic pyrethroid called deltamethrin. **The Author never advises using any volatile, synthetic pyrethroid or lindane or malathion shampoos on your child. The Author also advises not to use any enzyme product that contains over 1% protease enzyme. Make sure you know all of the ingredients in any shampoo before you use it on your family!**

Even the least-toxic, over-the-counter pesticide poison shampoos or lotions containing pyrethroids (e.g. permethrin) or pyrethrins can cause many health reactions in many humans, e.g., many different allergic and respiratory problems (especially severe in asthmatics) and a strange tingling, itching and/or a burning skin sensation called paresthesia are common health complaints. **That is why they have so many health warnings on them.** Piperonyl butoxide (PBO) is a synergistic toxin added to many insecticide poisons, especially to pyrethrin and pyrethroids, to make them more lethal “to insects.” PBO makes it harder for insects to detoxify (and anything else to detoxify, including you.) The Eleventh Edition of the Merck Index on page 1266 under Pyrethrin has this caution: Can cause severe allergies, dermatitis, systemic allergic reactions. Large amounts may cause nausea, vomiting, tinnitus, headache and other CNS (Central Nervous system) disturbances. (Note: Both pyrethrin and piperonyl butoxide are now considered to be carcinogenic.) In Shirley A. Briggs’ “Basic Guide to Pesticides” she notes that acute (one time) oral exposure to permethrin has a low to high toxicity, that nothing was known about acute dermal toxicity and that acute inhalation toxicity was also low to high and that long-term or chronic toxicity could cause blood damage. There is a Washington Post article that quotes Cheston Berlin Jr. a pediatrician and pharmacologist as saying “many doctors are recommending to their patients several different lice shampoos that are available without prescription. Most rely on the chemicals permethrin and pyrethrins as active ingredients, which are (supposedly) “nontoxic” in humans because they are so rapidly metabolized.” Someone ought to tell the good Doctor what piperonyl butoxide does - it stops this metabolizing process and is twice as strong in these shampoos than it is in a can of Raid®! The eighth edition of SACS Dangerous Properties of Industrial Materials notes, “Piperonyl Butoxide (C₁₉H₃₀O₅) Safety Profile: Poison by skin contact. Moderately toxic by ingestion and intraperitoneal routes. An experimental teratogen. Experimental reproductive effects.

Many glycol ether compounds have dangerous human reproductive effects. Questionable carcinogen with experimental tumorigenic data. Mutation data reported. Combustible when exposed to heat or flame; can react with oxidizing materials” SAXS also noted, “Pyrethrins Safety Profile: Moderately toxic to humans by ingestion. Poison experimentally by ingestion, intraperitoneal and intravenous route. Experimental reproductive effects...can cause gastrointestinal, respiratory and central nervous system effects. A dose of 15 grams (only a little more than ½ ounce) has caused the death of a child. Chronic exposures can cause liver damage.” A 37-year old woman developed severe shortness of breath five minutes after beginning to wash her family dog with D-Flea® insecticide shampoo containing pyrethrin. Her death shortly after her arrival at the nearest hospital was attributed to sudden, irreversible, bronchial spasm from exposure to the pyrethrin shampoo. According to a report by Paul M. Wax of Rochester, New York - Clinical toxicology (32:4, 1994) - NPA noted that while this report was not associated with head lice, the NPA has had reports that are using pet (poison) shampoos on children - because of all the “treatment” failures they have been having with commercially available lice treatments/poisons. If you think the Raid example was bad, I noticed an advertisement from FMC® in the May 1998 Service Technician/PCT that proudly proclaims the termiticide (poison) they sell to use against termites is the same active poison ingredient used as a lice shampoo for children! Then FMC® notes that in soil degradation studies conducted all across the country this termiticide poison (permethrin) has been shown to be the longest lasting soil poison! - Implying that if your children get lice you can simply have the termite man spray their heads with the longest-lasting soil poison on the market today! Amazing! **Many thousands of people have safely gotten control of resistant head lice and nits with Lice R Gone® Enzyme Shampoo and Nit Remover and Tangles R Gone® Hair Conditioner.**

“Our” Environmental Protection Agency (EPA) is not expected to make a decision on the re-registration of PBO until at least 1996. “Our” Food and Drug Administration (FDA) **still** maintains that lindane products are “safe and effective when used as directed!” This in spite of all of the contrary health evidence **and** the federal law that clearly states it is illegal to say any pesticide poison is “safe”. On March 16, 1994, “our” EPA stated that lindane will remain on the market while it (slowly) compiles more health data on its risks. Note: way back in 1977, EPA initiated a special review of lindane due to all of the known and suspected health problems and negative environmental effects **then** — yet no serious action has yet been taken. Prescription lindane lice and scabies poisons are **still** being used on children by family members and in hospitals, schools and other institutions. Lindane is **also still** being used to *treat* Christmas trees, agricultural seeds, livestock, pecans, logs and lumber, ornamentals, forest trees, pets, households and other buildings and assorted fruits and vegetables! Bon appetit!

Propylene glycol is used as an “inert” in many over-the-counter shampoos. The Spectrum® Material Safety Data Sheet notes propylene glycol’s potential acute health effects as: very dangerous in case of ingestion. Slightly dangerous to dangerous to dangerous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Very slightly to slightly dangerous in case of skin contact (permeator). This product may irritate eyes and skin upon contact.

If you have used pediculide or scabicide poisons in the past, we suggest you use Not Nice to Toxins® and Safe Solutions Food-grade DE to help detox your body.

Intelligent Pest Management® Lice - Typical First Strikes by Housekeeping & Maintenance

1. Thoroughly vacuum each room daily wherever lice have been a problem and spray carpets and floors with Not Nice to Bugs® or 1 oz. of Safe Solutions Enzyme Cleaner with Peppermint (per quart of water) or mop floors with 1 oz. Safe Solutions, Inc. enzyme cleaners and borax. If you must spray, spray furniture and bedding with Not Nice to Bugs®.
2. Give parents and teachers a copy of this entire chapter on Lice.
3. Give whoever asks 2 packets or an 8 oz. bottle of Lice R Gone® Shampoo for each child and this chapter. This non-poisonous shampoo makes the hair so slick they can’t stick and lice can not live off the body for very long. You only need to give 1 bottle of Lice R Gone® to treat an entire family. (Only ½ oz. of Lice R Gone® will remove the lice and nits on a long-haired person in 5 - 10 minutes.) **If you have been using other pediculicides, this “treatment” may have literally welded the nits to the hair shaft and it may take several more minutes and/or shampoos and/or Tangles R Gone® Hair Conditioner to remove these treated nits.** A simple hair dryer will kill lice, especially if you use a shower cap.
4. Assign each child his/her own locker or hook.
5. For stubborn cases, wash each family member’s hair once a week for 3 weeks with Lice R Gone.

Note: Lice are host specific; there are lice that attack goats that will not attack cattle. There are lice that are common external parasites affecting cattle, sheep, goats, swine, poultry and other livestock. Many organic farmers are looking for safe ways to control these pests without using dangerous, synthetic, chemical insecticide poisons. **They should first try a fine-toothed metal lice or flea comb, Lice R Gone® or Not Nice to Fleas® Shampoos or diluted Safe Solutions, Inc. Enzyme Cleaner.** Vigorously shampoo with Lice R Gone® Enzyme Shampoo for 10 - 15 minutes and then, while still wet, add some Tangles R Gone® Hair Conditioner and comb with a regular comb to detangle the hair and then a fine-toothed metal flea or lice comb should be used to comb 1" sections of hair in order to remove the loosened nits. Then manually inspect the hair for any remaining nits before you rinse. **Rather than spraying surfaces, use ultra-violet light to disinfect and kill eggs.**

There are two kinds of lice that affect cattle/cows: biting lice and sucking lice. Lice are passed between animals as they feed or crowd together. Biting lice move along the topline (spine) and are about the size of a pin head, straw-colored and soft-bodied. Biting lice feed on dead skin and hair follicles. They are very common on cattle, sheep, goats and swine. Sucking lice are blue-black and very small; they are attached to the skin. Inspect for them by scraping the skin with a knife and shaking scrapings onto a stiff piece of white paper. Wash or (better yet) dip each animal from nose to tail with diluted Safe Solutions Enzyme Cleaners or the veterinary put-up of Lice R Gone® Shampoo and borax. Repeat treatment in 2 - 3 weeks. The enzyme cleaner wash should still be effective in a dip tank and should control many other ectoparasites. Mix at a rate of 1 quart of Safe Solutions Enzyme Cleaner with Peppermint to 50 gallons of water.

For those who may be interested, the word "lice" in Hebrew is "kinim" - one of the plagues God sent to punish Egypt was lice - even to this day parents and farmers respond to lice like they are truly plagues. Exod. 8:16-18

A staggering 20 million Americans find out each year we live in a lousy world - when they become infested or plagued with lice! The really lousy part of this is many are *treated* repeatedly with dangerous, volatile, synthetic pesticide poisons that no longer control the lice; some people have *treated* their children 10, 20 and even 30 or more times with over-the-counter poison shampoos without getting rid of the resistant lice!

Caution: Before "treating" with any volatile pesticide poison shampoo or lotion or even a regular soap shampoo, read the Material Safety Data Sheets (MSDS) for not only the active poison ingredient, but also for all of the "inerts." Never apply any pesticide poison shampoo in the shower. **Be sure to cover the eyes with a towel to protect them.** The warm, close environment can allow a dangerously high amount of the poison to be absorbed. Observe all warning labels. **Do not use a shower cap.** These "registered" poisons are especially dangerous for pregnant or nursing women, children younger than 2 months, or anyone with asthma.

Other than plain salt (*Natrium muriaticum*) water; another simple "lice-killing" shampoo formula Safe Solutions has combines several simple ingredients (e.g., Sodium Lauryl Sulfate, Sodium Chloride, Potassium Sorbate) which are all also on the USEPA exempted products list and, when combined, these ingredients basically make soapy salt water that will indeed safely kill lice but will not remove the nits.

Sodium laureth sulfate, or sodium lauryl ether sulfate (SLES), is a detergent and surfactant found in many personal care products (soaps, shampoos, toothpaste etc.). It is an inexpensive and very effective foamer. Sodium lauryl sulfate (also known as sodium dodecyl sulfate or SLS) and ammonium lauryl sulfate (ALS) are commonly used alternatives to SLES in consumer products. While SLS is a known irritant, some evidence and research suggest that SLES usually causes irritation only after extended exposure.

Sodium chloride, also known as common salt, or table salt, or halite is a chemical compound with the formula NaCl. Sodium chloride is the salt most responsible for the salinity of the ocean and of the extracellular fluid of many multicellular organisms. As the major ingredient in edible salt, it is commonly used as a condiment and food preservative. In one gram of sodium chloride, there are approximately 0.3933 grams of sodium, and 0.6067 grams of chlorine.

Potassium sorbate is the potassium salt of sorbic acid. Its primary use is as a food preservative. Potassium sorbate is used to inhibit molds and yeasts in many foods, such as cheese, wine, yogurt, dried meats, and baked goods. It can also be found in the ingredients list of many dried fruit products. In addition, herbal dietary supplement products generally contain potassium sorbate, which acts to prevent mold and microbes and to increase shelf life, and is used in quantities at which there are no known adverse health effects. Labeling of this

preservative reads as “potassium sorbate” on the ingredient statement. Also, it is used in many personal care products to inhibit the development of microorganisms for shelf stability. Some manufacturers are using this preservative as a replacement for parabens, e.g., Safe Solutions, Inc. in its Tangles R Gone® and its upcoming Safe Solutions Alternative Lice Shampoo.

Start combing - Once lice are detected, plan on spending one full day for each initial treatment, then daily for at least 2 weeks. Give yourself at least an hour per head - and with long hair, as much as two hours per head. Make sure your child is comfortable and occupied. Use an entertaining video, arts and craft project or coloring book to keep your child entertained and engrossed. Use a bright light, magnifying glass and metal (flea/nit) comb. Comb through each strand from top to bottom, removing nits with fingernails, combs, blunt scissors or tweezers. If the nits will not budge, snip off the hair. **Recheck your child's head every 3 - 4 days for several more weeks. Start cleaning - Everything** that has been in direct contact with the infested child - bedding, clothing, towels, toys, dolls, cars, furniture, hats, combs, brushes - must either be vacuumed, laundered or dry cleaned daily; any items that can not go through the washer or the dryer or be thoroughly vacuumed should be placed in sealed plastic bags and kept isolated for at least 2 weeks. **Be sure to remove all the nits!**

The 1997-1998 head lice season had been particularly bad. Even in February, 1998 school nurses and parents were still telling us that children had their head lice “treated” with poisons 10 - 20 or more times! Some children's parents were using over-the-counter poison treatments virtually daily to treat” the resistant lice, even though the poison shampoo labels clearly warn people not to use these toxins more than once every 2 weeks! Never use any volatile, synthetic pesticide poison more than twice after it fails the first time! Lice R Gone® Shampoo does not contain any *registered* pesticide poisons and has safely controlled even pesticide resistant lice.

Enzyme Cleaner/Shampoo Caution: Enzyme cleaners are also used to clean contact lenses; after rinsing, the contacts are put directly into the eyes. This is the safest way to clean contact lenses. Occasionally someone will have a sensitivity to enzymes and should avoid contact with all enzyme cleaners or shampoos. Enzyme cleaners are very efficient cleaners; before using them on anyone else the Author washed his own hair with the concentrate (not diluted Not Nice to Lice®, which has been improved and is now called Lice R Gone®) for over 5 years and even though the Author is chemically sensitive he never got any reaction. At the time the Author rewrote this Chapter 16, he personally saw that many thousands of children (over 600,000) had used Not Nice to Lice® (and over 350,000 had used the vastly improved Lice R Gone®) and had safely removed all of their nits and lice and never got any reaction; only a few times has the Author heard of stinging eyes from the original Not Nice to Lice®, but flushing with water solved the slight eye irritation. Pediculicides or poison shampoos can kill people and do not control lice or nits and comparing these dangerous, useless poison shampoos with Safe Solutions Lice R Gone® Enzyme Shampoos makes no sense at all. Not Nice to Lice-UK® and Lice R Gone® not only safely clean away lice and nits, but they also clean the hair shafts and follicles and loosen dirt, grease, soap, makeup, previous poison shampoos, lotion, hair spray, hair conditioners, dead skin, perspiration salts, dyes and other residue material and debris that have accumulated on the head and hair. **If you get any soap or enzyme cleaner or shampoo and other debris in your eyes, flush them with cold water per the label directions. If your eyes still burn, have your doctor order Lacralube or Bacitracine for your eyes.**

When you allow any of the above debris to get in your eyes, these materials may cause a eye irritation or burning - but not the enzymes (less than 1% protease) in Lice R Gone®; the entire ingredient list has had dermal and ocular testing. The only things that could possibly cause any eye irritation are the surfactants as they are simply in regular soap shampoos. Soap shampoos can also burn the eyes; usually people simply rinse them out with water. If you get Lice R Gone® or Not Nice to Lice-UK® or any cleaner in your eyes, immediately flush with copious amounts of cold water. **If you have previously used poison shampoos, hair spray or rinse, do not use these very effective cleaners/shampoos in a shower.** The Author then recommends you use the Critter Cap™.

Lice R Gone® is the newest enzyme shampoo (<http://www.licergone.com>) with which the Author has worked. (Note: This product is called Safe Solutions, Inc. Not Nice to Lice® in the U.K.) Only ½ oz. is needed to wash away the lice and nits in a few minutes on a long-haired person. These products are considered a FDA medical device in the U. S. and U. K. **To view a video of Lice R Gone® at work, click here.** http://www.licergone.com/Safe_Solutions_Lice-R-Gone.mpg

Be sure you do not create your own “mix” of enzyme cleaners. There are various stabilizers used in Safe Solutions, Inc. Enzyme Cleaners and/or Lice R Gone® to keep each formula from spoiling. Changing, diluting and/or adulterating the formula may harm the product and/or you. It is not good to use more product than you need. Follow the label directions carefully. Note: Only Safe Solutions, Inc. enzyme products are covered by U. S. Patent No. 6,663,860.

The Critter Cap™ - At the time of this writing, the Critter Cap™ was being developed so that the entire Lice R Gone® shampoo process could safely and effectively take place under a simple disposable “shower cap.” This cap can also be used with a hair dryer for 30 minutes to kill both lice and nits. You can use a comfortable temperature slightly cooler than a standard blow dryer.

Borax Caution: Do not use on damaged or unhealthy skin. Do not use on children under the age of three. Avoid ingestion and rinse thoroughly.

Correctly Prescribed Drugs Take Heavy Toll — On Wednesday, April 15, 1998 Rick Weiss wrote in The Washington Post, “More than 2 million Americans become seriously ill every year because of toxic reactions to **correctly** prescribed medicines taken **properly**, and 106,000 die from those reactions, a new study concludes. If you decide to use the dangerous poison shampoos or pediculicide poisons, you won’t get control because the lice are already immune or resistant to these poisons; if you doubt this check out <http://www.washingtonpost.com/wp-srv/national/longterm/viagra/stories/milloy.htm>

HOW TO USE THE OLD GINESIS NOT NICE TO LICE® SHAMPOO: Wet the hair with warm water. Have the child lay face up on the sink counter or have the person to be treated upright in a straight chair with a clean towel over their eyes for protection and cover their shoulders with a towel or blanket. Add 2 ounces of Not Nice to Lice® to hair and massage for 10 minutes. **Do not rinse.** Add 2 more ounces and massage for 10 more minutes. **Do not rinse.** Continue to add 2 ounces of Not Nice to Lice® and massage for 10 minutes until contents of entire 8-ounce bottle is on the hair and scalp. **Do not rinse.** Let set for 10 more minutes. After a full 30 minutes, rinse with warm water. (Another way to do this shampoo is to wet hair, add the contents of the bottle or package of Not Nice to Lice® Shampoo and then cover with the Critter Cap™ and externally massage for 20 minutes; leave on for another 10 minutes and then rinse.) If there have been any previous pediculicide treatments, or there are any remaining nits, massage in a small amount of hair conditioner. With one hand under a 2” to 3” strand of hair, carefully insert the teeth of a fine-toothed Not Nice to Lice® comb or steel-toothed nit comb between your hand and the scalp. Keep the comb’s base tight against the strand of hair, and gently pull both hands to the end of the strand. Hair conditioner should help make the comb glide through each strand of hair easily. After combing each strand, clean the lice and the nits from the comb between your thumb and finger into the sink under the hottest water you can comfortably handle. Repeat this procedure until all the hair has been combed and nits removed. Rinse hair, dry and style as usual. If all the nits and lice are not gone in 30 to 45 minutes, you can immediately treat again. Safe Solutions, Inc. improved Not Nice to Lice-UK® Shampoo (you will use a lot less of this product) can be safely used as often as needed. Not Nice to Lice-UK® Shampoo is gone after the first rinse. **Always remember to keep enzyme cleaners, shampoo products out of the eyes:**

http://www.licergone.com/Lice-R-Gone_Ocular_Sensitivity.pdf

HOW TO USE SAFE SOLUTIONS LICE R GONE® (and their vastly improved Not Nice to Lice-UK®): Wet hair with warm water. Use a small amount of product (about ½ oz.) to make a lather. **Keep any shampoo out of the eyes to prevent eye irritation.** Massage for 5 - 10 minutes; then rinse. This bottle contains enough material for multiple shampoos. If any nits remain after your rinse, please apply some Tangles R Gone® Hair Conditioner and comb with a fine-tooth comb. Repeat as often as needed. **Spanish instructions can be found at <http://www.licergone.com/about-spanish.htm>. French instructions can be found at <http://www.licergone.com/science-french.htm>.**

Will protease enzymes harm the hair? While hair is made of protein, it is covered with several overlapping layers of cuticle that protect it from being destroyed by protease enzymes. The saliva in your mouth also contains enzymes. You are also made of protein, yet you do not dissolve. A short treatment using Lice R Gone® Shampoo actually helps the hair by serving as a clarifying treatment for the hair. A clarifying agent will also serve to remove harmful residues, **but make sure you are using a Safe Solutions product that contains 1% or less protease enzymes or you may have serious health problems.**

Final Lice Notes: At several conventions I have repeatedly heard that (resistant) lice are living for many weeks in plastic Ziploc bags and/or for months in plastic bags. If this is true, it is vital that people with infested children greatly improve their housekeeping.

Final Nit Notes: If you have previously used poison shampoos, you may have “welded” some of the nits on your hair shafts. It is believed the poisons negatively impact the nit glue. Lice R Gone® effects the nits in a very dramatic way; when you pinch the nits after the shampoo they “pop” and a “cold cream” type material comes out of the nit, **but if they are still hard to remove, simply put some Tangles R Gone® Hair Conditioner on the wet hair; wait 10 minutes and then comb - it will help remove the nits. Cider vinegar will also help loosen nits. Simply keeping the hair wet 30 minutes expands the hair shaft and cracks the glue.**

Isopropyl Alcohol Caution: Some “safe and effective, non-toxic” lice shampoos contain essential oils that can create allergic responses and rubbing alcohol which is highly flammable. Isopropyl alcohol should never be applied to irritated skin or allowed to come in contact with eyes or mucous membranes. We do not advise using this “safe” product on children’s heads.

Class Action Lawsuits: The Associated Press noted: The FBI is investigating a \$225,000 “payment/settlement” by Warner Lambert Co. to two lawyers hired to sue the pharmaceutical company over whether its head lice (poison) shampoo (Nix®) works. The agreement dated August, 1997 specified the pharmaceutical company would pay the two lawyers \$225,000 to drop the class action suit and turn over the names of the 90 people who asked to be plaintiffs. Warner Lambert specified the only relief for the would-be plaintiffs who said Nix® didn’t work (even when they followed package directions to the letter) consisted only of refunds, and Warner Lambert specified it would pay no more than \$10,000 total in refunds.

On 12/22/98 at 5:27 p.m. another class action lawsuit was filed in Harris County, TX - Civil Action No. H-99-0238 (Removed from 125th District Court of Harris County, Texas, Cause No. 1998-59797) against several pediculicide (poison) manufacturers, including Rid®, Pronto®, Nix® and many other sprays, treatments and/or shampoos and against the sellers of these lice “treatment” products. The lawsuit was filed on the behalf of the Plaintiffs, who purchased said products in the United States in reliance upon Defendants’ false, misleading and unsubstantiated claims concerning the effectiveness of their products, who followed Defendants’ prescribed instructions and whose lice infestation was not cured. Lice R Gone® and Not Nice to Lice® were not included in this lawsuit either.

Malathion (Ovide) Permethrin Precaution: Tom Collins, M.D. noted that Ovide, a prescription treatment, is flammable, so do not use a hair dryer to dry wet hair! On September 19, 1999, the CNN.com web page noted that Harvard University researchers last week announced they had found head lice that were not susceptible to permethrin, the active “registered” poison ingredient found in most popular lice treatments. A 1995 Israeli study had found lice resistant to similar pediculicide poisons.

FINAL CAUTION: There have been some recent reports of head lice that have not only become resistant to pesticide poisons, but actually have mutated and are now living under the scabs with their nits. No amount of combing will remove these pests. Lice R Gone® Shampoo and Tangles R Gone® Hair Conditioner products will remove these resistant pests. Head lice normally must pass through 3 instars or molts in about 18 days before they are able to reproduce. If you suspect mutant lice, wash with Lice R Gone® at least every 2 weeks until the condition improves and your scalp is healed. Lice R Gone® is an extremely efficient shampoo and can lift pediculicide shampoos, pesticide poisons, hair spray glues, rinse-in hair color and other debris and irritants from your hair and scalp. If you use these shampoos and you have previously used hair spray or hair color or have used previous pesticide (poison) lice shampoos, it is advised you do not use this product in the shower.

Always keep Lice R Gone® and the debris it loosens and cleanses out of your eyes and off your face, especially if you have used hair spray, hair color and/or lice (poison) shampoos. If you get anything in your eyes, flush with copious amounts of water. If your eyes still burn, have your doctor order Lacralube of Bacitacine for your eyes.



Nano-UV Wand™ Large Area Disinfection Scanner - Simply pass this ultra-violet light source within 1/4" of the surface to safely kill 99.99% of bacteria and virus in a quick 10-second sweep. This rechargeable UV light source safely kills: e-coli, salmonella, staphylococcus aureas, avian bird flu, SARS and eggs of dust mites, lice and fleas. To order or to learn more, call 1-888-443-8738 or visit Safe Solutions, Inc. web site at:

<http://www.safesolutionsinc.com> to order this safe disinfection scanner.

TANGLES R GONE®



Scientifically designed to be used in combination with Lice R Gone®. This hair conditioner helps restore what the Lice R Gone® Shampoo removes and also helps loosen stubborn nits. While Safe Solutions specifically designed this hair conditioner to work with Lice R Gone®, Safe Solutions has customers who choose to use it on a daily basis to remove tangles and add shine and moisture to their hair after using their chosen brand of shampoo. A blend of organic ingredients and protection factors to help safely condition and protect and/or restore your hair.

New Ingredients: deionized water, cetyl alcohol, stearyl alcohol, stearamonium chloride, dimethyl stearamine, lactic acid, glycerine, peppermint oil, potassium sorbate, sodium benzoate

Directions: Apply after shampoo, massaging this rich mixture into wet hair. Rinse thoroughly and style your hair. Helps to safely remove tangles and to restore and moisturize your hair. Helps to repair split ends, dry and/or frizzy hair. No animal testing or by-products. Cruelty free.

HOW TO PURCHASE

Lice R Gone® Shampoo and/or Tangles R Gone® Hair Conditioner, Not Nice to Bugs® and/or Not Nice to Skin Irritations™, Safe Solutions, Inc. Enzyme Cleaner with Peppermint products can be purchased from:

1. Safe Solutions, Inc. at 1-888-443-8738; web sites: <http://www.safesolutionsinc.com>, <http://www.licergone.com>

These safe and effective products are also currently available at many retail locations. If you are a drug store and need to order Lice R Gone Shampoo® and/or Tangles R Gone® Hair Conditioner, call Safe Solutions, Inc. at 1-888-443-8738.

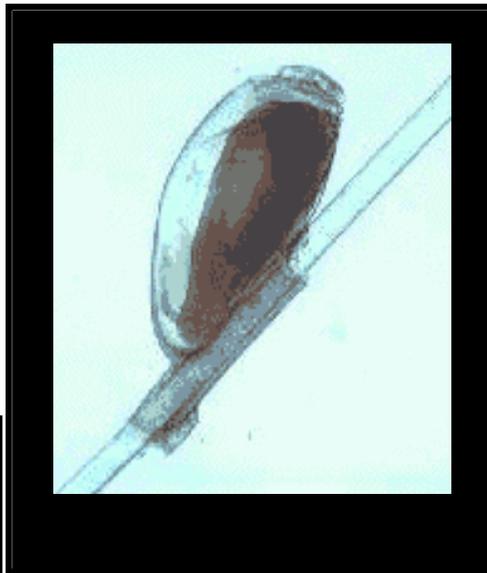
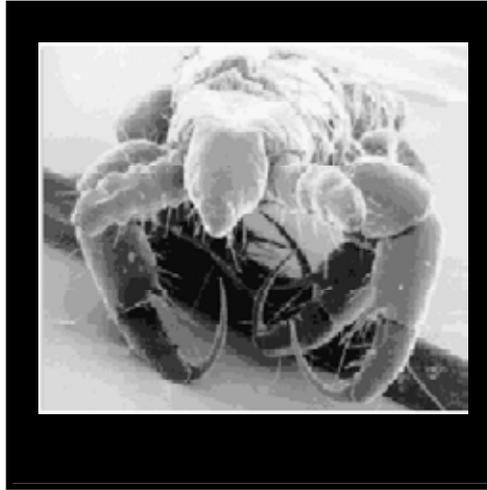
NOTE: The scabies mite lives only about 2 weeks off the host; if you simply increase the temperature to 80° - 82° F. most scabies mites not on a host will die in 24 hours from dessication. Use ultra-violet light and dehumidifiers. Routinely clean with Safe Solutions Enzyme Cleaner with Peppermint. Call 1-888-443-8738 or see: <http://www.safesolutionsinc.com>



My Grandfather told me there are two kinds of people: those who do the work and those who take the credit. He told me to be in the first group - there is less competition there. – Indira Gandhi

How to inspect for head lice/nit infestations:

The Sonoma County Health Services has posted these pictures on their web site on what to look for:



Inspect each head very carefully (for about one hour) under a bright light using a comb, a wooden probe and a magnifying glass. Capture any lice you find on a piece of scotch tape rolled on the finger, sticky-side out. Then carefully unwrap the tape and fold it in on itself so the louse is securely trapped inside. You can then write on the outside of the tape with a ball point pen. Be sure to include the date, child's name and time authenticating what you found.

Here are the results of a study showing how any school system can reduce the number of days absent due to head lice infestation. **Absenteeism was reduced over 50% by using even the old formula Not Nice to Lice.***

Study conducted by Cheri Porter Redway Elementary School, Redway, CA

STUDY OF REDWAY SCHOOL HEAD LICE ERADICATION PROGRAM

Table 1: Redway School's Rate of Head Lice Infestation

School Year	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Enrollment	376	425	400	352	347
Infested	39	43	41	36	49
Days Absent	185	261	130	118	91
% Infested	10%	10%	10%	10%	14%

Table 2: Product Distributed to Parents

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Metal Combs	No	No	Yes	Yes	Yes
NIX	No	No	Yes	Yes	No
Lice Free	No	No	No	Yes	No
Lice Off	No	No	No	Yes	No
Not Nice to Lice	No	No	No	Yes	Yes
Not Nice To Lice House Spray	No	No	No	No	Yes

*Note: This was the original Not Nice to Lice® formula and required 8 oz. and 30 minutes to do what the new formula in Lice R Gone® does with ½ oz. and 5 minutes.

The National Pediculosis Association's PROGRESS

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THE HAZARDS OF TREATING HEAD LICE

When treating my child for head lice, I never thought about the harm I could be bringing to him. I thought about the anxiety all mothers feel when they find bugs in their child's hair. I never imagined that I might actually be causing Jesse's death. If I had only known or even had a clue.

In telling my story, I have decided to remain anonymous because talking about what happened is so difficult. It requires me to confront my demons, and I don't know if I will ever be able to do that. These memories remain vivid nightmares that haunt me through the night. If I think about my role in Jesse's pain and suffering, I'll never make it through the day. I fought so hard to help him live, it's hard to confront the fact that I may have contributed to his death.

The nightmare began in 1984 when there was an outbreak of head lice in the elementary school. Several children were discovered to have head lice, including my second son. Our pediatrician prescribed Kwell® shampoo never telling me anything other than the fact that it could cause eye or skin irritation. I used the Lindane shampoo on my family, sprayed the house, and had it exterminated. I had a refill of the Lindane so I used it twice that first time on all of my children. I did all of the shampooing myself. About two months later, I watched Jesse playing "Superman" as he jumped from the couch to the love seat. When he was in mid-air he caught himself in the stomach and appeared to be in a lot of pain. My husband, realizing that I was worried, told me to take him to the emergency room. After being examined, the doctors told me that Jesse had an enlarged spleen which I thought had been caused by his accident. The doctors decided to do some blood work and found that his lymphocytes and white blood cell count was irregularly high.

Not knowing the cause, they decided to keep him overnight to do a liver and spleen scan. The next morning they sent us home

with some iron drops for an iron deficiency. When the drops didn't bring his hemoglobin up, they scheduled Jesse for a bone marrow biopsy. By that time, I already suspected the worst. I had researched the possible diagnoses and knew his symptoms pointed to leukemia - acute lymphoblastic leukemia. Jesse was hospitalized for six weeks until he went into remission through chemotherapy. I stayed with him the entire time. The doctors asked a lot of questions about our background. Had there been a history of leukemia? Was there chemical exposure? There were no questions about pesticides or treatments for head lice so I didn't make the connection. It never crossed my mind. Never.

Jesse responded well to chemotherapy. He never looked sick. He was resilient and the entire family pulled for him. Our entire focus was on getting Jesse well. He was only two at the time. Eventually, things got back to normal as Jesse ingested chemotherapy orally once a week for three

One Mother's Story



Jesse's Story

years. The doctors told us that if he relapsed it would happen within six months after coming off chemotherapy. We were excited to pass the six month and then ninth month marks. We were finally feeling more at ease about his recovery and Jesse's entry into the first grade. Prior to the start of that school year in 1987, I shampooed all of

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- pg. 6 Childcare Provider's Guide to Controlling Head Lice
- pg. 8 Symbol of the People
- pg. 9 A Call to Pharmacists
- pg. 10 An Editorial
- pg. 10 NPA's 10 Tips for Removal of Head Lice and Nits
- pg. 11 You Can Help The NPA

Continued from front cover.

the kids' hair. We always hear about increased cases of head lice when children go back to school and it always strikes a chord with me because I am very hygiene conscious. So I went to the store and bought NIX® over the counter and used it on all of us - including Jesse. It was nine months after his remission.

About six-to-eight-weeks after, Jesse's cancer came back. The doctors were shocked because his type of cancer had such a high cure rate and he had passed the nine month mark typically indicating a complete recovery. It boggled everyone's mind. Because there was no perfect match for a bone marrow transplant, he was put on a new two year protocol for chemotherapy with new drugs. The doctors believed he had a 70% chance of remission. Jesse did well. When he came off the second protocol he was doing well. About six-to-eight months later I shampooed the kids' hair again for back-to-school. Six-to-seven weeks later Jesse relapsed again. We took him to a prominent medical facility on the East Coast for a bone marrow transplant. My daughter, who was now 16 months old, was an identical genetic match. It was in 1991 and we lived there for long periods of time while the transplant was conducted. Jesse slotted through the entire procedure and the doctors felt it went well.

We came home and everyone felt good about things. Jesse had stayed out of school for five months so that his immune system could get back to normal. It was mid-August 1992, and I again shampooed the kids' hair with NIX® because it was once again back-to-school time. We went on vacation for a week and when we returned we took Jesse in for lab work to find that he had relapsed again and this time he was completely full of leukemia. In a "normal relapse" after a bone marrow transplant experts usually find that they missed some of the original chromosomes from the leukemia patient. They resurface, multiply and divide and create leukemia again. Jesse was one of twelve documented cases in the world where the patient had relapsed even though the tainted cells had been completely removed. This was a red flag to me. When I received the news, I panicked that my daughter's marrow was leukemic, but the doctors told me her marrow was perfectly clean. Jesse's relapse indicated that there is something in the environment that may be triggering transformation.

It was at this time that I began to make the connection between Jesse's relapses and the head lice treatments. The

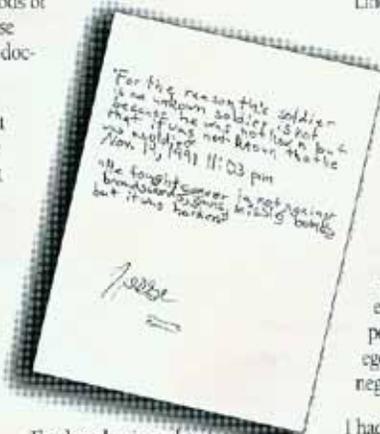
week before we went for the lab work, I found two lumps at the back of Jesse's neck. That's when it hit me. Every time I used head lice treatments, Jesse relapsed. I broke into a cold sweat and started to panic. I was eaten up with guilt so I talked to my sister who is a nurse-midwife in the area, as well as the doctors at the bone marrow unit. They told me that thousands of children use head lice shampoo each year and that not many get leukemia. But I am close to these people and they know me all too well. Even if they believed my theory, they would never admit it to me because they know it would destroy me.

I went to the library to research in the hope that I could prove that my suspicions were wrong. What I found devastated me. I found an EPA pesticide fact sheet which defined Lindane as an isomer of benzene hexachloride. I also found that there was sufficient evidence to support the dangers of exposure to benzene and that many reports associated leukemia with benzene exposure. That explained the Lindane I used, but I also used so much NIX® after which Jesse consistently went into relapse. So, I looked to find a correlation with NIX® and Lindane and found an issue of Chemical Engineering News which had an article on the phasing out of chlorinated hydrocarbons. It included a specific chart which included a listing of endocrine disruptors. Synthetic pyrethroids such as NIX® were included in the chart with different herbicides, fungicides, and pesticides. They were all in the same category in terms of their effects. And the negative effects were many.

I had never heard about the National Pediculosis Association or the concept that it teaches. I was born in a time when you pulled out a can of RAID® or OFF® spraying it freely to avoid bugs and mosquitoes. I never considered those chemicals as dangerous. They were just part of everyday life. I never considered it until this nightmare happened to me. I now understand that everything is in balance in your body until something knocks that balance starting a chain reaction. Lindane knocked the balance in Jesse's body. I just didn't have a clue. Why didn't I figure it out before it was too late?

Jesse went in for another transplant and he did very

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The above drawing and quote was found in Jesse's dresser drawer just after he had died. His parents reproduced it to share with friends at his funeral.

Continued from previous page.

well. Soon after he went into seizures and they never understood why. He even pulled out of that. He was amazing. On the 4th of July he had trouble breathing and we took him to the hospital. It was the beginning of the end. The chemotherapy has caused his lungs to harden and he had trouble breathing. They gave him oxygen but he wasn't getting better. They did a lung biopsy and found pneumonitis, a hardening of the lung tissue. He ended up on a respirator. When he began moving air in the bottom part of his lungs, they turned down the respirator but his lung tissue was still sore and fragile. As he took his breath his lung tissue tore. Soon after he had a heart attack. His blood pressure dropped. They put in a pacemaker. Finally, his blood pressure was so low that I was told that even if his blood pressure rose, Jesse would never be the same. That was when I knew he was gone. That was when I stopped praying he would live. Jesse died on September 11, 1993.

Jesse was my soul mate. There has never been, and will never be, another person in my life with whom I connected as I did with Jesse. I go through life like a robot now, feeling betrayed and existing only for my other children so they will have a Mom, even if her spirit is broken. I will never be the same. I'll never smile again, not inside anyway.

Today, the Leukemia Society's brochure states the only two known causes of leukemia are radiation and benzene. I have learned that there isn't a system that's out there to protect mothers and children like Jesse and me. People need the facts. If I had done this knowing the facts, that would be a different story. But that isn't the case. I believe the lice sprays, the Lindane and the NIX® contributed to Jesse's illness and death. I feel the same about my husband's leukemia which was diagnosed in 1992. The kind he has takes five-to-ten years to appear, supporting my contentions. He has been given the same prognosis as Jesse. Fearful for where this will all end, I can only hope that my story will help others.

The End

"A Mother's Story" is only one of many tragedies associated with the hazards of treating head lice. Since May 1995, the NPA's National Reporting Registry has received hundreds of adverse reaction reports associated with all of the commercially available lice and scabies pesticidal treatment products.

Each year hundreds of thousands of poorly informed parents apply potentially harmful pesticides to their children's scalp or skin to kill head lice or scabies. Education is vital. There are too many families yet to be reached and too many children unnecessarily put at risk. Help us to reach parents before they treat their families.

Read an update of this article at: <http://www.headlice.org/jesseproject/jesse.htm>

Morgellons Symptoms

- Skin lesions.
- Sensation of crawling, stinging or biting movement on or under the skin.
- Filaments on skin or lesions, black or white granules, comparable to sand grains, on skin and clothing.
- Pain in joints, muscles, tendons and connective tissue. Headaches and backaches are common.
- Fatigue that interferes with daily living.
- Impaired thought processing, short-term memory loss, combined with attention-deficit, bipolar and obsessive-compulsive disorders

Source: Morgellons Research Foundation

Morgellons Disease: The fibers can be seen under a black light. People have found relief using alternating baths containing 1 oz. turpentine (Be careful as turpentine can burn sensitive areas.), bathing for 4 - 8 minutes or as long as you can take it; (make sure to use a brush to help cleanse your skin) or 1 gal. vinegar and 3 oz. sea salt, or 1 c. Safe Solutions Enzyme Cleaner, or scrubbing their bodies with hydrated food-grade DE. (If you burn yourself, sprinkle the burned area with corn starch; the pain should leave in 10 minutes.) Some people have lightly covered their bodies with plain yogurt for instant relief and then allowed the yogurt to dry exposing "lines of eggs" that can then scrubbed away with enzyme cleaner at a rate of 1 oz. per quart water. Make sure to wash your clothes and bed linen using ½ cup enzyme cleaner and 20 Mule Team Borax. After washing your clothes, rinse out your washing machine with bleach in a normal cycle to sanitize it. Rinse your hair with Listerine after shampooing and then rinse with water. Take Not Nice to Toxins and Grass of the Sea per label and artemisia and Russian Immune System per labeled directions. Take infra-red saunas at 110° - 130° F. for 30 - 45 minutes and then cool off with shower. People have found relief using alternating baths with vinegar and salt or borax and various oils and diluted enzyme cleaners.

1/03/06: David Fittlock wrote the Author that he had been searching for an effective treatment for Morgellons disease and that GOD had shown his Wife an example within the nature realm that provided them with the answer. David also noted that in New Zealand they have hedgehogs, small animals with short spines for a coat. The hedgehogs have often been observed chewing tobacco leaf and spitting the juices on their uncleanable spines; the aim being to deter parasites from gaining a foothold. Tobacco has long been used as an insecticide,

so David tried soaking a small quantity of tobacco in water and then spraying the mixture on his own and his Wife's skin and found the results to be nothing short of miraculous. David further noted: "in regards to internal problems associated with this condition, another amazing treatment is the peel of the fruit of the orange. This definitely works on the parasite and also may work on (the) Lyme disease organism which tends to be associated with Morgellons; as yet I have had insufficient time to evaluate the effects on Lyme disease." **Be careful! Tobacco is a very toxic product. The Author does not recommend using tobacco in any way.**

Note: People with Morgellons really want to get well; people who are delusional do not want to get well. Most, if not all, people with Morgellons symptoms test positive for Lyme Disease.

The Morgellons Research Foundation has registered more than 9000 households and many have multiple family members who are affected. There are cases in every state in the USA, but most are located in Florida, Texas and California.

Some people are treating their symptoms with nutritional supplements and homeopathic remedies that include natural aloe vera, coconut milk and vinegar. They eat organic foods and avoid all processed foods. This can help but the overall symptoms still remain. Colloidal silver made with pure water also helps.

A compromised immune system can make a person more susceptible, so detox. Try to find a qualified medical provider who has successfully treated and healed patients with Morgellons Disease. You may wish to visit the following web sites:

<http://www.morgellons.org> (Morgellons Research Foundation)

<http://www.medconsumer.info/topics/morgellons.htm>

<http://transcripts.cnn.com/TRANSCRIPTS/0608/19/hcsg.01.html>

<http://www.healthsciences.okstate.edu/morgellons/index.cfm>

<http://www.mayoclinic.com/health/morgellons-disease/SN00043>

<http://www.mlive.com/search/index.ssf?/base/features-1/1173797198301090.xml?gpress?FEGE&coll=6&thispage=6>

The August 2005 Pest Control Magazine on page 51 noted: A study in Oklahoma City found that 18 out of 20 people (who complained they were being bitten but could never produce a specimen) had early instar *Collembola* (springtails) on or under their skin. The *Collembola* may have been present feeding on fungal mycelia and perhaps the fungi are causing the itching. The Author notes that people have said that taking borax baths with Safe Solutions Enzyme Cleaners and Lice R Gone have helped control this problem and scabies. It has been suggested that springtails are the first insect to attack a dead body.

Bill M. has found that mixing 2/3's honey and 1/3 water and covering areas that itch will stop the itching after "2 coats" which can be easily washed off in the shower. Bill also suggests trying to bathe for an hour with 1/2 cup mineral oil or 1/2 cup olive oil in a hot, soapy bath; keep the water moving and after drying off, lightly apply olive oil to all of the skin. Do this for at least 3 days. You can apply olive oil as needed to any area.

Epsom Salt Baths For Your Health

Many people are deficient in magnesium, and by simply soaking in a relaxing bath with magnesium-rich Epsom salt we can boost our levels of this important element. Magnesium is the second-most abundant element in human cells and the fourth-most important positively charged ion in the body. Magnesium - the key component of Epsom Salt -- performs more functions in more systems of the human body than virtually any other mineral. Magnesium is an electrolyte, helping to ensure proper muscle, nerve and enzyme function. Magnesium is critical to the proper use of calcium in cells and it is an aid in helping to prevent heart disease and strokes by lowering blood pressure, protecting the elasticity of arteries, preventing blood clots and reducing the risk of sudden heart attack deaths. Magnesium also helps the body regulate over 325 enzymes, helps ease stress and improves sleep and concentration, plays an important role in organizing many bodily functions, like muscle control, helps regulate electrical (nerve) impulses, helps prevent artery hardening and blood clots, helps make insulin more effective, reduces inflammation to relieve pain and muscle cramps and helps improve oxygen use, energy production and the elimination of harmful toxins.

According to the National Academy of Sciences, most Americans are magnesium deficient, which the academy says helps to account for high rates of heart disease, stroke, osteoporosis, arthritis and joint pain, digestive maladies, stress-related illnesses, chronic fatigue and a number of other ailments.

Americans' magnesium levels have dropped by half in the last century due to changes in agriculture and diet. Industrial farming has depleted magnesium from soil and the typical American diet contains much less magnesium than that of our forefathers. And in fact, the modern American diet with its fat, sugar, salt and protein actually works to speed up the depletion of magnesium from our bodies.

Interestingly, our focus on getting enough calcium is another factor in decreased magnesium levels. In a delicate dance of balance, calcium depletes magnesium yet calcium functions best when enough magnesium is present. Studies indicate that taking a calcium supplement without enough magnesium can increase the shortage of both nutrients. Researchers have found that many Americans have five times as much calcium as magnesium in their bodies, although the proper ratio for optimum absorption of both minerals is two to one.

With such widespread magnesium deficiency one might think that magnesium supplements would be called upon, but studies show that magnesium is not easily absorbed through the digestive track. The presence of specific foods or drugs, certain medical conditions, and the chemistry of a person's stomach acid can render magnesium supplements ineffective. Try using a magnesium-calcium , e.g., Calm Plus Calcium.

Modern medical applications of sulfur include its use as an anti-microbial and anti-bacterial, as a laxative (magnesium sulfate), as an anti-inflammatory, to prevent convulsions, and in the treatment of dermatitis, scabies, and various skin disorders such as acne. Sulfur dioxide (SO₂) is a common additive in wine and dried fruits because of its anti-bacterial qualities. One common misconception about sulfur is that it has a pungent odor. Sulfur itself is odorless. Hydrogen sulfide (H₂S), one of sulfur's more common compounds, does have a very strong odor (like rotting eggs). Sulfates help our bodies to flush toxins, they improve absorption of nutrients, help form joint proteins, brain tissue and mucin proteins and they also help prevent or ease migraine headaches.

Seeing how sulfates and magnesium are so beneficial; this brings us to Epsom salt. Known scientifically as hydrated magnesium sulfate, Epsom salt is rich in both magnesium and sulfate. While both magnesium and sulfate can be poorly absorbed through the stomach, studies show increased magnesium levels from soaking in a bath enriched with Epsom salt! Magnesium and sulfates are both easily absorbed through the skin. Sulfates play an important role in the formation of brain tissue, joint proteins and the mucin proteins that line the walls of the digestive tract. They stimulate the pancreas to generate digestive enzymes and are thought to help detoxify the body of medicines and environmental contaminants. Studies indicate that sulfates are difficult to absorb from food, but are readily absorbed through the skin.

Epsom Salt is one of only a few water-soluble sulfate minerals. The medicinal qualities of magnesium sulfate were first discovered in the mineral waters at Epsom, England and are where the name Epsom is derived. Magnesium is one of the most important of the essential minerals in the body, and it is commonly deficient in the American diet. It has anti-inflammatory and anti-arthritis properties and can be absorbed through the skin. Magnesium sulfate dilates blood vessels, and this property may help prevent further brain injury in stroke victims. A New England remedy for arthritis is a hot bath of Epsom Salts. The heat of the bath increases circulation and reduces the pain and swelling of arthritis. Soaking in Epsom Salt soothes tired, aching muscles. This mineral is known to be helpful in preventing pre-eclampsia (known as toxemia and pregnancy-induced high blood pressure). It is also used in severe exacerbations of asthma. When given intravenously, it promotes broncho-dilation. When taken as an injection, magnesium sulfate blunts deep tendon reflexes and a scientific study is underway to determine what benefit to recovery magnesium sulfate has when it is administered to stroke victims before they reach the hospital. An infusion of Epsom salt (magnesium sulfate) given just before delivery to pregnant women at high risk for preterm birth cut the rate of cerebral palsy among these newborns in half, U.S. researchers reported.

Researchers and physicians also suggest these health benefits from proper magnesium and sulfate levels, as listed on the web site of the Epsom Salt Industry Council:

- Improved heart and circulatory health, reducing irregular heartbeats, preventing hardening of the arteries, reducing blood clots and lowering blood pressure.
- Improved ability for the body to use insulin, reducing the incidence or severity of diabetes.
- Flushed toxins and heavy metals from the cells, easing muscle pain and helping the body to eliminate harmful substances.
- Improved nerve function by electrolyte regulation. Also, calcium is the main conductor for electrical current in the body, and magnesium is necessary to maintain proper calcium levels in the blood.
- Relieved stress. Excess adrenaline and stress are believed to drain magnesium, a natural stress reliever, from the body. Magnesium is necessary for the body to bind adequate amounts of serotonin, a mood-elevating chemical within the brain that creates a feeling of well being and relaxation.
- Reduced inflammation to relieve pain and muscle cramps.
- Improved oxygen use.
- Improved absorption of nutrients.
- Improved formation of joint proteins, brain tissue and mucin proteins.
- Prevention or easing of migraine headaches.

The Author believes that besides the above benefits - epsom salt baths and sprays will control scabies and other skin problems. They work especially well if you add 3 to 4 ounces of Safe Solutions Enzyme Cleaner to the bath water. Note: If you soak a splinter in an epsom salt solution - it will draw out the splinter. You can also add clove oil, tea tree oil, oregano oil and/or lavender oil to the bath, or you can apply them topically (if you are not pregnant or sensitive). **Always check first using a diluted small amount.**

There are many different brands of Epsom salt, but they are basically all the same chemically, and can be found at most drug stores. Add two cups of Epsom salt (provided you are not allergic to sulfur) and one-half cup olive oil or baby oil and some alfalfa tablets. The oil will help keep your skin moisturized, and it will also help prevent mites from surfacing for air. Chlorophyll may play an important role in detoxing the body of many poisons. Add these three items to your warm bath water and then soak for at least 12 minutes. Do this three times weekly. (Please also read the Human Lice and Scabies Chapter of this book.)

If you are pregnant or have any health concerns, check with your doctor before using Epsom salts.

The Author no longer recommends the use of Epsom Salt (Magnesium Sulfate) Baths - The Author now recommends the use of Magnesium Chloride. See Chapter 41 - Magnesium Chloride Vs Oral Magnesium, Epsom Salts

Additional Notes: A non-GMO, organic diet has been suggested to help in controlling parasites and to heal the immune system. Fresh ground cloves will help destroy the eggs of the parasites.

Amino acids will help remove the ammonias of the parasites. L-arginine in the morning if you do not have a herpes infection, L-ornithine in the night L-tryptophane can be taken anytime.

Food-grade DE kills bugs even microscopic pathogens. You can use food-grade DE to make a salve for skin lesions. You can drink 1/2 teaspoon in water or juice to help cleanse the digestive system. The Chinese have used DE for pest control for over 4000 years. **Lightly** sprinkle on the bed, furniture, carpets, rugs, auto and other suspect area to kill insects and other pathogens. If you see white, it ain't right. DE treatments are significantly enhanced when temperature over 86° F. **Avoid inhaling any/all dusts!**

Ozone Therapy - Ozonate your bath and drinking water.

As always, do not start any medical procedure without first consulting health professional that you trust!

The dramatic threat of ecological breakdown is teaching us the extent to which greed and selfishness...are contrary to the order of Creation. — Pope John Paul II

*Humanity now stands biologically between the alternatives of suicide and worship.
Pierre Teilhard de Chardin—, Catholic Priest and Scientist*



*Safe Solutions products may be purchased online at:

<http://www.safesolutionsinc.com>

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1-888-443-8738.

Remember, Safe Solutions, Inc. does not currently sell any of its enzyme products as pesticides.



So it is said that if you know your enemies and know yourself, you will fight without danger in battles. If you only know yourself, but not your opponent, you may win or may lose. If you know neither yourself or your enemy, you will always endanger yourself. - The Art of War, Sun Tzu

