

## Topic: Below-Knee Amputation

*January 2007*

This monthly publication is designed to inform you of resources the NLLIC has to offer on a chosen topic. Please feel free to distribute to those who may find this useful. We also welcome your comments and topic suggestions! Contact us via e-mail at [library@amputee-coalition.org](mailto:library@amputee-coalition.org).

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### Library OPAC

Find other related resources by searching the NLLIC OPAC. Note that this is just a sampling of items found in the OPAC.



### Books

**Atlas of Amputations and Limb Deficiencies: Surgical, Prosthetic, and Rehabilitation Principles** / American Academy of Orthopaedic Surgeons; edited by Douglas G. Smith, John W. Michael, and John H. Bowker. 3rd edition. Rosemont, IL: American Academy of Orthopaedic Surgeons, 2004. ISBN 0-89203-313-4. This atlas is a comprehensive reference on the surgical, prosthetic and rehabilitative management of adults and children who have lost a limb or who have congenital limb loss. This source contains many images and illustrations.

**It's Just a Matter of Balance** / Kevin S. Garrison. South Euclid, OH: Print Vantage, 2005. ISBN 0-9773261-0-1. Prosthetist Kevin Garrison tells his story about how he became a below-knee amputee after being diagnosed with cancer as a teenager. He offers hope and inspiration to all amputees young and old.

**Living With a Below-Knee Amputation: A Unique Insight From a Prosthetist/**

**Amputee** / Richard Lee Riley. Thorofare, NJ: SLACK Incorporated, 2006. ISBN 1-55642-6925. Authored by an amputee and prosthetist, this book covers a spectrum of information on being a below-knee amputee.

**Lower-Limb Amputation: A Guide to Living a Quality Life** / Adrian Cristian. New York: Demos Medical Pub., c2006. ISBN 1-932603-24-7. This book includes information on the causes of lower-limb amputation, surgery, prevention, rehabilitation, prosthetic components, coping with limb loss, children with limb loss, and much more.

**Out on a Limb** / Heather Mills with Pamela Cockerill. London: Warner, 1996. ISBN 0-7515-1601-5. Heather Mills received national publicity in 1993 when her left leg had to be amputated just below the knee after she was involved in a motorcycle accident. Tragic in any circumstances, this was a doubly cruel disaster for a professional model who depended on her looks. But Heather Mills had come too far, and worked too hard, to let this stand in her way. Years of setbacks and trauma had given her the drive and determination needed to rebuild her life.

**Prosthetics and Orthotics: Lower Limb and Spinal** / Ron Seymour. Philadelphia: Lippincott Williams & Wilkins, c2002. ISBN 0-7817-2854-1. Contents include an introduction to prosthetics and orthotics, the team approach, financial issues, psychosocial issues of patients with prostheses, developing an exercise/functional program, and information on transtibial components and clinical decision making.

**Up and Running: The Jami Goldman Story** / by Jami Goldman and Andrea Cagan. New York: Pocket Books, c2001. ISBN 0-7434-2420-4. When Jami Goldman was forced to have her frostbitten legs amputated below the knee, it seemed like a tragedy. But when she became a world-class runner, Adidas spokesperson, and motivational speaker, her fierce determination and extraordinary spirit prevailed over misfortune. This is her inspirational story.

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## **ACA Articles: Including *inMotion*, *First Step* and *Military in-Step* Articles**

**Amputee Firefighter Returns to Duty** / Brandie Erisman. Knoxville, TN: Amputee Coalition of America, 2001. Article from *inMotion*, November / December 2001. Just 15 months after losing his left leg below the knee, Florida firefighter Bill Henry is back on the job. A firefighter for six years before his amputation, Henry is not riding a desk but is back riding a fire truck and hauling hose.

[http://www.amputee-coalition.org/inmotion/nov\\_dec\\_01/fireman.html](http://www.amputee-coalition.org/inmotion/nov_dec_01/fireman.html)

[http://www.amputee-coalition.org/inmotion/nov\\_dec\\_01/fireman.pdf](http://www.amputee-coalition.org/inmotion/nov_dec_01/fireman.pdf)

**Exercise: Ten Exercises to Improve the Performance of Your Prosthetic Feet** / Robert S. Gailey. Knoxville, TN: Amputee Coalition of America, 2001. Article from *inMotion*, May / June 2001. Unfortunately, people with first-rate prosthetic components often don't take full advantage of the functional capabilities their prosthesis has to offer. This article discusses various ways to enhance prosthetic performance to maximize functional ability.

[http://www.amputee-coalition.org/inmotion/may\\_jun\\_01/exercise.html](http://www.amputee-coalition.org/inmotion/may_jun_01/exercise.html)

[http://www.amputee-coalition.org/inmotion/may\\_jun\\_01/exercise.pdf](http://www.amputee-coalition.org/inmotion/may_jun_01/exercise.pdf)

**How to Ride a Motorcycle With Parts Missing (On You, Not the Bike): Adaptive Modifications for Amputee Motorcycling** / Jeffrey J. Cain, MD. Knoxville, TN: Amputee Coalition of America (ACA), 2006. Article from *inMotion*, May / June 2006. Amputees don't have to give up their passion for motorcycling. This article discusses adaptive motorcycle modifications for both lower- and upper-limb amputees, to get bike enthusiasts back on the road.

[http://www.amputee-coalition.org/inmotion/may\\_jun\\_06/motorcycle.html](http://www.amputee-coalition.org/inmotion/may_jun_06/motorcycle.html)

[http://www.amputee-coalition.org/inmotion/may\\_jun\\_06/motorcycle.pdf](http://www.amputee-coalition.org/inmotion/may_jun_06/motorcycle.pdf)

**Notes From the Medical Director: Transtibial Amputations: Successes and Challenges** / Douglas G. Smith. Knoxville, TN: Amputee Coalition of America, 2003. Article from *inMotion*, July / August 2003. Dr. Doug Smith talks about the importance of the knee joint and highlights some major issues involved in transtibial amputations.

[http://www.amputee-coalition.org/inmotion/jul\\_aug\\_03/meddir.html](http://www.amputee-coalition.org/inmotion/jul_aug_03/meddir.html)

[http://www.amputee-coalition.org/inmotion/jul\\_aug\\_03/meddir.pdf](http://www.amputee-coalition.org/inmotion/jul_aug_03/meddir.pdf)

**Parenting: Family Ties** / Zahra Meghani. Knoxville, TN: Amputee Coalition of America, 2000. Article from *inMotion*, September / October 2000. This article looks at Barbara Wilkinson, a single parent and below-knee amputee. She talks about parenting, her amputation, and her efforts to find peer support after the amputation.

[http://www.amputee-coalition.org/inmotion/sep\\_oct\\_00/parent.html](http://www.amputee-coalition.org/inmotion/sep_oct_00/parent.html)

**Prosthetic Feet** / Amputee Coalition of America. Knoxville, TN: Amputee Coalition of America, 2005. Article from *Military in-Step*, 2005. This article gives a recent overview of prosthetic feet.

<http://www.amputee-coalition.org/military-instep/feet.html>

**Prosthetic Primer: Below-Knee Prosthetics: Is It Time for an Upgrade?** / Kevin Carroll and Scott Sabolich. Knoxville, TN: Amputee Coalition of America, 1999. Article from *inMotion*, July / August 1999. This article discusses points to consider, including individual components, when deciding if it is time for a below-knee prosthesis upgrade.

[http://www.amputee-coalition.org/inmotion/jul\\_aug\\_99/prosth.html](http://www.amputee-coalition.org/inmotion/jul_aug_99/prosth.html)

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## ACA Publications

***First Step: A Guide for Adapting to Limb Loss.*** A publication of the National Limb Loss Information Center. Knoxville, TN: Amputee Coalition of America, 2005. This is the essential guide for all people who are coping with the challenges of limb loss. First Step offers readers reliable information on consumer issues that have been raised time and time again by amputees attempting to make educated choices, get better services or decide on available options. Also available in Spanish.

<http://www.amputee-coalition.org>

***inMotion.*** A publication of the Amputee Coalition of America. Knoxville, TN: Amputee Coalition of America. inMotion is published bimonthly for amputees, caregivers and healthcare professionals, providing timely and important information on a wide variety of topics.

<http://www.amputee-coalition.org>

***Military in-Step.*** A publication of the National Limb Loss Information Center. Knoxville, TN: Amputee Coalition of America, 2005. This is the essential guide for those in the military who are coping with the challenges of limb loss. Published by the Amputee Coalition of America (ACA) in partnership with the U.S. Army Amputee Patient Care Program, this publication offers 100 pages of personal profiles, information on physical and emotional recovery, tips for preventing secondary conditions, information on prosthetic devices, useful resources, and much more.

<http://www.amputee-coalition.org/military-instep/index.html>

***Senior Step: A Guide for Adapting to Limb Loss.*** A publication of the National Limb Loss Information Center. Knoxville, TN: Amputee Coalition of America, 2004. A resource guide to support and educate older amputees, their caregivers and their healthcare and social service providers.

<http://www.amputee-coalition.org>

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## PubMed© Abstracts

Abstracts of these articles are available via PubMed©, a service of the United States National Library of Medicine®.

**Bilateral Recurrent Dislocation of the Patella Associated With Below-Knee Amputation** / S. Batra, R. Kumar and P. Lenka. London: BioMed Central, 2005.

Citation to article: *BMC Musculoskeletal Disorders*. 2005 Feb 17;6(1):9.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?  
cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=15717922](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15717922)

**Comparison of Interface Pressures With Pin and Suction Suspension Systems /**  
Tracy L. Bell and Glenn M. Street. Baltimore, MD: Rehabilitation Research and  
Development Service, Dept. of Veterans Affairs, 2004. Citation to article: *Journal of  
Rehabilitation Research and Development*. 2004 Nov-Dec;41(6):821-8.  
Full Text Article: <http://www.vard.org/jour/04/41/6/Beil.html>

**Gait Patterns of Transtibial Amputee Patients Walking Indoors Barefoot /** TR Han,  
SG Chung and HI Shin. Hagerstown, MD: Lippincott Williams & Wilkins, 2003. Citation  
to article: *American Journal of Physical Medicine & Rehabilitation*. 2003 Feb;82(2):96-  
100.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?  
cmd=Retrieve&db=PubMed&list\\_uids=12544754&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12544754&dopt=Abstract)

**The Effect of Foot and Ankle Prosthetic Components on Braking and Propulsive  
Impulses During Transtibial Amputee Gait. /** RJ Zmitrewicz ... [et al.]. Philadelphia,  
PA: W.B. Saunders, 2006. Citation to article: *Arch Phys Med Rehabil*. 2006 Oct;87  
(10):1334-9.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?  
cmd=Retrieve&db=pubmed&list\\_uids=17023242&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&list_uids=17023242&dopt=Abstract)

**The Effect of Prosthesis Alignment on the Symmetry of Gait in Subjects With  
Unilateral Transtibial Amputation. /** DHChow...[et al.]. Hellerup, Denmark:  
International Society for Prosthetics and Orthotics. *Prosthetics and Orthotics  
International*. 2006 Aug;30 (2):114-28  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?  
db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=16990222](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=16990222)

**A Randomized Controlled Trial Comparing Functional Outcome and Cost  
Efficiency of a Total Surface-Bearing Socket Versus a Conventional Patellar  
Tendon-Bearing Socket in Transtibial Amputees /** RW Selles ... [et al.]. Philadelphia,  
PA: W.B. Saunders, 2005. Citation to article: *Archives of Physical Medicine and  
Rehabilitation*. 2005 Jan;86(1):154-61; quiz 180.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?  
cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=15641007](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15641007)

**Regional Differences in Pain Threshold and Tolerance of the Transtibial Residual  
Limb: Including the Effects of Age and Interface Material /** WC Lee, M. Zhang and  
AF Mak. Philadelphia, PA: W.B. Saunders, 2005. Citation to article: *Archives of Physical  
Medicine and Rehabilitation*. 2005 Apr;86(4):641-9.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=15827912](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15827912)

**Reliability of the Two-Minute Walk Test in Individuals With Transtibial Amputation** / D. Brooks ... [et al.]. Philadelphia, PA: W.B. Saunders, 2002. Citation to article: *Archives of Physical Medicine and Rehabilitation*. 2002 Nov;83(11):1562-5.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12422326&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12422326&dopt=Abstract)

**Total Knee Arthroplasty in a Below-Knee Amputee** / JR Crawford and N Coleman. New Brunswick, NJ : Taylor and Francis, 2003. Citation to article: *The Journal of Arthroplasty*. 2003 Aug;18(5):662-5.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12934223&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12934223&dopt=Abstract)

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## Videos & CD-ROMs

**Advanced Gait Training for Lower-Extremity Amputee Patients** / written by Carol Stube Hammersley; Wesley M. & Suzanne S. Dixon Education and Training Center, Rehabilitation Institute of Chicago. Chicago, IL: The Institute, [199-?]. VHS. This video is intended to demonstrate advanced gait training skills for both unilateral and bilateral below-knee and above-knee amputee patients. It shows how to manage stairs, curbs, ramps and escalators and how to pick up objects on the floor and step over objects. It also demonstrates how to sit on the floor and rise from the floor.

**Fitness is for Everyone: Aerobics for Amputees** / National Handicapped Sports and Recreation Association and Invacare. New York, NY: Winkler Video Associates, Inc., 1994. VHS. This video includes exercises to physically strengthen people with disabilities. It is specifically designed for amputees. The workout is demonstrated by a nondisabled instructor and an above-knee amputee who adapts the exercises as necessary.

**Functional Prosthetic Training for the Transtibial Amputee** / produced by Advanced Rehabilitation Therapy, Inc. Miami, FL: Advanced Rehabilitation Therapy, Inc., c2001. This video offers an exercise progression for most levels of the prosthetic user. Demonstrates exercises that prepare the amputee to maximize prosthetic performance in daily activities, while developing their overall level of fitness. Exercises focus on stability, balance, muscular endurance, coordination and agility.

**Jonathon's Story** [CD-ROM] / Interactive Drama Inc. Bethesda, MD: Interactive Drama

Inc., 2000. ISBN 1-892601-17-6. Jonathon Lee is a musician/composer who has lost both legs below the knee and most of his eyesight due to diabetes. In spite of these disabilities, he runs his own business and lives his life with complete independence. Jonathon responds to your questions about his amputations and recovery and how he has coped. His positive outlook and independent spirit are inspiring.

**Ron's Story** [CD-ROM] / Interactive Drama Inc. Bethesda, MD: Interactive Drama Inc., 2000. ISBN 1-892601-17-6. Rev. Ronald Austin lost his left leg below the knee as a result of a brutal carjacking incident. In spite of this traumatic event, he has resumed his active ministry. His goal is to get back into his physical fitness routine, which includes jogging.

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## More Online Resources

**Below-Knee Amputee Exercise Program** / Department of Rehabilitation Services and the Ohio State University Medical Center (viewed 2006). An exercise routine for the below-knee amputee to use as part of a rehabilitation program. Includes illustrations. <http://medicalcenter.osu.edu/pdfs/PatientEd/Materials/PDFDocs/exer-reh/lower/b-k-amp.pdf>

**A Manual for Below-Knee (Trans-Tibial) Amputees** / Alvin L. Muilenburg and A. Bennett Wilson, Jr. Fifth edition. Topping, VA: Rehabilitation Press, 1996. Online version viewed 2006. This online booklet is written for the new BK amputee. It briefly describes amputations and then moves on to the process following the surgery. A lot of emphasis is put on information concerning prostheses and the processes involved. Residual limb care is also included this booklet. <http://www.oandp.com/resources/patientinfo/manuals/bkindex.htm>

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Last updated: 01/10/2007

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