RESEARCHING SAFETY AND TOXICITY CONCERNS pdf

1: Safety of olmesartan (Benicar) (MPKB)

Key words: Safety and Toxicity, herbal medicines/ drugs, side / hazardous effects, Pharmaceuticals, Botanicals, Allergic, Contamination & adulteration d to be having serious side effects.

Flammable and combustible liquids are one of the most common types of chemicals used at Cornell and are an important component in a number of laboratory processes. When using flammable liquids, keep containers away from open flames; it is best to use heating sources such as steam baths, water baths, oil baths, and heating mantels. Never use a heat gun to heat a flammable liquid. Any areas using flammables should have a fire extinguisher present. If a fire extinguisher is not present, then contact EHS at for more assistance. Always keep flammable liquids stored away from oxidizers and away from heat or ignition sources such as radiators, electric power panels, etc. When pouring flammable liquids, it is possible to generate enough static electricity to cause the flammable liquid to ignite. If possible, make sure both containers are electrically interconnected to each other by bonding the containers, and connecting to a ground. Always clean up any spills of flammable liquids promptly. For those chemicals with vapor densities heavier than air applies to most chemicals , it is possible for the vapors to travel along floors and, if an ignition source is present, result in a flashback fire. Standard refrigerators are not electrically designed to store flammable liquids. Refrigerators and freezers rated for the storage of flammable materials will be clearly identified as such by the manufacturer. As a general rule of thumb, if you have more than 10 gallons of flammable liquids, including materials in use, then you should store the flammable liquids in a properly rated flammable liquid storage cabinet. All flammable liquids not in use should be kept in the flammable liquid storage cabinet. For stand-alone flammable cabinets as opposed to cabinets underneath fume hoods , there are vent holes on each side of the cabinet called bung holes that must have the metal bungs screwed into place for the cabinet to maintain its fire rating. Typically, proper flammable cabinet ventilation requires that air be supplied to the cabinet and the air be taken away via non-combustible pipes. If you are planning on venting your flammable storage cabinet, please contact EHS at for more information. Under the DOT hazard class system, flammable solids are listed as hazard class 4. Flammable solids are further broken down into three subcategories: Flammable Solids â€" Class 4. Always keep flammable solids stored away from oxidizers, and away from heat or ignition sources such as radiators, electric power panels, etc. Two common examples are tert-Butyllithium under Hexanes and White Phosphorus. In addition to the hazard of the spontaneously combustible chemical itself, many of these chemicals are also stored under flammable liquids. In the event of an accident, such as a bottle being knocked off a shelf, the chemical can spontaneously ignite and a fire can occur. Extra care must be taken when handling spontaneously combustible chemicals. When transporting these chemicals, it is best to use a bottle carrier and carts. Please note, attempting to put out a fire involving dangerous when wet materials with water will only make the situation worse. Common examples include sodium metal and potassium metal. It is important to note that any paper toweling, gloves, etc. If you are using dangerous when wet compounds and do not have a Class D fire extinguisher present, then please contact EHS at for more assistance. As a reminder of the fire triangle now referred to as the fire tetrahedron , in order to have a fire, you need: Oxidizers can supply the oxygen needed for the fire, whereas organic peroxides supply both the oxygen and the fuel source. Both oxidizers and organic peroxides may become shock sensitive when they dry out, are stored in sunlight, or due to contamination with other materials, particularly when contaminated with heavy metals. Most organic peroxides are also temperature sensitive. As with any chemicals, but particularly with oxidizers and organic peroxides, quantities stored on hand should be kept to a minimum. Whenever planning an experiment, be sure to read the SDS and other reference documents to understand the hazards and special handling precautions that may be required, including use of a safety shield. Also be aware of the melting and autoignition temperatures for these compounds and ensure any device used to heat oxidizers has an overtemperature safety switch to prevent the compounds from overheating. Laboratory staff should be particularly careful when handling oxidizers especially high surface area oxidizers such as finely divided powders around organic materials. Avoid using metal objects when stirring or removing oxidizers or organic peroxides from chemical containers.

Plastic or ceramic implements should be used instead. Laboratory personnel should avoid friction, grinding, and impact with solid oxidizers and organic peroxides. If you suspect your oxidizer or organic peroxide has been contaminated evident by discoloration of the chemical, or if there is crystalline growth in the container or around the cap , then dispose of the chemical as hazardous waste or contact EHS at Indicate on the hazardous waste tag that the chemical is an oxidizer or organic peroxide and that you suspect contamination. Once peroxides have formed, an explosion can result during routine handling, such as twisting the cap off a bottle â€" if peroxides are formed in the threads of the cap. Explosions are more likely when concentrating, evaporating, or distilling these compounds if they contain peroxides. When these compounds are improperly handled and stored, a serious fire and explosion hazard exists. The following guidelines should be adhered to when using peroxide forming chemicals: Each peroxide forming chemical container MUST be dated when received and opened. A list of common peroxide forming chemicals can be found in the appendix. Those compounds in the appendix listed in Table A should be disposed of within 3 months of opening and those compounds in the appendix listed in Tables B, C, and D should be disposed of within 12 months of opening. Each peroxide forming chemical container must be tested for peroxides when opened and at least every 6 months thereafter. The results of the peroxide test and the test date must be marked on the outside of the container. There are sample peroxide labels on the Signs and Labels webpage. Peroxide test strips can be purchased from the Chemistry Department stockroom or from a variety of safety supply vendors, such as VWR and Laboratory Safety Supply. An alternative to peroxide test strips is the KI potassium iodide test. References such as Prudent Practices in the Laboratory and the American Chemical Society booklet Safety in Academic Chemistry Laboratories outline ways to test for peroxides and ways to remove them if discovered. When using the test strips, if the strip turns blue, then peroxides are present. Light blue test results may be acceptable for use if your procedure does not call for concentrating, evaporating or distilling. Containers with darker blue test results must be deactivated or disposed of. You can test older test strips for efficacy with a dilute solution of hydrogen peroxide. Peroxide forming chemicals should not be refrigerated at or below the temperature at which the peroxide forming compound freezes or precipitates as these forms of peroxides are especially sensitive to shock and heat. Refrigeration does not prevent peroxide formation. As with any hazardous chemical, but particularly with peroxide forming chemicals, the amount of chemical purchased and stored should be kept to an absolute minimum. Only order the amount of chemical needed for the immediate experiment. Ensure containers of peroxide forming chemicals are tightly sealed after each use and consider adding a blanket of an inert gas, such as Nitrogen, to the container to help slow peroxide formation. A number of peroxide forming chemicals can be purchased with inhibitors added. Unless absolutely necessary for the research, labs should never purchase uninhibited peroxide formers. Before distilling any peroxide forming chemicals, always test the chemical first with peroxide test strips to ensure there are no peroxides present. Never distill peroxide forming chemicals to dryness. In both cases, procedures should be followed for removing peroxides or the containers should be disposed of as hazardous waste. If you discover a container that meets this description, DO NOT attempt to open or move the container. Notify other people in the lab about the potential explosion hazard and notify EHS at immediately. However, if laboratory staff follow the guidelines listed above, the chances for requiring special handling for these types of containers or for an explosion to occur is greatly diminished.

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2: Safety/Toxicity Issues in Drug Discovery | GEN - Genetic Engineering and Biotechnology News

1. Introduction 2. Oral route: advantages and disadvantages 3. Different nanoparticulate systems 4. Conclusion 5. Expert opinion Review Safety and toxicity concerns of.

References Safety of olmesartan Benicar Some patients and healthcare providers have expressed concerns about the safety of higher than typical doses of olmesartan Benicar. Ample research supports the fact that olmesartanMedication taken regularly by patients on the Marshall Protocol for its ability to activate the Vitamin D Receptor. Also known by the trade name Benicar. I feel there are simply no adverse reactions or negative side effects that I need to worry about while taking the Marshall ProtocolA curative medical treatment for chronic inflammatory disease. Based on the Marshall Pathogenesis. It is an extremely safe approach. Personally, I believe overtreating this condition is preferable than undertreating as the side effects of both antibiotics and Benicar are so minimal compared to the risk of [disease] recurrence. FDA safety guidelines Although they do so for many other drugs, the U. Food and Drug Administration has set no unsafe upper limit for olmesartan. The FDA has consequently set no unsafe dosage level for Olmesartan. Schwocho, PhD and Harvey N. Masonson, MD 2 Animal studies in mice, with olmesartan doses up to times the human dose of 40 mg per day relative to body weight , showed that olmesartan is not carcinogenic. The label for olmesartan states that the drug is well-tolerated. Adverse events were similar to those experienced by the placebo group â€" a group of patients who were not given the drug at all. Data implying the necessity of higher than typical dosing frequencies Peleg and Nguyen observed that in the absence of an agonist such as 1,D, the VDR suffers from polyubiquitination and proteasome-mediated degradation in relatively short course â€" in the sub-4 hour region, and certainly in the subhour region. Recent published reports on the dynamics of VDR recruitment to promoters of target genes in cultured cells demonstrate that the time course for maximal recruitment of the 1,25D3â€"VDR complex to the promoter of the CYP24 gene in osteoblasts is 3 h, whereas the time course for maximal recruitment of the VDR to the promoter of this gene in IECs is only 30 min [Kim et al. Nguyen 4 Harmless side effects profile In placebo-controlled trials, the only side effect that occurred in more than 1 percent of olmesartan-treated patients vs. The label does state that olmesartan should not be used during pregnancy or breast-feeding, but since pregnant women are not allowed to do the Marshall Protocol, the warning is of little concern for those using the medicine to recover from Th1 diseaseAny of the chronic inflammatory diseases caused by bacterial pathogens. According to the report: In the dose-finding study, patients were randomized to olmesartan 2. Olmesartan, with or without hydrochlorothiazide, was well tolerated over two years of treatment. One of the topics on the agenda was how to put an end to concerns physicians express about the safety of olmesartan. Second, he pointed out that the FDA has set no toxic level for olmesartan, because its safety is not in question, and certainly not at the levels we are using. Trevor Marshall, PhD Additional research of olmesartan safety Additional papers on the general safety of olmesartan state: Frequency of adverse events is not dose related. There are no clinically significant effects on laboratory parameters, and the drug-interaction potential of olmesartan medoxomil is low. One of the ARBs is olmesartan Benicar. Animal studies have shown that olmesartan medoxomil provides a wide range of organ protection. Olmesartan medoxomil ameliorated atherosclerosis in hyperlipidemic animals and ameliorated cardiac remodeling and improved survival in rats with myocardial infarction. Olmesartan medoxomil has renoprotective effects in a remnant kidney model and type 2 diabetes models. Hormonal adjustments The most common reason that patients who begin the Marshall Protocol incorrectly assume that they are suffering from side effects of olmesartan is that they mistakenly attribute the hormonal adjustments that accompany the onset of a olmesartan blockade to side effects of the drug. These hormonal changes occur because in most patients with Th1 disease, the body has become accustomed to a higher than normal level of the hormone 1,DPrimary biologically active vitamin D hormone. Activates the vitamin D nuclear receptor. Produced by hydroxylation of D. Also known as 1,dihydroxycholecalciferol, 1,hydroxyvitamin D and calcitirol. But the olmesartan blockade quickly and dramatically lowers 1,D - by as much as half in just two weeks. This often causes temporary neurological-type symptoms such as but not limited to fatigue, dizziness, headache ,

photosensitivityAbnormal sensitivity to sunlight and bright lights. Also referred to as "sun flare" or "light flare. As the body adjusts to this hormonal shift these symptoms dissipate, usually in a week or two. Immunopathology The ability to accept and tolerate a certain level of immunopathology is a requisite of continuing with the Marshall Protocol and is not always predictable. Usually symptoms wax and wane, but they can also be constant for varying periods of time. It is a protective attempt by the organism to remove the injurious stimuli as well as initiate the healing process for the tissue. Meg Mangin Protective effects of olmesartan Olmesartan has a number of protective effects. Since the anti-inflammatory actions of olmesartan actually protect organs, the medication will reduce damage to the body from immunopathology. Olmesartan is designed to reduce the impact on the tissues of the inflammatory substances released by the immune system as part of the immunopathological reactionA temporary increase in disease symptoms experiences by Marshall Protocol patients that results from the release of cytokines and endotoxins as disease-causing bacteria are killed. Other protective effects include:

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3: Dental amalgam controversy - Wikipedia

Ensuring safety and lack of toxicity during drug development were central themes to Cambridge Healthtech's "Trends in Drug Safety" conference, held in San Francisco, and The Oxford.

Enter your email to reset your password Or sign up using: Common workplace health and safety hazards include: Some may disrupt your continuity more than others, some may pose more serious threats to employee welfare, and still others will result in the most time lost or be the most costly. What all these setbacks have in common is that thorough planning can forestall many of them. The go-to resource for the legal requirements in your particular industry or state is the Occupational Safety and Health Administration OSHA , the arm of the federal government that enforces health and safety laws. This crackdown is partly due to a string of recent, highly-publicized disasters including the West Virginia coal mine explosion, an oil rig south of Louisiana that blew up, and a fire at a Washington State oil refinery. Aside from giving employees more flexible sick leave, small businesses can also prepare for epidemics by testing whether employees have the infrastructure to work remotely if they are ambulatory but contagious. How Business Travelers Can Avoid Swine Flu Be Prepared There are two prominent types of general preparation employers can take against health and safety hazards in the workplace: These approaches share an element of stepping back and examining your procedures and facilities with new eyes unclouded by routine and alert to potential danger. She goes on to explain that job hazard analysis is "when you look at how a job is done and what sorts of equipment people are interacting with. These are not real mysteries, they tend to be things that you can look at very objectively and see where your protection and prevention needs to be. Combining both of these tools can prevent many accidents at work. For example, if you have an area of your facility where liquids might spill, you would want to include handrails to prevent slips and falls if and when that occurs. Often overwork, sleep deprivation, and cell phone usage are behind these deadly accidents. Policies dictating safe cell phone use can also help reduce crashes. Here are three more sources of potentially fatal accidents your employees could get into and how to prevent them. The disgruntled gun-toting recent fire resides more in the newspaper headlines than in the category of statistically significant concerns. Consequently, she advises examining where employees are exchanging or guarding money, interacting with the public, or working alone or in small groups in the late or early hours of the day. You can also make sure the area around your workplace is well-lit, install security cameras, or consider scaling back your business hours if late or early operation comes to necessitate hefty security and insurance costs. Falls -- The falls that result in fatalities tend to be in industries such as construction or landscaping. This is a case where training your employees in safety procedures and periodically evaluating their understanding and execution of those procedures is the most useful course of action. Additionally providing equipment precautions such as guardrails and rope and pulley supports when possible is also a good idea. Toxic Events -- Gas and chemical leaks are the most common problems though asbestos continues to plague businesses moving into older facilities. It is now mandated that natural gas have some sort of odor but preventing ventilation problems and carbon monoxide leaks is the next frontier for OSHA. Getting struck by objects or electrocuted are two other common and preventable ways employees die. The Top Health Companies Non-fatal Injuries When it comes to non-fatal workplace injuries, the clear leaders are incidents of ergonomic problems and overexertion. Furthermore, because these injuries can give rise to chronic conditions, they result in one of the higher rates of lost work time. They can also happen simply from sitting at your desk for too long. Good lifting technique is often ignored when there is insufficient space or time to get a job done properly, but Brown says a good general rule is rather than "lifting, lowering, or carrying, you want to push, pull, or slide. In a manufacturing setting, hearing loss is a common problem that can creep up on you and your employees but that is easily preventable. Simply provide headphones or earplugs that cancel out high decibel levels, depending on what volume of noise the equipment in your office environment produce. But providing the equipment is not enough, you need to enforce the policy and make sure your employees are using all the protective gear. However, whether an injury is fatal or more glancing, one of the biggest mistakes employers make is improper documentation. Laws says, "the most cited OSHA standard seems to be failing to log your

injuries correctly or not logging them at all. New Website Tracks Worker Injuries Employee Education and Awareness A businesses human resources department can do a lot to reduce workplace accidents simply by educating employees. But you need to go beyond informing employees. Laws explains that, "a lot of the standards that are in place do require training of one sort or another or some sort of documentation that the person was trained. OSHA provides lists of the most common workplace health and safety violations by industry. Look your industry up here. Berman also advises that business owners reach out to industry experts or associations in their field, but most of all to their local board of health. He says, "a small- or medium-sized business should actually go to their local board of health or commissioner of health and have these discussions periodically as to what they should be looking for.

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4: Pesticide Exposure, Safety Issues, and Risk Assessment Indicators

Safety and toxicity concerns of. research involving oral nanoparticulate systems, the amount Safety and toxicity concerns of orally delivered nanoparticles as drug carriers.

Estimating Nanomaterial Transport in Soils Quantifying how nanomaterials move from point of release to human or ecological systems is essential for assessing environmental exposures. Studies to quantify transport are time-consuming, labor-intensive, and can only be conducted on a small number of nanomaterials at a time. EPA scientists evaluate the use of using an automated screening technology to help quantify transport. This technique can rapidly screen the mobility of nanomaterials. This methodology is useful to both regulators and the regulated community for the preparation of pre-manufactured notices that EPA requires. Innovative Nanomaterial Characterization Techniques Measuring the concentration and size distribution of nanomaterials is critical for studying their environmental behavior. EPA researchers developed a unique technique to assess nanomaterials. The method combines a size separation technique with an elemental concentration detector to provide better assessments. The technique provides information simultaneously on nanomaterial size, number and metallic composition which was not possible with the older technique. Using this technique, scientists can distinguish natural minerals or metal with natural organic matter from low concentrations of nanomaterials. This is critical for measuring nanomaterials in environmental samples such as drinking water and stream samples. This technique can be used by companies that produce nanomaterials to support premanufacture notice requirements. The analysis suggests that microbial activity can be impacted within hours of AgNPs exposure, although at low AgNPs concentrations activity can be relatively stable. Data from this and other studies show that toxicity might be different when dealing with complex microbial communities. This suggests that data from pure culture studies may be inaccurate in predicting the impact of AgNPs on microbial communities. More research is needed to identify which concentrations of silver nanoparticles begin to have a toxicological effect on waste management systems. Nanoscale Silver in Disinfectant Spray Final Report Nanomaterial Effects on Ecosystems and Wildlife Health Nanomaterials have become widely used in products ranging from clothing which incorporates bacteria-fighting nano Silver to sunscreen. Nanomaterials are very useful, but there is insufficient information about how nanomaterials affect ecosystem health. EPA is in the process of researching how nanomaterials interact with biological processes important to the health of ecosystems and wildlife species that live in these ecosystems. Studying Nanomaterials in Ecosystems and the Environment EPA is in the process of researching how nanomaterials interact with biological processes important to the health of ecosystems and wildlife species that live in these ecosystems. Evaluating the potential toxicity of nanomaterials is difficult because they have unique chemical properties, high reactivity, and do not dissolve in liquid media. Testing for potential impacts on ecological systems is especially challenging because they enter the environment through multiple exposure routes, transform over time, and food-chain transfers occur. Existing test protocols for soluble chemicals may not work to test the safety of nanomaterials. EPA researchers conduct laboratory analyses to evaluate new approaches and procedures for studying the impacts of specific nanomaterials in freshwater, marine and terrestrial ecosystems. The results from the lab studies provide guidance about how to properly evaluate nanomaterials and how to characterize them in key organisms and different ecosystems. Using New Chemical Data to Classify Nanomaterials EPA scientists are using new high-throughput screening and zebrafish assays from the ToxCast chemical prioritization research to determine if they can be used to screen nanomaterials for potential effects to human health and the environment. Researchers used these to test over 50 samples. Metal nanoparticles show strong cellular stress responses across many different cell types. Most other nanomaterials are not significantly cytotoxic. The methods demonstrate the feasibility of using these assays to evaluate a range of nanomaterials, but much refinement is needed before using them to identify any potential adverse health and environmental effects. Green production of nanomaterials to promote sustainable nanotechnologies EPA scientists evaluate the production of sustainable nanomaterials in a medium in which they are to be used. The approach EPA is evaluating can be used to replace hazardous chemicals with naturally occurring antioxidants that reduce the

metal salts and contain the nanomaterials that are formed. Several protocols have been developed to show that the benign antioxidants present in agricultural wastes e. This research could provide safer methods to produce nanoparticles used for the growing nanotechnology industry. The impact of nanomaterials on health and the environment is further minimized by developing sustainable nanomaterials. Nano-encapsulated Membranes Lack of safe drinking water is the primary cause of many diseases in the world today. Every day, tens of thousands of people die from causes directly related to contaminated water. The scarcity and contamination of worldwide drinking water requires the development of highly efficient water purification techniques such as membrane filtration. Membrane assisted water purification is found to be a solution for the water crisis. For instance, membrane purification technologies such as a Reverse Osmosis RO , Membrane Distillation MD and recently Forward Osmosis FO are widely used to produce water from ground water, surface water, waste water, and water extracted from saline sources such as brackish ground water and seawater. Nano composite membranes and materials are the backbone of various modern technologies for a variety of sustainable applications. EPA researchers are developing and evaluating a method to employ bio-renewable materials such as cellulose to develop nano-encapsulated membranes for future water purification purposes. EPA is developing novel methods for preparing cellulosic and nanomaterial incorporated cellulosic membranes for sustainable applications. The nano-encapsulated membranes currently being developed and tested by EPA researchers can be useful for a number of applications in water or solvent purification. Collaborative Research on Nanomaterials.

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5: Rubber Mulch and Crumb Rubber Health and Safety

2. Pesticide Registration and Safety. Pesticide registration is a scientifically-based, legal, and also administrative process, where a wide variety of effects associated with the use of a pesticide product and its potential effect on human health and the environment is assessed [].

In fact, the adverse effects of modern drugs have triggered a search for medicines from natural and safer sources, thus bringing traditional systems of medicine into the limelight. The perception is that medicines derived from plants processed in crude form without the isolation of the active molecules would be safer. The tables have turned against traditional systems of medicine like Ayurveda after being subjected to suspicions of toxicity of its medicines. It is pertinent to point out that Ayurveda is perhaps the earliest system of medicine to have developed the specialized discipline of toxicology. Toxicology or Agada Tantra is one of the eight clinical specialties of Ayurveda since thousands of years. Those trained in this branch are mainly dealing with forensic medicine. Agada Tantra has often been exclusively associated with healing cases of envenomation. With the advent of modern treatments for snake bites and the relative decrease in such incidents, this branch of Ayurvedic treatment is now considered to be obsolete and is being sidelined in the modern institutions of Ayurveda. This is in spite of the fact that there are traditional practitioners in parts of Kerala and other remote areas in the country who still practice many techniques of Agada Tantra even today. Safety of medicines and treatments has always been on high priority in the tradition of Ayurveda. When it comes to medicinal plants, toxicity of poisonous plants, have been well-described. Plants like Plumbago rosea and Acorus calamus which are commonly used in Ayurvedic formulations are to be used only after purification. Ayurvedic texts distinguish poisonous substances to be either toxic or semi-toxic and lethal or nonlethal. Poisons can also be slow acting or fast acting on the body. A physician had to know about such substances and the remedies for them. Ayurvedic texts have listed antidotes for many commonly known poisons from both the animal and plant kingdom. When it comes to the use of minerals and metals, the texts are clear that these are extremely toxic substances that can have a fatal impact on the body. However, elaborate methods of purification and processing have been described to render them nontoxic and safe for human use. The adverse effects of treatments are also very well described in the texts and iatrogenic diseases caused by improper treatment are described very early in the evolutionary history of Ayurveda. There is a need today to reconstruct the Ayurvedic discipline of toxicology to deal with the challenges that Ayurveda faces today with regard to the safety of its medicaments and treatments. Not only is there scope for Ayurveda to find solutions for toxicity issues related to Ayurveda, but there is also great scope for discovering solutions to new challenges in toxicity that have emerged in the modern world. Environmental pollution, use of harmful pesticides that contaminate natural sources of human food and the use of chemical cosmetics have created new health issues for humanity. There is a good chance that Ayurveda can discover solutions for these problems. Another area, where Ayurvedic toxicology can make valuable contributions, seems to be the toxicity of modern drugs. We hear anecdotal accounts of how the toxicity of chemotherapy and radiation therapy could be mitigated by adjuvant Ayurvedic treatment. This area needs to be further explored and developed. To sum up, we can say that Ayurvedic physicians must develop a clear perspective of the safety of Ayurvedic medicines and treatments and find solutions from within. The Ayurvedic toxicologist well trained in Agada Tantra seems to be the answer. An exhaustive listing of all potential hazards associated with Ayurvedic treatments, guidance on how to anticipate them and also manage them would be the first step in this direction. Just as in the case of generating evidence on efficacy of Ayurvedic treatments, a three-pronged strategy is recommended for generating evidence on the safety. The primary evidence will come from the codified texts and the secondary evidence from the living practices. Tertiary evidence from modern scientific research will serve to fill the gaps. Video available on www.

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6: Silicone Tally: How Hazardous Is the New Post-Teflon Rubberized Cookware - Scientific American

Toxicity of Ayurveda medicines and safety concerns: The need to revive the branch of toxicology in Ayurveda P. Ram Manohar Director and Chief Scientific Officer, AVP Research Foundation, Coimbatore, Tamil Nadu, India.

Find articles by Christos A. This article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license http: This article has been cited by other articles in PMC. Abstract Pesticides are widely used in agricultural production to prevent or control pests, diseases, weeds, and other plant pathogens in an effort to reduce or eliminate yield losses and maintain high product quality. Although pesticides are developed through very strict regulation processes to function with reasonable certainty and minimal impact on human health and the environment, serious concerns have been raised about health risks resulting from occupational exposure and from residues in food and drinking water. Occupational exposure to pesticides often occurs in the case of agricultural workers in open fields and greenhouses, workers in the pesticide industry, and exterminators of house pests. Exposure of the general population to pesticides occurs primarily through eating food and drinking water contaminated with pesticide residues, whereas substantial exposure can also occur in or around the home. Regarding the adverse effects on the environment water, soil and air contamination from leaching, runoff, and spray drift, as well as the detrimental effects on wildlife, fish, plants, and other non-target organisms , many of these effects depend on the toxicity of the pesticide, the measures taken during its application, the dosage applied, the adsorption on soil colloids, the weather conditions prevailing after application, and how long the pesticide persists in the environment. Therefore, the risk assessment of the impact of pesticides either on human health or on the environment is not an easy and particularly accurate process because of differences in the periods and levels of exposure, the types of pesticides used regarding toxicity and persistence , and the environmental characteristics of the areas where pesticides are usually applied. Also, the number of the criteria used and the method of their implementation to assess the adverse effects of pesticides on human health could affect risk assessment and would possibly affect the characterization of the already approved pesticides and the approval of the new compounds in the near future. Thus, new tools or techniques with greater reliability than those already existing are needed to predict the potential hazards of pesticides and thus contribute to reduction of the adverse effects on human health and the environment. On the other hand, the implementation of alternative cropping systems that are less dependent on pesticides, the development of new pesticides with novel modes of action and improved safety profiles, and the improvement of the already used pesticide formulations towards safer formulations e. In addition, the use of appropriate and well-maintained spraying equipment along with taking all precautions that are required in all stages of pesticide handling could minimize human exposure to pesticides and their potential adverse effects on the environment. Introduction Pesticides are widely used in most sectors of the agricultural production to prevent or reduce losses by pests and thus can improve yield as well as quality of the produce, even in terms of cosmetic appeal, which is often important to consumers [1 , 2]. Pesticides can also improve the nutritional value of food and sometimes its safety [3 , 4]. There are also many other kinds of benefits that may be attributed to pesticides, but these benefits often go unnoticed by the general public [2 , 5]. Thus, from this point of view, pesticides can be considered as an economic, labor-saving, and efficient tool of pest management with great popularity in most sectors of the agricultural production. Despite their popularity and extensive use, pesticides serious concerns about health risks arising from the exposure of farmers when mixing and applying pesticides or working in treated fields and from residues on food and in drinking water for the general population have been raised [6 â€” 10]. These activities have caused a number of accidental poisonings, and even the routine use of pesticides can pose major health risks to farmers both in the short and the long run and can degrade the environment. In developing countries, farmers face great risks of exposure due to the use of toxic chemicals that are banned or restricted in other countries, incorrect application techniques, poorly maintained or totally inappropriate spraying equipment, inadequate storage practices, and often the reuse of old pesticide containers for food and water storage [11 â€” 13]. Obviously, exposure to pesticides poses a continuous health hazard, especially in the agricultural working environment.

By their very nature most pesticides show a high degree of toxicity because they are designed to kill certain organisms and thus create some risk of harm. Within this context, pesticide use has raised serious concerns not only of potential effects on human health, but also about impacts on wildlife and sensitive ecosystems [14 â€” 16]. Often, pesticide applications prove counterproductive because they kill beneficial species such as natural enemies of pests and increase the chances of development of pest resistance to pesticides. Furthermore, many end users have poor knowledge of the risks associated to the use of pesticides, including the essential role of the correct application and the necessary precautions [17 â€” 20]. Even farmers who are well aware of the harmful effects of pesticides are sometimes unable to translate this awareness into their practices [21 â€” 24]. Although pesticides have been developed to function with reasonable certainty and minimal risk to human health and the environment, the published results are not always in agreement with this fact. Even though the development of toxicity reference levels for pesticides incorporates uncertainty factors that serve to achieve this regulatory standard, in reality, we may never know whether a pesticide is safe under all circumstances, nor can we predict with certainty its performance in hypothetical situations. Scientific investigation is bound by the tools and the techniques that are available and therefore new developments continually redefine our capabilities. Despite many studies on the fate and toxicity of pesticides, there are research gaps causing uncertainty in the predictions of their long-term health and environmental effects. On the basis of these contradictory results of the literature, discussions among scientists and the public focused on the real, predicted, and perceived risks that pesticides pose to human health worker exposure during pesticide use and consumer exposure to pesticide residues found in fresh fruit, vegetables and drinking water and the environment water and air contamination, toxic effects on non-target organisms are fully justified [5 , 8 , 25 , 26]. The purpose of this paper is to present and discuss: It is worth mentioning that this paper does not focus on the fate of pesticides in the environment or their adverse effects on specific non-target organisms. Pesticide Registration and Safety Pesticide registration is a scientifically-based, legal, and also administrative process, where a wide variety of effects associated with the use of a pesticide product and its potential effect on human health and the environment is assessed [27 â€” 29]. The registration is an important step in the management of pesticides as it enables authorities primarily to determine which pesticide products are permitted to be used and for what purposes, and also to exercise control over quality, usage rates, claims, labelling, packaging and advertising of pesticides, thus ensuring that the best interest of end-users as well as the environment are well protected [30]. In addition, the registration process is restricted to the assumption that pesticides are only used for their intended function and envisages proving that such use does not promote unreasonable effects either on human health or on the environment. Therefore, before any pesticide can be used commercially, several tests are conducted that determine whether a pesticide has any potential to cause adverse effects on humans and wildlife, including endangered species and other non-target organisms, or potential to contaminate surface waters and groundwater from leaching, runoff, and spray drift. Effects in any non-target species may translate into ecosystem unbalance and food-web disruption that ultimately may affect human health and edible species. Pesticide registration is a complex process and takes considerable time, resources, and expertise on the part of the registration authority, the pesticide manufacturing industry, and various public interest groups. An expanding series of tests based on improved technology is used to provide precise pesticide residue detections and toxicological assessments in response to public concern. In addition, improved methods for hazard predictions, novel approaches to hazard reduction measures, and incorporation of the broadening scope of relevant scientific knowledge into industry and government policy decisions contribute to changes and improvements in the pesticide registration process. The basic pathway for the registration of a pesticide is: The decisions of the registration authority to register a pesticide hinges on a benefit-to-risk analysis of the required data. Therefore, it is essential that all steps in the registration process are transparent, based on sound and published criteria and guidance documents, with full information shared with the applicant on the outcomes of the various steps in the registration procedure [31]. Also, the registration authority ensures that each registered pesticide continues to meet the highest standards of safety to protect human health and the environment as these standards are becoming stricter over the years with regard to our ability to evaluate the potential effects of pesticides. Within this context, older pesticides are being

reviewed to ensure that they meet current scientific and regulatory standards. This process, called re-registration, considers the human health and ecological effects of pesticides and results in actions to reduce risks that are of concern. Also, EPA in USA has completed several individual pesticide re-registration and tolerance reassessment decisions the results of reviews are summarized in Re-registration Eligibility Decision documents , which improved food safety, human health and environmental protection in the United States [29]. The registration process for a pesticide usually requires the manufacturer registrant to conduct, analyze, and pay for many different scientific tests. These tests define the product chemistry, risks to humans and domestic animals, the environmental fate of the pesticide, and the impact on non-target organisms [30 , 31]. Data required to support an application of a registration should cover all relevant aspects of the product during its full life-cycle. They should include the identity and physical and chemical properties of the active ingredient and formulated product, analytical methods, human and environmental toxicity, proposed label and uses, safety data sheets, efficacy for the intended use as well as residues resulting from the use of the pesticide product, container management, and waste product disposal. Generation of such data for a single compound may take several years and costs a great amount of money. Also, toxicological testing is conducted under stringent guidelines, approved methodologies, and specified reporting requirements. Exacting standards are necessary for consistency in the evaluations of pesticide safety and also for the comparisons among chemicals. Ecological risk assessments to determine what risks are posed by a pesticide and whether changes to the proposed use s of the product are necessary to protect human health, wildlife, and the environment. To evaluate the environmental risks of a pesticide product, scientists of the registration authority look at all the data together. If the risk assessment indicates a high likelihood of hazard to wildlife or any phytotoxicity to non-target plants, the registration authority may require additional testing and extra data or require that the pesticide be applied only by certified individuals i. Alternatively, the registration authority may decide not to allow its use. Human Exposure to Pesticides and Factors Affecting Exposure Human exposure to pesticides may occur through occupational exposure in the case of agricultural workers in open fields and greenhouses, workers in the pesticide industry, and exterminators of house pests [6 â€” 10 , 33 â€” 35]. However, irrespective of whether the occupation involves the use of pesticides, the presence of such chemicals in the working environment constitutes potential occupational exposure. Evidently, workers who mix, load, transport and apply formulated pesticides are normally considered to be the group that will receive the greatest exposure because of the nature of their work and are therefore at highest risk for possible acute intoxications [36]. In some situations, exposure to pesticides can occur from accidental spills of chemicals, leakages, or faulty spraying equipment. The exposure of workers increases in the case of not paying attention to the instructions on how to use the pesticides and particularly when they ignore basic safety guidelines on the use of personal protective equipment and fundamental sanitation practices such as washing hands after pesticide handling or before eating. Several factors can affect exposure during pesticide handling [36]. The form of formulation of pesticide products may affect the extent of exposure. Liquids are prone to splashing and occasionally spillage, resulting in direct skin contact or indirect skin contact through clothing contamination. Solids may generate dust while being loaded into the application equipment, resulting in exposure to the face and the eyes and also respiratory hazards. The type of packaging of pesticide products can also affect potential exposure. For example, the opening of pesticide bags can result in some kind of exposure depending on the type of packaging in combination with the formulation of the active ingredient. Also, the size of cans, bottles, or other liquid containers may affect the potential for spillage and splashing. Moreover, adjuvant chemicals used in pesticide formulations to enhance their efficiency in terms of biological activity e. Weather conditions at the time of application, such as air temperature and humidity, may affect the chemical volatility of the product, the perspiration rate of the human body, and the use of personal protective equipment by the users [36 , 38 â€” 40]. Wind increases considerably spray drift and resultant exposure to the applicator. The amount of pesticide that is lost from the target area and the distance the pesticide moves will increase as wind velocity increases, so greater wind speed generally will cause more drift. In addition, low relative humidity and high temperature will cause more rapid evaporation of spray droplets between the spray nozzle and the target than high relative humidity and low temperature. General hygiene behaviour of workers during pesticide use can also have

substantial impact on exposure. For example, workers who avoid mixing and spraying during windy conditions can reduce the exposure. Proper use and maintenance of protective clothing are considered important behaviours associated with reduced chemical exposures. Furthermore, the frequency and duration of pesticide handling both on a seasonal and lifetime basis affects the exposure. In particular, the exposure of an individual farmer that applies a pesticide once a year is lower than that of a commercial applicator that normally applies a pesticide for many consecutive days or weeks in a season [36]. Exposure of the general population to pesticides occurs mainly through eating food and drinking water contaminated with pesticides, whereas substantial exposure to pesticides can also occur when living close to a workplace that uses pesticides or even when workers bring home contaminated articles [41 , 42]. Non-occupational exposure originating from pesticide residues in food, air and drinking water generally involves low doses and is chronic or semi-chronic. However, clear links between individual pesticides and individual health effects can only be shown in animal studies, but the doses used in these studies are far higher than the enforced legally pesticide limits [43]. Therefore, the risk to human health from these studies appears to be negligible. The actual acute exposure, however, may be higher than that anticipated due to certain food preferences, residue variability between individual food items and the greater than average consumption of a particular food item only at one sitting [44]. As a result of pesticide use in or around the home, individuals can be exposed during the preparation and application of pesticides or even after the applications are completed, whereas delayed exposure can occur through inhalation of residual air concentrations or exposure to residues found on surfaces, clothing, bedding, food, dust, discarded pesticide containers, or application equipment [41]. Also, accidental poisoning with pesticides in the home is a possibility from pesticide use around the house or garden. Exposure is likely to occur from pesticide spills, improper use, or poor storage as a result of use without reading or accounting to the pesticide label. Pesticide mishandling such as transferring the products from their original packages into household containers and also the lack of compliance with instructions of the label can be also sources of exposure [42]. Pesticide and Human Health Risk assessment of pesticide impact on human health is not an easy and particularly accurate process because of differences in the periods and the levels of exposure, type of pesticides regarding toxicity , mixtures or cocktails used in the field, and the geographic and meteorological characteristics of the agricultural areas where pesticides are applied [45 , 46]. Such differences refer mainly to the people who prepare the mixtures in the field, the pesticide sprayers, and also the population that lives near the sprayed areas, pesticide storage facilities, greenhouses, or open fields. Therefore, considering that human health risk is a function of pesticide toxicity and exposure, a greater risk is expected to arise from high exposure to a moderately toxic pesticide than from little exposure to a highly toxic pesticide. However, whether or not dietary exposure of the general population to pesticide residues found on food and drinking water consists of a potential threat to human health, is still the subject of great scientific controversy [47]. Regardless of the difficulties in assessing risks of pesticide use on human health, the authorization for pesticide commercialization in Europe currently requires data of potential negative effects of the active substances on human health. These data are usually obtained from several tests focused on e. The acute toxicity experiments are required for the calculation of the median lethal dose LD50 , which is the pesticide dose that is required to kill half of the tested animals when entering the body by a particular route. For example, if the substance is swallowed the figure is an oral LD50, whereas if absorbed through the skin it is a dermal LD In addition, the acute inhalation lethal concentration LC50 , which is the pesticide concentration required to kill half of the exposed for 4 hours tested animals to a pesticide, is also calculated.

7: Aspartame controversy - Wikipedia

So think before you ink. Consider the risks. Remember, too, that removing a tattoo is a painstaking process, and complete removal without scarring may be impossible.

Dental restoration Dental amalgam has had a long history and global impact. Thus, amalgam an alloy of mercury with another metal or metals, from the French word amalgame was invented. This was further perfected in , when Auguste Taveau of Paris used a silver paste made from mixing French silver-tin coins with mercury, which offered more plasticity and a quicker setting time. Relevant discussion may be found on the talk page. Please do not remove this message until conditions to do so are met. June Learn how and when to remove this template message The Crawcours were a family of five Polish dentists who acquired "superficial knowledge" of dentistry in France before moving to England in the s. The Crawcours set up elegant dental "parlours" in New York City and competed with the ethical dentists and catered to the wealthy and influential residents of the city. With that, the brothers returned to Europe in , leaving "a long trail of victimized patients and exasperated dentists". The so-called "Amalgam War" raged from to , "broke up friendships and, even threatened to disrupt the profession. The committee reported that all filling materials in which mercury was an ingredient were, "hurtful both to the teeth and every part of the mouth, and that there was no tooth in which caries in it could be arrested, and the organ rendered serviceable by being filled, in which gold could not be employed. Brewster of Paris thought that to condemn the use of amalgam in all cases merely because its use was abused by some "unprincipled quacks" was unwise. He felt that, "much good has been and may be done by a judicious use of this composition. Parmly, one of the founding members of the American Society of Dental Surgeons, stated that, "gold is the only substance known that can be permanently relied upon," and Dr. Townsend recommended, "removal of teeth that could not be saved by gold. Allen said had "gold" for its motto. However, this came too late, and the organization folded in Foster Flagg, a professor of dental pathology in Philadelphia, experimented with new mixtures of amalgam. In , he presented his findings to the Pennsylvania Association of Dental Surgeons and, in , he published his book, Plastic and Plastic Fillings Figure 4. Amalgam fillings were often called "plastic fillings" at the time. During the American Civil War, the debate on the merits of amalgam continued. In dental meetings, with now decades of use and dental research came the recognition of the importance of good technique and proper mixture on long-term success. It was argued that, "the fault was not in the material but in the manipulation Another alleged case of " pytalism " causing headache, fever, rapid pulse, metallic taste, loss of appetite, and generalized malaise was reported in in a female patient following the insertion of eight amalgam fillings. Alfred Stock was a German chemist who reported becoming very ill in the s and traced his illness to his amalgam fillings and resulting mercury intoxication. He described his recovery after the fillings were removed and believed that amalgam fillings would come to be seen as a, "sin against humanity. Germany, Austria, and Canada recommended against placing amalgam in certain individuals such as pregnant women, children, those with renal dysfunction, and those with an allergy to metals. Chewing gum, particularly for nicotine, along with more amalgam, seemed to pose the greatest risk of increasing exposure. One gum-chewer had Studies have shown that the amount of mercury released during normal chewing is extremely low. It concluded that there was not enough evidence to support or refute many of the other claims such as increased risk of autoimmune disorders , but stated that the broad and nonspecific illness attributed to dental amalgam is not supported by the data. However, this is not the only time mercury vapors are released. When chewing for extended periods of time more than 30 minutes an increased level of mercury vapor is released. Vapor levels will return to normal approximately 90 minutes following chewing cessation. This contributes to a daily mercury exposure for those with amalgam filling. Neither exposure has any known health effect. Because this test was designed for factories and large enclosures, Consumer Reports has reported that this is not an accurate method of analysis for the mouth. It is less reliable, less consistent, and tends to greatly exaggerate the amount of mercury inhaled. This assumption was reviewed by the U. Department of Health and Human Services and not found to be valid. Their research review found that most of the mercury vapor released from amalgam fillings is mixed with saliva and

swallowed, some part is exhaled, and the remaining fraction is inhaled. The Action Level is defined as an indoor air concentration of mercury that would prompt officials to consider implementing response actions. It is a recommendation and does not necessarily imply toxicity or health risks. Estimates of daily intake from amalgam restorations range from 1 to Health research[edit] As public pressure demands more research on amalgam safety, an increasing number of studies with larger sample sizes are being conducted. Those who are not opposed to amalgam claim that, aside from rare and localized tissue irritation, recent evidence-based research has continued to demonstrate no ill effects from the minute amounts of mercury exposure from amalgam fillings. Although poisoning with heavy metals-such as mercury, lead, or manganese can damage the nervous system and produce symptoms such as tremor and weakness, the damage is inflicted in a different way than occurs in MS and the process is also different. In fact, it is highly unlikely that dental fillings aggravate or cause SLE. It is mentioned that evidence to date fails to account for all confounding variables such as alcohol consumption and recommends more comprehensive and rigorous studies to adequately assess the hazards faced by dental personnel. This led to some dentists who advocate removal of amalgam fillings who may describe themselves as " holistic dentists " to develop special techniques to counter this, such as wearing breathing apparatus, using high-volume aspiration, and performing the procedure as quickly as possible. The impact of such techniques on the dose of mercury received during filling removal is unknown, and the techniques have been criticized as merely advertising gimmicks which enable such dentists to charge far more than a normal dentist would for the same procedure. Sources of mercury from the diet, and the potential harm of the composite resins which mimic female sex hormones [citation needed] to replace the purportedly harmful amalgam fillings, are also ignored by these dentists. Consumer Reports has warned its readers on several occasions that, "if a dentist wants to remove your fillings because they contain mercury, watch your wallet. Teaching of amalgam techniques to dental students is declining in some schools in favor of composite resin, [70] and at least one school, University of Nijmegen in the Netherlands, eliminated dental amalgam from the curriculum entirely in These alternative dental restorative materials are not free of potential health risks, such as allergenicity, inhalation of resin dust, cytotoxicity, and retinal damage from blue curing light. Detoxification may also be advised, including fasting, restricted dieting to avoid mercury containing foods, and quasi- chelation therapies , allegedly to remove accumulated mercury from the body. Given its superior strength, durability, and long life relative to the more expensive composite fillings, it will likely be used for many years to come. Prenatal[edit] There is little evidence to suggest that amalgam fillings have any negative direct effects on pregnancy outcomes or on an infant post-pregnancy. A study, consisting of 72 pregnant women, was conducted to determine the effects of dental amalgam on babies in utero. Results indicated that although the amount of amalgam the mother had was directly related to the amount of mercury in the amniotic fluid, no negative effects on the fetus were found. A larger study, consisting of 5, women who had recently given birth, was used to determine if amalgam restorations during pregnancy had any effects on infant birthweight. Among the study group, 1, women had infants with low birth weights and 4, women had infants with normal birth weights. Approximately five percent of the women had one or more amalgam filling restorations during their pregnancy term. These women had little to no difference in infant birth weight compared to the women whom did not undergo amalgam restoration during pregnancy. This resulted in a nationwide amalgam scare and additional research into mercury release from amalgam. The following month Consumer Reports published an article criticizing the content of the broadcast, stating that it contained a great deal of false information and that the ADA spokesperson on the program was ill-prepared to defend the claims. Also, one physiologist interviewed by Consumer Reports noted that the testimonials are mostly anecdotal, and both the reported symptoms and the rapid recovery time after the fillings are removed are physiologically inconsistent with that of mercury poisoning. Consumer Reports goes on to criticize how 60 Minutes failed to interview the many patients who had fillings or teeth removed only to have the symptoms stay the same or get worse. The vast majority of past studies have concluded that amalgams are safe. However, although the vast majority of patients with amalgam fillings are exposed to levels too low to pose a risk to health, many patients i. The study states, "during follow-up [blood mercury levels were] 1. However, such studies were unable to find any negative neurobehavioral effects. The mercury contaminates the treatment

plant sludge , which is typically disposed of by land application , landfilling or incineration. Most dental offices nationwide are now required to use amalgam separators. With respect to pollution in the United States, a study done in showed that batteries "accounted for 86 percent of discarded mercury and dental amalgam a mere 0. Mercury imposes health risks upon the surrounding population. In economics, this pollution is considered an external cost not factored into the private costs of using mercury-based products. Environmental risks from amalgam can be mitigated by amalgam separators and the ISO has issued standards regarding the proper handling and disposal of amalgam waste. In countries with high cremation rates such as the UK , mercury has become a great concern. Proposals to remedy the situation have ranged from removing amalgam-containing teeth prior to cremation to installing activated carbon adsorption or other post-combustion mercury capture technology in the flue gas stream. According to the United Nations Environment Programme, it is estimated that globally about 3. Organizational statements[edit] American Dental Association ADA [edit] The American Dental Association ADA has asserted that dental amalgam is safe and has held that, "the removal of amalgam restorations from the non-allergic patient for the alleged purpose of removing toxic substances from the body, when such treatment is performed solely at the recommendation or suggestion of the dentist, is improper and unethical". Maths Berlin of The Dental Material Commission published an overview and assessment of the scientific literature published between November â€” for the Swedish Government on amalgam and its possible environmental and health risks. In the final report from , Berlin states that the summary had found that " He reports that researchers have been able to show effects of mercury at lower concentrations than before and states that " The suggested labeling included: There are currently two countries, Norway and Sweden, that have introduced legislation to prohibit or restrict use of amalgam fillings; however, in both cases amalgam is part of a larger program of reducing mercury in the environment and includes the banning of mercury-based batteries, thermometers, light bulbs, sphygmomanometers, consumer electronics, vehicle components, etc. In many countries, unused dental amalgam after a treatment is subject to disposal protocols for environmental reasons. FDI is a federation of approximately national dental associations and dental specialist groups representing over 1. More recently, FDI has published a resolution confirming that their position on the safety and effectiveness of amalgam has not changed despite the phasing-down in some countries [] In the United States, numerous respected professional and non-profit organizations consider amalgam use to be safe and effective and have publicly declared such. On July 28, , the U. Food and Drug Administration FDA recategorized amalgam as a class II medical device, which critics claim indicates a change in their perception of safety. The ADA has indicated that this new regulation actually places encapsulated amalgam in the same class of devices as most other restorative materials, including composite and gold fillings, [13] but the agency now recommends the posting of a warning informing patients of the potential for toxicity if mercury vapors are inhaled. A special controls guidance document was issued as part of the reclassification that enumerates the established risks associated with mercury vapor, including neurotoxicity. This warning also applied to resin fillings for a time, since they contain Bis-phenol A BPA a chemical known to cause reproductive toxicity at high doses. A position statement from the Canadian Dental Association CDA states that "current scientific evidence on the use of dental amalgam supports that amalgam is an effective and safe filling material that provides a long-lasting solution for a broad range of clinical situations. The CDA has established its position based on the current consensus of scientific and clinical experts and on recent extensive reviews of strong evidence by major North American and international organizations, which have satisfactorily countered any safety concerns. In a recent publication, the Canadian Association of Naturopathic Doctors states that " In , the Australian Dental Association published a position paper on the safety of dental amalgam. It has proved to be a durable, safe and effective material which has been the subject of extensive research over this time" and that "amalgam should continue to be available as a dental restorative material".

RESEARCHING SAFETY AND TOXICITY CONCERNS pdf

8: Chemicals and Toxics Topics | Environmental Topics | US EPA

However, some concerns are being raised regarding their safety and potential toxicity, which is not only about the nanoparticles themselves but also their components, when administered to humans Nahar M, Mishra D, Dubey V, et al. Development, characterization, and toxicity evaluation of amphotericin b-loaded gelatin nanoparticles.

Harriet Hall on September 9, Shares Piper methysticum aka kava kava; is it useful? Kava is a plant that grows in the western Pacific. It was traditionally prepared as a drink and used for its psychoactive properties, including sedation, relaxation, and relief of anxiety. It is intoxicating but not addictive. It has become a popular supplement in the US, used to treat anxiety, depression, insomnia, stress, and menopausal symptoms. It has also been suspected of killing quite a few people. But they recommended kava. Not only that, they gave it the highest quality-of-evidence rating: Despite the absence of long-term data on safety and effectiveness, the evidence shows that short-term use i. While the majority of evidence shows it is superior to placebo, there is contradictory evidence showing it is not superior to placebo. And the clinical studies used an extract that was more than twice as concentrated as most commercially available products. The use of kava for as little as one to three months has resulted in the need for liver transplants, and even death. Kava has been banned from the market in Switzerland, Germany, Canada, and several other countries are considering similar action. Some patients may be more at risk than others. Until more is known, tell patients to avoid kava. Recommend routine liver function tests for patients who continue to use kava. It particularly warns against use in pregnancy or lactation. It also gives a long list of side effects, from minor gastrointestinal symptoms to serious reactions and kava dermopathy. It has caused erratic driving resulting in DUI citations. It may cause extrapyramidal side effects involuntary movements. Liver toxicity may occur in kava users after a single occasion of alcohol consumption. It lists numerous drug interactions. Kava significantly inhibits several cytochromes. An Evidence-Based Approach , Edzard Ernst and his co-authors cite serious safety concerns and recommend that if kava is taken it should be short term and under close medical observation. Given the lack of regulation for supplements and the absence of clear indicators of who is at risk for toxic reactions, cautionary statements continue to be justified. Physicians who supervise patients taking kava for the treatment of GAD should take care to avoid the following: Use of WS standardized kava extract is also recommended. If these safety precautions are followed, kava can be appropriate therapy for selected patients diagnosed with GAD Is There a Double Standard? I wonder if all the cases of liver toxicity associated with kava are being reported in the medical literature. I wonder if some patients with liver toxicity neglect to tell their doctors they have used kava. American Family Physician , anxiety , kava , liver transplant , toxicity Posted by Harriet Hall Harriet Hall, MD also known as The SkepDoc, is a retired family physician who writes about pseudoscience and questionable medical practices. During a long career as an Air Force physician, she held various positions from flight surgeon to DBMS Director of Base Medical Services and did everything from delivering babies to taking the controls of a B She retired with the rank of Colonel. In she published her memoirs,.

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9: 9 Avoidable Workplace Health and Safety Hazards | www.enganchecubano.com

The Trouble With Ingredients in Sunscreens. Sunscreen is a unique body care product: consumers are directed to apply a thick coat over large areas of the body and reapply frequently.

Origins[edit] The controversy over aspartame safety originated in perceived irregularities in the aspartame approval process during the s and early s, including allegations of a revolving door relationship between regulators and industry and claims that aspartame producer G. Searle had withheld and falsified safety data. In , the controversy reached a wider audience with a 60 Minutes report [1] that discussed criticisms of the FDA approval process and concerns that aspartame could cause brain tumors in humans. Searle had submitted studies [2]: In December , the FDA placed a stay on the aspartame approval, preventing Searle from marketing aspartame. The panel identified errors underlying the PBOI conclusion that aspartame might cause brain tumors, and presented arguments both for and against approval. Hayes further justified his approval by citing the results of a Japanese brain tumor study, [18] the results of which, the PBOI chairman later said, would have resulted in an "unqualified approval" from the PBOI panel. Metzenbaum requested an investigation by the U. In , the GAO reported that protocol had been followed and provided a time-line of events in the approval process. Senate approved the nomination of Sam Skinner to be Secretary of Transportation , noting that both Sullivan and Senator Metzenbaum had concluded that Skinner had not acted improperly. Walton, a psychiatrist at Northeastern Ohio Universities College of Medicine , stated in a self-published analysis of aspartame research that industry-funded studies found no safety concerns while 84 of 92 independent studies did identify safety concerns. This theory claims that the FDA approval process of aspartame was tainted [12] [26] [27] and cites as its source an email based upon a supposed talk by a "Nancy Markle" thought to be Betty Martini, who first circulated the email [28] at a "World Environmental Conference. Its contents were entirely false, misleading, and defamatory to various popular products and their manufacturers, with no basis whatever in fact. The tutorial implied that the "Markle" letter was not credible and stated that it should not be used as an authoritative source of information. Beware The E-Mail Hoax: The Evils Of Nutrasweet Aspartame A highly inaccurate "chain letter" is being circulated via e-mail warning the reader of the health dangers of aspartame Nutrasweet diet drinks. Be careful, because others know how to manipulate you by this. When you read health information online, be sure to know the source of the information you are reading, okay? In May , EFSA was asked by the European Commission to bring forward the full re-evaluation of the safety of aspartame E , which was previously planned for completion by This includes previously unpublished scientific data, "including the original studies on aspartame which were submitted to support the request for authorisation of aspartame in Europe in the early s. Reported flaws were numerous and included, but were not limited to, the following: These conclusions are also contradicted by other carcinogenicity studies which found no significant danger. This review therefore concluded this research did not constitute credible evidence for the carcinogenicity of aspartame. The EFSA therefore concluded this study did not provide enough evidence to reconsider previous evaluation of aspartame safety.

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