Diamond Blackfan Anemia Registry

For those of you needing to contact or mail medical records to the Diamond Blackfan Anemia Registry (DBAR), please use the following information.

**MAILING ADDRESS:**
Diamond Blackfan Anemia Registry  
c/o Dr. Adrianna Vlachos  
Schneider Children's Hospital  
Division of Pediatric Hematology/Oncology and Stem Cell Transplantation  
269-01 76th Avenue  
New Hyde Park, NY 11040

**TOLL-FREE PHONE NUMBER:**
1-888-884-DBAR

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Dr. Vlachos can also be reached by e-mail at: avlachos@lij.edu.

**WEB ADDRESS:**
http://www.dbar.org
NHLBI Commits Funds for Rare Bone Marrow Failure Research

On September 16, 2003, The National Heart, Lung, and Blood Institute (NHLBI), committed $3,000,000 in fiscal year 2004 to promote research regarding Diamond Blackfan Anemia and other rare bone marrow failure syndromes areas. Project periods can be 5 years in length which means the NHLBI has committed to potentially $15,000,000 over a five year period. This funding is limited to rare bone marrow failure syndromes that have received little attention from the research community in the past. The research must address genetics and basic mechanisms of these rare bone marrow failure systems.

Under this Request for Grant Applications (RFA), the NHLBI intends to fund between seven and nine new grants. These grants can come from any scientist in the world. Funding is not limited to U.S. researchers. The five review criteria are significance, approach, innovation, investigator, and environment. Award decisions will be based upon scientific merit, availability of funds, and programmatic priorities. The size and nature of the awards will vary. All guidelines and review processes may be found at: http://grants2.nih.gov/grants/guide/rfa-files/RFA-HL-04-008.html

Important dates for researchers to know are (1) Letter of Intent Receipt Date: February 17, 2004; (2) Application Receipt Date: March 17, 2004; (3) Peer Review Date: June 2004; (4) Council Review: September, 2004; and (5) Earliest Anticipated Start Date: September 30, 2004.

This RFA is very important for DBA patients worldwide and other patients who suffer from rare bone marrow failure syndromes. It would not have been possible with the efforts of the Daniella Maria Arturi Foundation.

Foundation’s Efforts Result in Large Commitment from NHLBI

For several years, the Daniella Maria Arturi Foundation has worked with lobbyists to secure funding from the NIH for DBA research. In September of this year, the NHLBI committed up to $3,000,000 per year for five years ($15,000,000) for rare bone marrow failure research.

The process began when the Daniella Maria Arturi Foundation contacted and paid a Washington, D.C. lobbying firm to work on the project. Representative Carolyn McCarthy of
The Diamond Blackfan Anemia Foundation, Inc. recently granted fifty-three thousand dollars ($53,000) to Dr. Niklas Dahl of Sweden for the continuation of DBA genetic research. The total needed for one year for this two year project is approximately $152,000. Other organizations contributing to this project include Childrens Cancer Foundation of Sweden ($43,000), the Swedish Research Council ($31,000), and Uppsala University ($25,000). This funding will partially cover personnel expenses, equipment, supplies, consultant fees, and/or antibody product.

Dr. Dahl is working with co-investigators Edward Davey, PhD and Hans Matsson, PhD. Also involved in the project is engineer Birgit Carlson.

Through the study of Rps19 +/- mouse models, these DBA scientists plan to “clarify the pathophysiology and the molecular mechanisms behind DBA as well as to develop an alternative therapeutic strategy (gene-transfer) for the disorder.” Objectives of this research include Rps19 gene transfer using the mouse model, identification of proteins interacting with Rps19, and studying various aspects of erythropoiesis.

It was through Dr. Dahl’s previous research efforts that the mutation of Rps19 was identified in DBA patients. One of many aims of the current research is to attempt to identify another gene locus. As gene therapy develops, the identification of another gene locus would be important and beneficial to DBA patients. The research group also aims at the identification of proteins that interact with RPS19 and in the regulation of erythrocyte production.

Thank you to Drs. Dahl, Davey, and Matsson and Birgit Carlson for their continued DBA research efforts and interests.

Once again, it is the families and friends of DBA patients who have made the funding of this grant possible. Thank you.

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New York was very helpful to the cause and initially introduced the bill that ultimately resulted in the commitment by the NHLBI.

At the request of the Daniella Maria Arturi Foundation, the Diamond Blackfan Anemia Foundation, Inc. contacted DBA families and friends and initiated a letter writing campaign. Many DBA patients, families, and friends sent letters to their congressional leaders requesting their support and ultimately in funding for DBA research.

The Arturi Foundation has held annual Diamond Blackfan Anemia International Consensus Conferences for several years. In the spring of 2002, the NHLBI held a DBA conference in conjunction with the annual conference sponsored by the Arturi Foundation. At that meeting, the NHLBI was brought up to date on current DBA research efforts and was able to meet DBA researchers from around the world.

All the hard work of the foundations, U.S. Congress, lobbyists and letter writers has proven very worthwhile. Thank you to everyone whose efforts made this significant commitment possible.
Foundations Cosponsor The Fourth Annual Diamond Blackfan Anemia International Consensus Conference

On April 6-7, 2003, The Daniella Maria Arturi Foundation and the Diamond Blackfan Anemia Foundation, Inc ("DBAF") cosponsored the Diamond Blackfan Anemia International Consensus Conference. The conference was held in New York City.

The mission of the Diamond Blackfan Anemia International Consensus Conference is to increase the understanding of Diamond Blackfan Anemia by fostering an international collaboration to continue to investigate the pathophysiology and genetics of Diamond Blackfan Anemia (DBA) as well as update current treatment options and review potential new treatment alternatives. This forum is dedicated to establishing a research agenda and fostering international collaborations in DBA. This research will enhance the understanding of DBA with the ultimate goal of providing a cure for DBA patients around the globe.

World renowned scientists from many different countries attended. Scientists and physicians presenting at the conference included Elizabeth Kang, Blanche Alter, Jan Ackowitz, Thierry LeBlanc, Joerg Meerphol, Jeffrey Lipton, Steven Spandorfer, Marcus Hughes, Gilbert Tchernia, Leonard Zon, Jason Fixler, Mohandas Narla, Hanna Gazda, Johan Richter, Han Matsson, Sujit Sheth, Joel Anne Chasis, Steve Arkin, Yasar Celiker, Sarah Ball, Stefan Karlsson, and Pankaj Qasba. Those attending presented updates on their current research. The results presented were very encouraging. Progress is being made.

The following is a summary of some of the topics covered during the conference:

a. Clinical update and new projects – The NIH continues to conduct clinical trials involving the use of ATG and Cyclosporine in combination for the treatment of DBA. To date, 13 patients have been treated and all patients tolerated the treatment well. Two patients became transfusion independent and are currently being tapered off Cyclosporine. The third patient had a complete response while ten patients showed no response. NIH is also investigating gene therapy based treatments and a new stem cell transplant conditioning regiment.

The National Cancer Institute is continuing its study of cancer susceptibility within families affected by inherited bone marrow failure syndromes.

Researchers continue to experiment with the use of Metoclopramide in patients with DBA. A pilot study was completed with 15 transfusion or steroid dependent patients. Three persons discontinued therapy and three were non-compliant. Of the nine patients that completed the trial, three responded. A larger study is now being initiated with DBA patients. In addition, as discussed elsewhere in this newsletter, similar research is also being conducted (and sponsored by the DBAF) in France.

Several presentations were given on stem cell transplants of DBA patients. In Germany for instance, 18 DBA patients received stem cell transplants. Seventeen of the patients are alive with median follow-up of 6.4 years. In the U.S., the Diamond Blackfan Anemia Registry reports 27 DBA transplant patients. The survival rate for HLA matched siblings versus alternative donor transplant was 80% versus 20%; demonstrating that alternative donor transplants must be approached cautiously.

b. Pre-Implantation Genetic Diagnosis (PGD) and its implications – PGD combines the technologies of invitro fertilization, embryo culture and biopsy, and single cell molecular genetics, to provide couples at high genetic risk the opportunity to begin their pregnancy with the knowledge that their fetus will not have the inherited disorder that afflicts their family. Since the genes that may be principle cause for DBA are not yet completely understood, PGD is not recommended for couples who wish to have complete certainty that their child will not have DBA. However, PGD is viable for couples wishing to have a child that will be a matched HLA donor for another sibling with DBA.

c. In Vivo Model Systems for the study of DBA – Zebra fish is a powerful genetic and developmental system for understanding Hematopoiesis in congenital blood disorders. The conference included a discussion of the techniques and studies being done with the use of Zebra fish to better understand DBA. In addition, researchers are experimenting with fruit flies in order to understand the role of RPS 19 in DBA. The conference included a discussion of the fruit fly as a potential model for DBA.

d. Gene Therapy and Gene Discovery – Several presentations were made updating the participants on the various studies

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"Congratulations, you have a healthy baby boy" are the words I expected to hear the day that our son John Paul was born. Instead however, I heard the shuffling of feet of the nurses and doctors as they tried to get him to breathe.

Was that the day that he got diagnosed? No. I was led to believe that he only required 2 blood transfusions. After 12 days in the hospital, he was brought home.

As many of our stories are similar, John Paul was diagnosed 2 months later with Diamond Blackfan Anemia. I still recall the feeling when the doctor gave us the news. It played in my head over and over and I had no clue why, how, this was happening. I am a firm believer of things happening for a reason. Of course, it took a while for me to see why us.

I have gone and will continue to go to the end in helping to raise awareness and find a cure for DBA. Through my endeavors during the past two years, I have managed to have John Paul featured on billboards all over Los Angeles County through the American Red Cross, on newsletters and annual reports for the Red Cross, and on many news segments one of which just featured November 21st. This was a live 2 hour segment on the local news. Now I have been asked by the Red Cross to come out on a commercial they are putting together and a documentary lall of which will talk about Diamond Blackfan Anemia.

Fundraisers? Yes we have had those too. I am fortunate to say that I am BLESSED to have been given John Paul. Yes it is a difficult journey but he has taught us a wonderful lesson.....always stop and smell the roses because you never know when it will be your last.

Marisol Quintero, mother of John Paul, transfusion dependant, 2 1/2 yrs old

Our story started on April 23, 1999. My water broke at 37 weeks. Since it was my 4th pregnancy, the doctors weren’t surprised or alarmed until, with every contraction, the baby’s heart beat dropped dangerously low. Then suddenly, with one very strong contraction, Kylie nearly fell out, and we were all shocked to see a very tiny, blue baby with a cord wrapped around her neck twice and VERY tight. She was 5 pounds and 19 inches. She was rushed off, and I sat alone in the delivery room waiting and waiting. A nurse strolled in and casually commented that there was something wrong with her hands. I was devastated. In hindsight that was the LEAST of her problems. My husband eventually came back heartbroken and proceeded to tell me she had no thumb on her hand, and all I wanted to know was which one. Was it her right hand? Would she be embarrassed when she gets engaged to show off her ring? Or on her wedding day? Would no boy hold her hand because it was funny looking? I am embarrassed now at the pettiness of my thoughts, but that’s what they were. I had NO CLUE that a “different” looking hand would have been a blessing compared to what things eventually turned into. Hours after her birth it was discovered that she had a cleft palate (yes, hours!!). Again I was told it was all fixable, no big deal. Then they insisted I bottle feed her. "It's fine!!" Well, it was NOT fine. She gagged, choked, and turned blue. I rang for the nurse, and she said I was just nervous. She left me alone again, and as I tried to feed her, she stopped breathing. This time I screamed for the nurse, and they all came running. They believed me this time! Within an hour she was being transported to a local trauma hospital with a NICU. Things went from bad to worse. She was found to have an ASD, collapsed lungs, and was in need if a transfusion. We asked why the transfusion. They told us she was using up her blood because she was struggling so hard to breathe. Like a car uses gas. Common for sick babies they insisted. And after three months in the NICU she was only 4lbs, needed a G-tube, had a hernia, severe Apnea, severe reflux and for some reason continued to need transfusions.

With no answers and no changes she came home on oxygen, an Apnea monitor, a pulse oxymeter and a wing and a prayer. Within
a month she was back in the hospital with a Hb of 4 point something, bilateral ear infections, and congestive heart failure. Within minutes of being admitted to the PICU, she stopped breathing again. The doctors tried desperately to intubate her and failed. She had an emergency tracheotomy and was in the hospital for 6 months. There they came up with a tentative diagnosis of Shwachman-Diamond Syndrome since she was not absorbing her nutrients and no matter how many calories went in her tube she continued to loose weight. And it was only by luck that her intensivist’s wife, who was also her GI, did her fellowship in Canada with Dr. Durie who specializes in this rare syndrome. An aspirate was done and that confirmed (we thought) their suspicions. She was on enzymes to help absorb nutrients. Didn’t work. Special formula-Neocate- INSANELY expensive and NOT covered by insurance was tried. No change. She came home looking like a beach ball from the steroids.

She was home a week, and we had a house fire and lost EVERYTHING! The dryer had a fault and ignited and was right next to her O2 tanks. I had to keep running back in the house for her suction machine, her portable O2 tank, her apnea monitor, and her meds. Thankfully her nurse ran next door with the 4 kids and called 911. We lived in a hotel for three months. While there, Kylie was so overloaded on steroids she broke her arm just from trying to roll over, and the ER sent a report in to DYFS. We had a social worker at our hotel room who was so embarrassed at the situation when he realized how desperately ill Kylie was and what a bad judgment was made at the hospital.

By Feb. 1st she was back in the hospital. At the time my husband was a private security guard for Bruce Springsteen. When he heard about Kylie, he had his “people” find the “best of the best” in SDS, no expense spared. That was when we were put in contact with Dr. Lipton, who after receiving Kylie’s records, believed she had DBA not SDS. By Feb. 7th Kylie was transferred to Schneider Children’s Hospital in Long Island, and we here like to refer to it as Kylie’s second “birth”day. That is where she was saved. Dr. Lipton will tell you so himself. Had we not stopped the steroids her hematologist in NJ kept increasing on her, she would have died and very soon. I will never forget Dr. Lipton telling me one day that she will start kindergarten on schedule. I am holding him to it! After a few ups and downs in Schneiders, she was transferred to a rehab facility nearby. She became vent dependent after a terrible post-op wound dehiscence. Because of the steroid overuse, she was unable to heal properly, and after a fundoplication and pyloromyotomy her incision opened up and her insides started to come out. She had to have retaining stitches, and they held her so tight she could not expand her lungs, hence the vent. During her eight month stay there, she had her cleft palate repaired and was finally removed from the vent and was moved closer home to a different facility. In Voorhees she was taught to walk and play, and they tried to get her to eat by mouth (by now she was 2 and had never eaten by mouth). CHOP was the local hospital to Voorhees, and this was where she had open-heart surgery to repair her ASD and where an amazing man by the name of Dr.Chang took Kylie’s index finger on her left hand and turned it into a thumb. In passing you would have NO CLUE that Kylie only has four fingers on her right hand. The thumb works perfectly, and she does anything and everything any one else can do. She has no restrictions. We just keep up with occupational therapy to increase her fine motor skills with that hand. Finally Oct. 2001 Kylie came home permanently and has had a few long hospital admissions since but recovered form them all wonderfully.

She has monthly transfusions, sometimes twice a month. She is on Humatrope to make up for the growth hormone she cannot make on her own. Thanks to the perseverance of her father she now eats whatever you give her although she cannot have simple sugars (her blood sugars drop so low she seizes, once it was 14)! Through this all we continued to have four more children and added to the three before her and her two step brothers; Kylie is now one of ten. Her sister Jordyn is a perfect HLA match but has elevated e-ADA levels. Dr. Lipton is 99.9% sure it’s nothing, but it could mean that Jordyn is a silent carrier of DBA. Kylie has Deferral three nights a week, is on her second port, and is smaller than her two year old sister and weighs less than her one year old sister. Knowing the chances we will be taking, we have decided to go ahead with the transplant, and on Sun., December 14th , Joe and I will take Kylie to Long Island and place her in the care of Dr. Vlachos and Dr. Sadev. There she will receive her chemo, then her sister’s stem cells from her cord blood and hopefully a whole new life. I have left out about 99% of all the details of Kylie’s last 4 1/2 years, but I am sure as parents and patients you all know exactly what I am talking about.

God bless you all and thanks for reading our "story." You can e-mail Kylie at lijsquirt@aol.com during her transplant to check in and say “hi” or send a prayer. She’ll need them.
Successful treatment of beta-thalassemia requires two key elements: blood transfusion and iron chelation. Regular blood transfusions considerably expand the lifespan of patients, however, without the removal of the consequential accumulation of body iron, few patients live beyond their second decade. In 1963, the introduction of desferrioxamine (DFO), a hexadentate chelator, marked a breakthrough in the treatment of beta-thalassemia. DFO significantly reduces body iron burden and iron-related morbidity and mortality. DFO is still the only drug for general use in the treatment of transfusion dependent iron overload. However, its very short plasma half-life and poor oral activity necessitate special modes of application (subcutaneous or intravenous infusion) which are inconvenient, can cause local reactions and are difficult to be accepted by many patients.

Over the past four decades, many different laboratories have invested major efforts in the identification of orally active iron chelators from several hundreds of molecules of synthetic, microbial or plant origin. The discovery of ferrithiocin in 1980, followed by the synthesis of the tridentate chelator desferrithiocin and proof of its oral activity raised a lot of hope. However, the compound proved to be toxic in animals. Over a period of about fifteen years many desferrithiocin derivatives and molecules with broader alterations led to the discovery of numerous new compounds some of which were much better tolerated and were more efficacious than desferrithiocin in animals, however, none was safe enough to proceed to the clinical use. The discovery of a new chemical class of iron chelators: The bis-hydroxyphenyltriazoles re-energized the search for a safe tridentate chelator. The basic structure of this completely new chemical class of iron chelators was discovered by a combination of rational design, intuition and experience. More than forty derivatives of the triazole series were synthesized at Novartis. These compounds were evaluated, together with more than 700 chelators from various chemical classes. Using vigorous selection criteria with a focus on tolerability, the tridentate chelator 4-[(3,5-Bis-(2-hydroxyphenyl)-1,2,4triazol-1-yl]-benzoic acid (ICL670) emerged as an entity which best combined high oral potency and tolerability in animals. ICL670 is presently being evaluated in the clinic.

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taking place to further understand the role of RPS 19 and to search for the other genes that may be involved in DBA. In addition, the various studies underway related to the development of gene therapy (particularly in RPS 19 deficient DBA patients) were discussed.

e. Transfusion and Iron Overload — A principle subject of the discussion regarding iron overload was the use of the SQUID machine as a less invasive way of determining the amount of iron in the body. The safety, ease, rapidity and comfort of the SQUID may eventually make frequent and serial studies technically feasible and practically acceptable to patients.

The amount and quality of the work being done to understand DBA and to develop more effective treatments and ultimately a cure is extremely encouraging. The doctors and scientists at the conference represented a truly global contingent of individuals dedicated to DBA research. Bringing these individuals together to present their findings and discuss their theories is absolutely critical to the advancement of our understanding of DBA.

Thank you to the Daniella Maria Arturi Foundation for the time and effort required to organize this conference. The DBAF appreciates the opportunity to cosponsor this very important event with the Daniella Maria Arturi Foundation.
Diamond Blackfan Anemia Foundation, Inc. Grants $56,000 for Metoclopramide Therapeutical Trial

The Diamond Blackfan Anemia Foundation, Inc., has recently granted approximately $56,000.00 for a therapeutical trial to DBA head investigators Dr. Gil Tchernia and Dr. Thierry Leblanc of France. Other investigators, also from France, include Pr. Philippe Touraine, Madame Kathleen Laborde, Pr. Jean Delaunay, Dr. Lydie Da Costa, Dr. Pierre Demolis, and Dr. Muriel Kunstler, and Mme Isabelle Marie.

The objective of their research is to confirm the metoclopramide efficacy on DBA patients who are registered in France. The current study will include 40 French patients in a therapeutic trial. The study will be double blind, randomized, controlled, and involve multiple medical centers.

Metoclopramide (also known as Reglan) was discovered as a possible treatment for DBA by Dr. Janis Abkowitz of Seattle, Washington. It is believed that some DBA patients respond to metoclopramide as a result of the drug stimulating erythropoiesis by increasing the patient's prolactin levels.

DBAF funding for this research includes, but is not limited to, salaries for a biostatistician and a clinical research assistant, pharmaceutical supplies including metoclopramide and a placebo, carriage expenses for blood samples and medicines, transportation for patients and staff, and biological expenses for endocrinology investigations and drug dosing.

The DBAF thanks these investigators for their research efforts and the families and friends of DBA patients whose generous donations have completely funded this grant.

Diamond Blackfan Anemia / Inherited Bone Marrow Failure Syndromes Research Study
Stem Cell Transplantation for Diamond Blackfan Anemia

If you (or someone you know) is between the ages of 18-65 years and have been diagnosed with Diamond Blackfan anemia, you may be eligible for a stem cell transplantation procedure at the Clinical Center of the National Institutes of Health (NIH). Under evaluation is the use of low-dose radiation and novel methods of transplant preparation and post transplant therapy to reduce the risk of graft-versus-host disease.

You must have an HLA-matched family member to participate. We will do the blood testing free of charge to see if your family member is a match. We pay for all medical costs related to the transplant procedure. You must be available to live near NIH for approximately four months. We also provide a small daily allowance to help with living expenses while you are on the study and living away from home.

For more information please contact our research coordinator at (301) 402-3088, or email us at BloodStudy@nhlbi.nih.gov

Medical Costs of Bone Marrow Transplant Paid by NHLBI for Qualifying Adults

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What Courage Means to Me

by Craig Baumgardner

Webster’s Dictionary defines courage as “the quality or state of mind or spirit enabling one to face danger or hardship with confidence and resolution.” Since the tragic events of September 11, 2001, policemen and firemen have been recognized for their courage. On that day, they put aside their fears and performed their duties as best they could, knowing they could be killed at any time. They were willing to sacrifice their lives so others could be saved. Their professions require them to be courageous everyday.

It is easy to admire these men and women for their obvious courage, but there is also heroic courage and bravery in everyday life. Courage can be seen when someone stands up for what they believe in. Courage is doing the right thing, when it would be easier to do the wrong. Courage is facing hardships you can’t control, dealing with them the best you can and not letting them pull you down. Courage is overcoming an addiction, fear, or a problem.

I have seen children in hospitals dealing with diseases that are life threatening. They know there is no cure, but they live their lives as best they can and do what they are capable of doing. I admire my brother, who suffers from Diamond Blackfan Anemia, a rare incurable disease. Every night he needs to get a needle in his stomach, and every month he has to have a blood transfusion. I respect my brother because of his bravery and how he deals with everything like he’s just a normal kid.

 Courage is not something that is taught, it comes from within the individual in tough or severe situations. Courage can be shown in many different forms and everybody possesses it, even though they may not know it’s there until they need it.

The DBAF requested that the following article, written by Craig Baumgardner, be in the newsletter. Craig prepared this essay for school and won several contests with it. Thank you, Craig, for allowing us to put it in the DBA Newsletter and congratulations on a great essay!

Planning a vacation for next summer? Why not make the location Camp Sunshine at Casco, Maine?

The Diamond Blackfan Anemia Foundation, Inc. announces that DBA families have once again been invited to attend Camp Sunshine for a one week stay during the summer of 2004. It is anticipated that the DBA week will be July 18 – 23, 2004. There’s a slight chance at this time that a change to that date might occur.

You might see some old friends and will definitely make some new friends. There will be many activities including a variety of water activities, archery, a bonfire, a costume party, climbing wall, miniature golf, etc.

The food is good, the counselors are fun, the volunteers are great, and the DBA families are amazing! Look for more specific information in your mailbox within the next couple of months.

You can download an application and/or learn more about Camp Sunshine at www.campsunshine.org. We hope to see everyone there!
What you(ths) should KNOW about Tobacco

Tobacco and Athletic Performance

☆ Don’t get trapped. Nicotine in cigarettes, cigars, and spit tobacco is addictive.

☆ Nicotine narrows your blood vessels and puts added strain on your heart.

☆ Smoking can wreck lungs and reduce oxygen available for muscles used during sports.

☆ Smokers suffer shortness of breath (gasp!) almost 3 times more often than nonsmokers.

☆ Smokers run slower and can’t run as far, affecting overall athletic performance.

☆ Cigars and spit tobacco are NOT safe alternatives.

Tobacco and Personal Appearance

☆ Yuck! Tobacco smoke can make hair and clothes stink.

☆ Tobacco stains teeth and causes bad breath.

☆ Short-term use of spit tobacco can cause cracked lips, white spots, sores, and bleeding in the mouth.

☆ Surgery to remove oral cancers caused by tobacco use can lead to serious changes in the face. Sean Marcee, a high school star athlete who used spit tobacco, died of oral cancer when he was 19 years old.

So...

✓ Know the truth. Despite all the tobacco use on TV and in movies, music videos, billboards and magazines—teens, adults and athletes DON’T use tobacco.

✓ Make friends, develop athletic skills, control weight, be independent, be cool... play sports

✓ Get involved: make your team, school, and home tobacco-free; teach others; join community efforts to prevent tobacco use.

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