

Tolio Revisited

Thanks to all who returned surveys, sent photos, and talked to us; we have some answers and advice on the "Tolio" problem. Obviously, there are many factors that contribute to the condition, so we expect to learn more with time.

Biopsies have shown the skin lesions to be typical of chilblains, also termed pernio or immersion foot. Cold and wetness cause this. It is not a primary bacterial, fungal, or viral disease, although there can be secondary bacterial infections. The condition is not contagious person to person. The textbooks describe chilblains as itchy, burning, painful blisters of violaceous color taking up to three weeks to clear. Some people are obviously more susceptible than others and repeat cases were common. We feel that the cold water temperatures and relatively long time frame of Grand Canyon river trips make the condition more common than on other rivers. The roles that sun, sand, minor dings, prolonged sitting and water quality factors play are certainly of interest.

What can one do to avoid or minimize this problem? First and foremost, take good care of your feet! Try to avoid sunburn especially on the first trip each season. Use a potent waterproof sunscreen frequently before getting red or sore. One could wear kayak boots or river socks or the like. Wiggle your toes and move your feet a lot so they are not just stationary in the water on the floor of your boat. Keep your feet clean and the skin well hydrated by using Super Salve, Bag Balm, Lubriderm, Vaseline Intensive Care Lotion or some similar goop in camp daily. Do not soak your feet in the river. It may numb the pain, but it makes the condition worse. Anti-inflammatory agents may help the pain. Steroids may help the symptoms, but of course, have numerous problem side effects when taken orally. Antibiotics help only if there's a secondary bacterial infection. We received 44 completed questionnaires and these were very informative. We particularly want to thank the folks who had biopsies. Big thank you's go to Dr.s Carl Bigler and Brad Baack of Northern Arizona Dermatology who looked at photos and a biopsy and spent time helping us understand the condition better. Marlene Gaither of the Coconino County Health Department was also helpful, as was Dr. Dennis Nousaine of Jackson, California. Obviously, there are still unanswered questions about the relative roles of cold, wetness, sunburn, irritants, age, past history of cold injuries, medication use, etc. pertaining to this condition. We hope to gather more data this coming year.

Please continue to report cases on the new form shown and, if possible, send photos and reports from doctors. We hope to write or call reported cases to ask more detailed questions about possible predisposing factors. Any of you who've had the problem repeatedly are encouraged to contact one of us before your first trip this season as we'd like to get your cooperation with some experiments involving different footwear, skin protections and medications. Thanks in advance for your cooperation.

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“River Foot” (Tolio”) Questionnaire 2000

Please Continue to report all cases. Send a form on each case to:

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Photos are especially welcome. We will receive the data and contact cases to get more detailed background information to try to better pin down why some people are affected and not others.

1. What day of the trip did it appear?
2. Where on the river?
3. What month?
4. Appearance of the water?
5. What type of footgear were you wearing?
6. What sunscreen or other protection was used?
7. What type of craft? Circle one: Raft with regular floor Self-bailing Raft Dory Motor Rig Kayak Cataraft
8. Have you had this before? How many times?
9. How many Colorado River trips this year for you?
10. Have you had it on any other rivers?
11. Do you have any pre-existing skin disease?
12. Do you have any significant circulatory or blood disease?
13. Are you on any regular medications?
14. Did others on your trip get it?
Others on your boat?
15. What symptoms did you have? Itching, pain, redness, blisters, other?
16. How long did it last?
17. How did you treat it? On the river and afterwards?
18. Did you see a doctor and what was the diagnosis and treatment? Was any culture or biopsy done?
19. Your age Gender: Female Male
20. Name
Address
Phone Fax
email

Thanks!