The ideal hair care during and after strenuous physical activity, based on the presence or absence of certain common scalp and hair-related complaints, Dermatologists can particularly play a role in providing suggestions for treatments after exercise.

**Figure. Ideal Hair Care During Strenuous Physical Activity Based on Hair and Scalp Symptoms**

- **Styling during exercise**
  - **Stones to consider:** Natural, relaxed, ponytail, bun
  - **Stones to avoid:** Braids, wig, weave, hair wrap, scarf, hat
  - **Treatments to consider:** Moisturizing shampoo, dry shampoo, moisturizing antidandruff shampoo (to the scalp only), topical corticosteroids (oil, solution, ointment), moisturizing conditioners, and oils
  - Can increase scalp sweat and exacerbate symptoms

- **Treatment after exercise**
  - **Stones to consider:** Natural, ponytail, bun, hair wrap, scarf, hat, wig
  - **Stones to avoid:** Relaxed, braids, (tight) ponytail or bun
  - **Treatments to consider:** Moisturizing shampoo, dry shampoo, moisturizing conditioners, and oils
  - Can increase hair shaft fragility and breakage

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**OBSERVATION**

**Cutaneous Presentation of Methicillin-Resistant Staphylococcus aureus Sepsis in a Healthy Child**

Septic vasculopathy is a life-threatening condition that can present with cutaneous findings. We present a case of community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA) sepsis presenting as 2 retiform purpuric patches and diffuse erythematous to violaceous papules.

**Report of a Case** A healthy male toddler presented to the emergency department with abdominal pain and distention,
fever, and vomiting of 1 day’s duration. He was found to have “bruises” on both flanks (Figure 1A). Workup for child abuse was initiated, and he was treated with enemas for constipation and intramuscular penicillin after positive streptococcal findings. Over the next 2 days, he developed diffuse papules on the trunk and extremities; his condition rapidly deteriorated requiring intubation, vasopressors, and empirical broad-spectrum antibiotics. A dermatology consult was obtained to evaluate his skin eruption.

At the time of consult, he was hyponatremic and neutropenic, and the following laboratory values were recorded: aspartate aminotransferase (AST), 45 U/L; alanine aminotransferase (ALT), 142 U/L; C-reactive protein (CRP), greater than 270 mg/L; erythrocyte sedimentation rate, 43 mm/h; and ferritin, 603 ng/mL. (To convert AST and ALT to microkatals per liter, multiply by 0.0167; CRP to nanomoles per liter, 9.524; and ferritin to picomoles per liter, 2.247.) Urinalysis showed proteinuria and hematuria. Computed tomography of the chest and abdomen demonstrated cavitory lesions in his lungs representing necrotizing pneumonia. Areas of nonenhancement within both kidneys were suspected to represent renal abscesses. On physical examination, purpuric retiform patches were found on each flank (1 of them studded with 2 pustules) with erythematous to violaceous papules diffusely scattered on the extremities and trunk (Figure 1B).

Punch biopsy specimens were taken from an area of purpura for analysis by frozen section, from a pustule for

Figure 1. Skin Lesions Due to Septic Vasculopathy

A, Purpuric flank lesion

B, Erythematous leg papules

A, Purpuric patch on the flank noted at admission, prompting workup for child abuse. B, Erythematous to violaceous papules diffusely scattered on the extremities and trunk.

Figure 2. Histopathologic Findings

A, Hematoxylin-eosin—stained papule specimen

B, Gram-stained papule specimen

A, In this specimen from a papule, a large neutrophilic pustule with inflammation is seen extending throughout the dermis, and prominent necrosis with basophilic structures fills necrotic vascular spaces (original magnification ×40). B, Tissue Gram staining of a papule specimen confirms presence of gram-positive cocci in the vessels (original magnification ×200).
tissue culture, and from a papule for hematoxylin-eosin staining. Within an hour of obtaining the specimens, the pathologist reported frozen section findings of small organisms within the vasculature suggestive of either fungal spores, likely histoplasmosis, or staphylococcal bacteria. Permanent sections revealed a large neutrophilic pustule with inflammation extending throughout the dermis and prominent necrosis with basophilic structures filling necrotic vascular spaces (Figure 2A). Tissue Gram staining confirmed gram-positive cocci in the vessels (Figure 2B). Tissue culture, blood culture, bronchial washings, and fluid from bilateral empyemas all grew CA-MRSA.

Results from transthoracic echocardiogram and bone scans were negative. Magnetic resonance images of the brain showed multifocal lesions, likely septic emboli. Findings from workup for possible immunodeficiency were negative. The patient was sent to a rehabilitation facility to complete a 6-week course of intravenous vancomycin.

Discussion | The original classifications of CA-MRSA and hospital-acquired MRSA are no longer distinct: CA-MRSA now causes infections in health care settings, and hospital-acquired MRSA spreads in the community. In a study on disseminated *Staphylococcus* in children, MRSA was the causative agent in all cases. Children aged 5 to 12 years were most vulnerable, and trauma was found to be a common precipitating factor.

Septic vasculitis caused by septicemia from *Staphylococcus* is an immune-complex negative, small-vessel neutrophilic vasculitis. Clinical lesions of septic vasculitis are characterized by retiform purpura, petechiae and ecchymoses, vesiculopustules, hemorrhagic bullae, and ulceration. In cases of septic emboli without evidence of vasculitis, some prefer the term septic vasculopathy. One study compared 32 patients with bacterial sepsis, cutaneous lesions, and biopsy-proven septic vasculopathy. Cutaneous lesions were an early finding of sepsis in most patients (91%); n = 29. Most cases (n = 18) involved the development of lesions simultaneously or within the first 24 hours of sepsis that were disseminated rather than localized. Most lesions presented as purpuric papules and plaques, followed by petechiae, vesicles and bullae, pustules, distal ischemia, and nodules. Septic vasculopathy had a mortality rate of 20% in this study, making early recognition and treatment essential.

In addition to cutaneous findings, staphylococcal sepsis can involve the lung, heart, kidneys, brain, bone, and joints, and it is important to evaluate for these potential sites of involvement. As this case report highlights, consulting dermatologists can play a role in identifying disseminated infections by recognizing the diverse skin manifestations and performing appropriate biopsies for analysis by frozen section, permanent section, and tissue culture.

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Safe Use of Therapeutic-Dose Oral Isotretinoin in Patients With a History of Pseudotumor Cerebri

Drugs common in the treatment of acne vulgaris, such as minocycline and isotretinoin, have been reported in association with pseudotumor cerebri (PTC), which can lead to severe, irreversible symptoms, including vision loss. There is a paucity of data on isotretinoin use in patients with prior PTC.

Report of Cases | Case 1. A female patient in her teens presented with a 2-year history of severe, nodular, cystic acne of her face (Figure 1A), chest, and back with significant scarring. Her hormonal workup was unrevealing. Two years earlier, she had received minocycline for acne and had developed an unusually severe headache; lumbar puncture confirmed PTC. Prompt discontinuation of minocycline treatment led to long-term PTC symptom resolution. However, her acne was recalcitrant to treatment for several months with oral contraceptives, spironolactone (200 mg/d), topical antibiotics, and topical retinoids; she also required frequent intraleisional triamcinolone for persistent painful cysts.

Isotretinoin therapy was initiated at 10 mg/d for 7 days, and the dose was increased slowly over 4 months to 40 mg/d; the patient noted skin dryness and facial erythema but developed no signs or symptoms concerning for PTC. After 9 months of isotretinoin therapy (cumulative dose, 120 mg/kg), her acne had markedly improved (Figure 1B).

Case 2. A woman in her late 20s presented with polycystic ovarian syndrome, severe inflammatory nodular acne with scarring (Figure 2A), and a history of minocycline-associated PTC (diagnosed at age 16 years via lumbar puncture). Her acne had not responded adequately to several topical retinoids at maximum concentrations, concomitant benzoyl peroxide, topical and oral antibiotics, spironolactone, and oral contraceptives. Multiple clinicians had avoided isotretinoin use given her history of PTC.