



FROM THE SCIENTISTS AT THEBEAUTYBRAINS.COM

Smelly Hair and Scalp: Causes and Cures

18 TESTED
TREATMENTS
REVEALED

13 POSSIBLE
CAUSES
EXPLAINED

BONUS:

10 quick cover up tricks!

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Disclaimer

We are not doctors and we're not attempting to give medical advice related to "Smelly Scalp Syndrome" or any other condition. We're merely summarizing what other people with this condition have told us. By sharing this information with you our intention is to open your eyes to new causes and cures that you might not have been aware of. You should seek medical advice before trying ANY of the suggestions in this book beyond basic shampoos and conditioners. Always use products consistent with their use direction.

Introduction: Why you should read this book

We're cosmetic chemists who answer beauty questions on a blog called The Beauty Brains. Back in 2011 the Huffington Post asked us to write an article on the problem of Smelly Scalp Syndrome. At the time we had no idea how big of an issue this was for people. Since then, over a hundred thousand people have visited our website, many of them to share their own personal experience of how they've been affected by smelly hair and scalp.

Now, for the first time, we've culled through hundreds of stories to find the best information on what causes this condition and more importantly, what you can do about. It seems even dermatologists are stymied when it comes to a solution, and not every treatment works for everybody, but we've tried to capture the best of the best for you.

You can spend many many hours time to search our site and others to find this same information but we've done all that work for you and distilled everything down into these few pages. If you want to save time (and get a scientist's perspective on the ingredients) all we ask is a small contribution to cover our time and expenses.

We know how upsetting it is to have this condition and we wish you the best of luck in your search for a cure. If you have comments about what works or doesn't work for you, please leave a comment on our blog at: <http://thebeautybrains.com/2007/03/12/the-cause-of-smelly-hair-syndrome/>

Sincerely,

Randy Schueller and Perry Romanowski

The Beauty Brains

Part 1: What is smelly hair syndrome?

If you're reading this we probably don't have to tell you what terrible this condition is all about. Sometimes called smelly hair, other times called smelly scalp, we prefer the term Smelly Scalp Syndrome since the cause of the odor is unlikely to come from the hair itself. (We use the abbreviation SSS through out the book.) While everyone who suffers from this condition can be emotionally effected, the exact nature of the symptoms and even the type of odor can vary from person to person. We thought you might find it interesting to read a little bit about how other people describe their condition. Does any of this sound familiar to you?

What does your hair and scalp smell like?

- As soon as the water would hit it, it smelled like garbage...YUCK!
- A musty scalp odor.
- Sweaty and muggy
- Sour milk on pillows (because it is lactic acid)
- Moldy, wet hay
- Like our son has been peeing in the corner of the bathroom by accident when we weren't aware.
- Rank. Musty, moldy, sour at times.
- A pillow case that hasn't been washed in months or a jacket that's never been to the dry cleaner.
- Sour milk.
- My hair smells like I have a perm.
- An oily smell mixed with vomit!
- A cheesy/muggy smell
- When my hair is wet, it smells like potatoes
- Like burnt hair– Just smelled like if you lit your hair on fire and the residual smell of burning.
- Wet down, or wet dog hair, sometimes a little sour.
- My scalp smells like an old shoe and itches like I have fleas
- My daughter says "Mom your hair smell like stinking cheese with poop on the top."

- The best way I can describe the smell..... sorta a cross between Dorito's Bold BBQ chips and cinnamon (and not a sweet smell, actually kinda foul) and maybe a hint of cheese.
- My hair smells as though I've been "digging in the dirt" all day
- Instead of smelling like sewage, it now smells more like a faint fart instead.
- Mine smells perhaps like... if you were to take an old funky piece of wood, char it and then leave it out to get rained on. It's not as acrid as that but has a hint of it, very heavy, musty odor and it feels like it's swarming around your head in a cloud. Maybe even like some smelly, oily mushroom in the woods. Hard to describe but totally disgusting. Imagine what our forefathers smelled like!

Other symptoms

The foul smells described above are the main symptom of SSS but some people have secondary symptoms that include the following:

Skin odor

Some people find that the same odor that emanates from their scalp also comes from other parts of their skin. A 61 year old woman who wrote to us said she has the same odor on her upper arms, neck and chest.

Itching

Itching is a common complaint among SSS sufferers. As one person told us: "I constantly scratch and make my scalp bleed (I know, gross and embarrassing, but how much worse than smelly hair to start with?)"

Oily/greasy coating

Still others find their scalp coated with a "thick oily flour like substance."

Bumps and or Sebum "grains"

And unfortunately it gets worse. Many people have complained of bumps on their scalp that can emit "hardened sebum grains." These bumps can worsen and feel like small painful blisters. These look pink but are not acne because they have no "head."

Hair loss/thinning

Finally, to add insult to injury, hair loss (or at least thinning hair) accompanies many cases of Smelly Scalp Syndrome.

Part 2: The causes of smelly hair

Based on the comments we've received on our blog, many of you have sought advice from your dermatologists to find the cause of this condition.

Unfortunately, we've seen very little consensus in the medical community on what's really causing such intense scalp odor. Here are a few of the causes that our readers have identified on their own or with the help of their doctors. Warning: Some of these are a bit fanciful and to our knowledge, not supported by scientific evidence.

Fungus infestation

"They claim the problem is a fungus that grows on oily scalps. That sounds plausible since the odor you describe as sweaty and muggy could be caused by microbial growth. I know that sometimes the towel I used to dry my hair develops a funky smell kind of like the one you describe. That happens when it doesn't dry out completely, so I assume there's some mildew or similar organism that responsible. If I don't notice it right way, that mildew odor transfers from the towel to my hair."

Lactic acid buildup

"What this smell that everyone is talking about is called lactic acid, yes it is where the body over produces excessive sweat and the medical term for this condition is called (hyperhidrosis). Most dermatologists only deal with this condition in the feet and hands and underarms but not in the scalp.

This condition is more active at night time when one is sleeping, sweat smells like sour milk on pillows because it is lactic acid. Most products do not neutralize the lactic acid which is being produced."

Hormones

"My 13 year old daughter has very oily hair. Poor thing can get out of the shower and her hair already has that yucky smell. I thought it was just hormones but now I'm worried."

"I suddenly started to notice my smelly hair/scalp very soon after a GYN surgery, gone-wrong which resulted in early ovarian failure at age 35. When my hormones went completely out of wack...is when I noticed this stinky hair initially."

"I noticed when I was pregnant (2 kids) the smell went away until my hormones went back to normal."

Weak immune system/immune deficiency/Candida

"It's all to do with weak immune systems. How many of you with oily smelly scalp have been on any antibiotics?"

Diet/Digestive issues

“I had a feeling it might be candida and years ago I tried taking acidophilus, probiotics and still no change. What did help was not eating fried foods but it would only buy me couple more days without smell and then if I perspired, it would smell again.”

“Eating meat, oily foods, including all nuts, seafood and dairy products contribute to smell.”

“My experience shows that smelly hair can be caused by an imbalance in the intestinal tract flora concerning the levels of beneficial bacteria or Probiotics Vs fungus / yeast.”

“A high fiber diet offers more food for good bacteria (probiotics) inside of us. My theory is that your high fiber diet stimulated growth of your existing beneficial bacteria. The fact that when you went on a Candida free diet, the smell went pretty much confirms this to be the case. It is likely you will see benefit from daily probiotic supplements.”

“I’ve noticed that fiber reduces my scalp/body odor. Maybe there’s a correlation between impacted colon and smelly scalp.”

“Have any of you guys tried digestive enzymes to treat scalp/body odor? I read somewhere that people with poor digestive systems have difficulty breaking down the food. As a result, the acids start to seep through your pores when you’re sleeping.”

“I’m actually suspecting that eating bread or meat is somehow causing the bad smell. Could I have developed some kind of intolerance for this kind of food, that my body can’t properly digest/detoxify whatever is in this food, as a result causing a smelly scalp?!”

Demodex mites

“I would check out sites that explain a mite called demodex. I’ve had this for years and it took alot of research to find this info. Hope it helps.”

Yeast infection

“I’m still not 100% sure what it is or what causes it, but after doing some research my best guess is that it’s seborrheic dermatitis, which is mainly caused by a yeast called Malassezia furfur. It also may be caused by a lack of certain nutrients like biotin.”

“I started to suspect it’s due to the hats I’ve worn while experiencing this problem.”

Zinc/minerals

I came across something interesting that might help point out what causes the smell – a hair mineral analysis test. Dr Wilson mentioned that it COULD BE due to low zinc, or perhaps high copper, or maybe toxins coming out of the scalp. So a hair mineral analysis test will be able to reveal that. “

Water problems

“I’ve analysed changes in my life style and just recently have matched up a faulty water softener which has pumped too much salt (sodium) into our system of which i have been drinking. This was realized two days ago and the smell is finally going now I have stopped drinking our softened water.”

“In the 90’s I lived in Delaware and had smelly hair. It went away for years when I moved away. I then began to get it again when I started a new job and drank water from the fancy filtered water system. As soon as I stopped drinking from the filtered water system, the smelly hair stopped.”

Trimethylaminuria/Pyloria.

After doing my daily research, which has consumed most of my life for the past 3 years, I stumbled upon a disorder called “Pyroluria,” which can cause one’s head to emit a musty scalp odor.

Mercury fillings

“I went to my GP and he had me test for mercury poisoning from my dental amalgams and we found elevated levels of both mercury and lead. I believe that the fillings created a bio-accumulative condition that led to parasites and a fungal conditions in my brain and the toxins are escaping through the scalp.”

“It’s amazing that no one has mentioned mercury fillings (aka silver fillings) as a culprit for fungal scalp malodor. I have been struggling with scalp odor and have found my ear wax sometimes has a fungal smell. I believe mercury fillings create a fungal condition on the brain’s surface and it is excreting through the scalp. Removal of mercury fillings, chelation therapy/neural therapy/anti candida diet could be considered to get the odor under control.”

Follicle infection

“Got back from my 2nd appointment at the dermatologist. According to the biopsy my hair follicles are infected and that it’s most likely is the cause of the bad odor.”

Changing hair products/Using the wrong hair products

“I converted to a SLS free shampoo. Smell was gone instantly! The smell was a way my scalp / hair telling me it doesn’t like the chemicals I’m using to clean it. I suggest you try a SLS free shampoo.”

“I realized that my smelly hair started right after I stopped using bergamot formula conditioning hair dress (contains balsam & Vitamin E). Without this my hair became a lot drier and started to smell.”

“My husband often had an odor on his hair and neck and it use to really bother me. However, one day after I ran out of shampoo, I borrowed my husband’s Head and Shoulders. The next day, I noticed the smell, this time on myself. We have tracked the

smell down to his dandruff shampoo. Since then, we've thrown it out. It's been a big relief to finally track it down and I've finally been able to tell my husband he smells knowing it's not him, but the shampoo."

Part 3: Treatment for SSS

Let's be very clear: there is no miracle cure for SSS that we're aware of. But we have had hundreds of people tell us what has worked for them. This section summarizes all the cures that people have told us about. Some of these have no technical rationale for why they should work but since people swear by them, we're including them for your reference.

In cases where they told us about a specific brand name product, we've investigated the active ingredients used in that product and then listed a few other products that use the same chemical. For the most part these are all available for purchase on Amazon.com.

Anti-dandruff actives

People have had mixed results using anti-dandruff products as a solution for their smelly scalp. Perhaps that's because there are so many different types of active ingredients used in these products. Our recommendation is to try all the different actives listed below before giving up on dandruff shampoos. Note: A few of the products listed below use a combination of two actives. You might want to try these to see if they give you better performance. They are indicated by a "***."

Climbazol

What is it?

Climbazole is a topical antifungal agent used to treat skin infections like dandruff and eczema. It's chemically similar to ketoconazole.

Where can you find it?

DS Laboratories Dandrene High Performance Antidandruff Shampoo

Coal tar

What is it?

Coal tar is a thick, brownish black liquid consisting of over 200 compounds (including phenols, polycyclic aromatic hydrocarbons, and heterocyclic compounds). It is formed as a byproduct of coal production and is used in a variety of medicated shampoos, soaps and ointments.

Where can you find it?

Denorex (2.5%)

MG217 Medicated Conditioning Coal Tar Formula Shampoo (3%)

Neutrogena T-Gel Therapeutic Shampoo, extra strength (1%)

Oxipor VHC Coal Tar Solution, Psoriasis Lotion (25%)

Psoriatrix Coal Tar Shampoo (5%)

Walgreens (and other drug store brands use same active, sometimes at higher concentration. Walgreens, for example, has a 4.0% version.)

Ketoconazole

What is it?

Ketoconazole is a synthetic antifungal drug used to prevent and treat fungal skin infections such as dandruff.

Where can you find it?

Ketoconazole Solution Shampoo 2%

Nizoral A-D Shampoo (1% and 2% versions)

Regenepure DR - Hair & Scalp Treatment

Piroctone olamine

What is it?

Piroctone olamine is another antifungal agent. It is also known as Octopirox and piroctone ethanolamine.

Where can you find it?

**HEGOR PIROCTONE OLAMINE PYRITHIONE ZINC SHAMPOO ANTI PERSISTENT DANDRUFF (Combined with ZPT)

Matrix Biolage Scalptherapie Anti-Dandruff Shampoo

**L'Occitane Aroma Anti-Dandruff Shampoo (Combined with Climbazol)

Rolland UNA Dandruff shampoo

Sachajuan Scalp Shampoo

Klorane Soothing Shampoo with Peony

Salicylic acid

What is it

Unlike most of the other actives, salicylic acid is not an antimicrobial or antifungal. It is a beta hydroxy acid also used to treat acne because of its ability to increase skin cell turn over.

Where can you find it?

**Dandruff Relief Shampoo by Jason sulfur too

Dermarest Psoriasis Scalp Treatment Gel (3%)

Home Health Everclean Dandruff Shampoo Unscented (1.8%)

**Sal-3 Salicylic Acid and Sulfur Soap (10% sulfur, 3% sal acid)

SCALPICIN Max Strength Scalp Itch Treatment (3%)

**Sebulex Medicated Dandruff Shampoo (also contains sulfur)

Selenium sulfide (sometimes called selenium disulfide)

What is it?

Selenium sulfide is another antifungal known for its effectiveness in treating Malassezia genus fungi that can cause dandruff and seborrheic dermatitis.

Where can you find it?

Head & Shoulders Clinical Strength Anti Dandruff Shampoo (1%)

Selsun Shampoo Selenium Sulfide (2.5 %)

SELENIUM SHAMPOO

Sulfacetamide

What is it

Sulfacetamide is a prescription drug approved for the treatment of acne and seborrheic dermatitis. The trade name for the drug is Klaron or Ovace.

Where can you find it?

Avar

Carmol shampoo (at one time this was available without a prescription.)

Clenia

Plexion

Prascion

Sulfur shampoos and soaps (colloidal sulfur)

What is it

Colloidal sulfur is a finely ground version of sulfur that has antibacterial properties as well as the ability to help slough off skin cells.

Where can you find it?

**Dandruff Relief Shampoo by Jason (also contain sal acid)

**Sal-3 Salicylic Acid and Sulfur Soap (10% sulfur, 3% sal acid)

**Sebulex Medicated Dandruff Shampoo (also contains sal acid)

Sulfur Ointment (10%)

Triclosan

What is it

Triclosan is antimicrobial commonly used in hand sanitizers. It's easy to find in other products but it's not used in too many shampoos.

Where can you find it?

Sulfur8 Medicated Shampoo (0.2% triclosan, even though the name says sulfur!)

Zinc pyrithione

What is it?

Zinc pyrithione is one of the most commonly used antidandruff actives (Think Head & Shoulders.)

Where can you find it?

Head and Shoulders (regular version)

Zincon Medicated Dandruff Shampoo (1%)

CLEAR MEN SCALP THERAPY AntiDandruff Shampoo 1%

Other medicated products

Our readers have tried a variety of other medicated products in their search for a cure for smelly scalp. You should be warned that you should use these on your hair and scalp ONLY if they're specifically approved for that use. (Read the directions on the back of the package!) That being said, it hasn't stopped many of our readers from trying them anyway.

Lamisil Foot Spray

Lamisil is an athlete's foot product that is based on ketoconazole. (A knock off version is called Terbisil.)

Triclosan antibacterial soap (Dial)

Dial Antibacterial body wash is one of the most popular of ALL the solutions discussed on our website. You may want to experiment with the body wash which contains 0.15% triclosan as well as the bar soap which contains 0.60%. There is also a B&BW soap has with 0.3% and a product called Tersaseptic that contain 0.5% triclosan.

Chlorhexidine gluconate

This chemical antiseptic is effective on both Gram-positive and Gram-negative bacteria but is not well tested on fungi. It can be found in a product called Hibicleanse that many of our readers swear by.

Antiseptic mouthwash

Many people have found relief from scalp odor by rubbing an antiseptic mouthwash, such as Listerine into their scalp.

Mometasone Ointment

A couple of people reported good luck using Elocom Lotion which is based on Mometasone, a topical corticosteroids. It's a prescription medication so OF COURSE you'll check with your doctor before using it. But it can be purchased through various websites without a script if you are so inclined.

From a scientific point of view, we're included to believe that the best treatments are those that use proven active ingredients like the ones discussed above. Still, many people claim that other personal care and household/kitchen products work better for them. So for your enlightenment, we present a list of other products believe have recommended for SSS. Typically these are applied to the scalp to the point of saturation and allowed to sit for a while before rinsing off.

Other products

Coconut oil and jojoba oil

Neem oil or neem leaves

Honey and cinnamon mixture

Vinegar (usually Apple Cider Vinegar)

Lemon juice

Garlic

Baking soda

Cilantro

Lysol

Nutritional supplements

A number of SSS sufferers, particularly those who believe diet is the cause of their condition, recommend dietary supplements to stop the stink.

Chlorophyll

Liquid Candida

Nutri-A-25,

Omega 3s

Vitamin A

Vitamin B3, B5, B6

Vitamin K

Zinc

Change of routine/lifestyle

Some people have had good results by changing elements of their lifestyle that they believe made them more prone to SSS. Here are a few examples.

Clean brushes/combs, brushes, hats pillow cases

“use the Sulfur Bar Soap to wash your brushes / combs. Try not to share combs. Wash / change your pillows and hats. Wearing hats... especially Knit hats seems to exacerbate the problem (I guess, it doesn't allow enough air flow around your scalp). Wash your hats regularly... maybe use antibacterial soap to wash your hats and combs (haven't tried that one but makes sense).”

Cleansing technique

“I've noticed that massaging shampoo on your scalp from certain angles removes the smell more effectively than others (eg for the crown area – look straight and massage from back to front with your fingertips works better). It also helps to massage with shampoo for 5-10 secs non stop on each part of your scalp. remember to use a light hand though otherwise your scalp will hurt after a few days.”

Chlorine/swimming pool

“My daughter has had smelly scalp/hair for about 3 years now. She is 10 years now. The only time it went away was when she stayed with her aunt and swam daily in her pool. I am sure the chlorine was the key. But I don't know how to bottle and use that on anyone safely.”

Change your diet

“When I stopped eating chicken, the unpleasant odor on my scalp went away. Still have a greasy scalp, but no embarrassment any more.”

Electro-therapy

And finally, for those of you at the end of your rope, you may want to consider the salon treatment espoused by one of our readers:

“First I go to this salon that has a sensitive scalp treatment, where they rub a liquid into your hair to treat it, wrap your head in Saran wrap, and steam it. This is followed with something they call “frequency treatment”, it is a glass rod attached to a machine and they deliver like an electrical impulse using a rod.” Have fun with that one!

Part 4: Bonus: Quick coverups

If you're suffering from SSS right NOW and you can't wait to find out if any of the treatments we just discussed are right for you, here are a few quick coverup tricks that our readers have told us about. You might find that some of these lessen the hair and scalp odor until you find a longer lasting solution.

1. Try using a product like the Stila hair refresher.
2. Hand sanitize your hair.
3. Use hair wipes like Ted Gibson's.
4. Use a hair fragrance likes the one from Cleanperfume.com.
5. Spritz your hair with your own regular perfume
6. Use a powder shampoo. Pssst anyone? Or maybe Batiste? Just spray 'em in and brush 'em out.
7. Use a leave-in conditioner or combing cream. A touch of conditioner can mask icky odors.
8. Do a speedy, secret sink wash. Wet your hands, take a TINY dab of liquid soap, and run your fingers through your hair. Caution: this doesn't work on all hairstyles.
9. Wipe your hair with a dryer sheet It's better than smelling like smoke AND you'll get rid of embarrassing static cling.
10. Try a little Febreze on your brush. At least we THINK this might work. Better check with the manufacturer before you try this one at home!