

A decision aid for people facing partial foot amputation due to peripheral arterial disease

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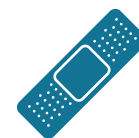
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Welcome message



The American Orthotic & Prosthetic Association (AOPA) is a national trade association committed to providing high quality services, products and advice to orthotic and prosthetic (O&P) professionals, as well as promoting education and supporting strong evidence-based outcomes and comparative effectiveness research/measurements relating to O&P treatment modalities.

As part of this mission, AOPA is proud to support innovative research through competitive research grants. We are delighted to have supported the development of this decision aid, which we believe will help people facing decisions about dysvascular partial foot amputation.

We appreciate that making healthcare decisions can be difficult, the information in this decision aid will help you to be more informed about treatment options, so you and your healthcare provider can work together to make decisions about your healthcare that are appropriate for your health condition and circumstances.

Sincerely,



James Campbell PhD, CO, FAAOP
AOPA President



Disclaimer:

This decision aid is not medical advice or a diagnosis of your condition. It is also not a treatment recommendation. The information in this decision aid is designed to help inform decisions about the level of amputation. It describes our knowledge of the likely outcomes of different types of partial foot amputation and how these compare to below knee amputation. The options and outcomes summarized in this decision aid may not be appropriate to your personal situation. Please discuss your personal situation and any questions you may have with your healthcare provider.

Q:

What is shared decision-making and why is it important?

Shared decision making:

- Involves patients and healthcare professionals working together to make decisions^{1,2}.
- Presents the best available evidence for different options, helping make the decision clearer^{1,2}.
- Allows patients to reflect on their personal preferences and what is important to them^{1,2}.
- Is helpful when people are unsure about the benefits and harms of different treatment options^{1,2}.



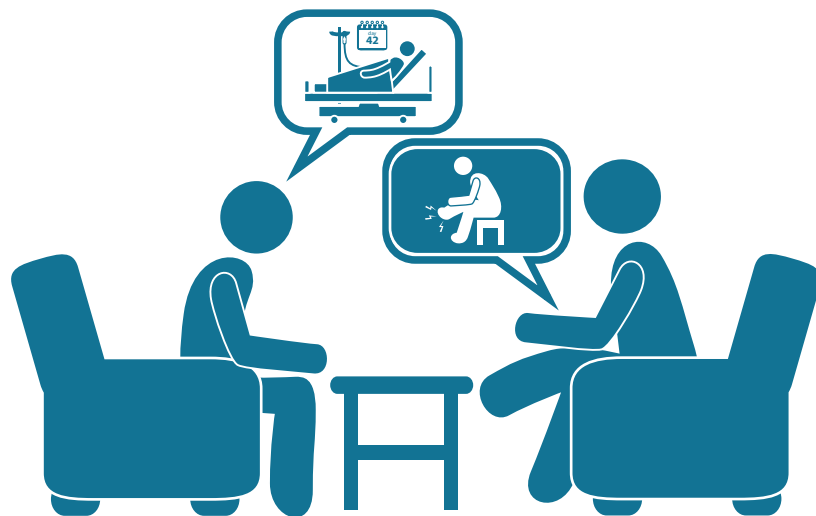
Q:

Who is this decision aid for?

- This decision aid has been designed for people facing partial foot amputation due to peripheral arterial disease (not enough blood supply to the legs/feet). Partial foot amputation tends to affect older adults who also have diabetes or other conditions such as kidney disease or loss of feeling in their legs or feet.
- It is **NOT** designed for people facing amputation due to trauma, cancer, or other reasons.
- This decision aid is intended to help you decide between:
 1. Different levels of partial foot amputation

OR

 2. Partial foot and below knee (transtibial) amputation.





Q:

What do I need to know about using this patient decision aid?

- The decision to have an amputation is often difficult. Many people feel better about their decision when they know more about what is involved and the likely outcome. You may also find it helpful to talk to someone who has already been through this experience. Contact information for support services have been provided in the back of this decision aid.
- This decision aid is designed as a conversation starter, so you can think about the topics you want to talk about with your doctor and other healthcare professionals. This conversation is important because the outcomes may differ depending on your health condition.
- You can keep this decision aid to read and share with people close to you.
- This decision aid was developed using the best available research, from a recent review³.
- We hope this decision aid will help you learn more about common complications and risks after amputation surgery and help you make an informed decision about surgery.

PARTIAL FOOT AMPUTATION

Q:

What is a partial foot amputation?

Partial foot amputation involves the surgical removal of part of the foot including tissue and bone, so that the remaining foot can heal.

Q:

What are the different levels?

Partial foot amputation refers to a range of surgeries that may involve removal of one or more toes, or a more substantial part of your foot. Some types of partial foot amputation might occur through the middle of the foot (midfoot), while others leave just the heel and ankle.



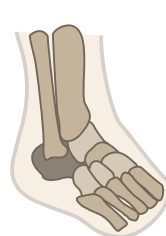
Toes



Ray resection



Metarsophalangeal



Transmetatarsal



Tarsometatarsal
(Lisfranc)



Transtarsal
(Chopart)

BELOW KNEE AMPUTATION



Q:

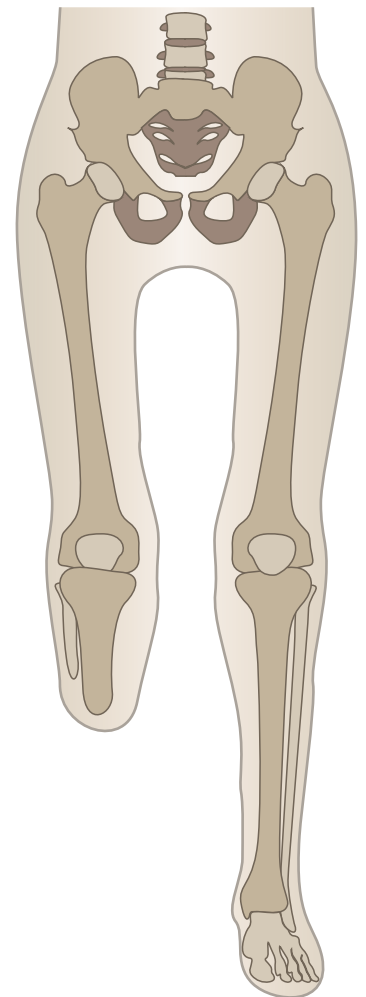
What is below knee (transtibial) amputation?

Below knee (transtibial) amputation involves the surgical removal of tissue and bones above the ankle but below the knee.

Q:

It's just my foot that has a problem – why would I think about amputation further up my leg?

Sometimes doctors advise patients to consider below knee (transtibial) amputation instead of partial foot amputation. For some people, the benefits and risks of below knee (transtibial) amputation may seem better than the benefits and risks of partial foot amputation. This will depend on your own health condition and what is important to you at this stage of your life.



OUTCOME SUMMARIES

- The following tables have been prepared as a quick reference guide to help you compare outcomes between:
 - different levels of partial foot amputation
 - OR**
 - partial foot and below knee (transtibial) amputation.
- These tables summarize the evidence. Additional information is provided in the following sections of this decision aid.

To help you navigate the tables:



A question mark shows that we are unsure about the outcome because there are no studies on the topic.



A check mark shows that we have some evidence on the outcome. More check marks mean we have more evidence about this topic.


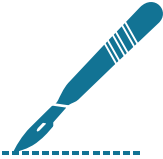











- Please write down any questions or concerns you have and discuss these with your healthcare provider.

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1

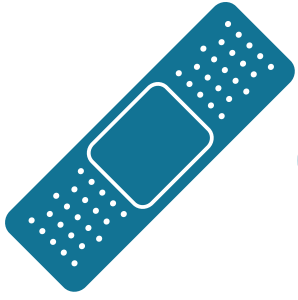
Summary comparing level of partial foot amputation

Outcome		Summary	Knowledge
Wound healing		We do not know if there are differences in wound healing rates between different levels of partial foot amputation.	
Complications		We do not know if there are differences in complication rates between different levels of partial foot amputation.	
Reamputation		About 25% of people will have reamputation 1 year after partial foot amputation. Research suggests little difference between levels of partial foot amputation.	
Quality of life		We do not know if there are differences in quality of life between different levels of partial foot amputation.	
Mobility		We do not know if there are differences in mobility between different levels of partial foot amputation.	
Psychosocial		We do not know if there are differences in psychosocial outcomes, such as depression, between different levels of partial foot amputation.	
Pain		We do not know if there are differences in pain between different levels of partial foot amputation.	
Death		Research suggests little difference in death rates between different levels of partial foot amputation.	

2

Summary comparing partial foot and below knee amputation

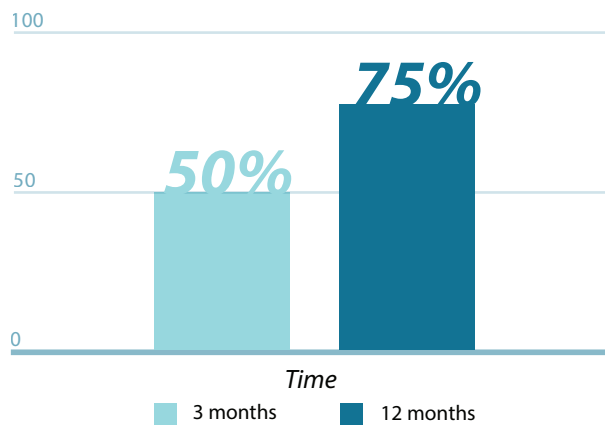
Partial foot amputation	Below knee amputation	Knowledge	Summary
50% heal within 3 months 75% heal within 1 year	Unknown		Wound healing rates have been reported in people with partial foot amputation, but no studies have compared these to rates for people with below knee amputation.
40% experience complications	30% experience complications		Limited research suggests higher rates of complications in people with partial foot amputation, but we don't know about the time in which these occur.
25% reamputation within 1 year 50% reamputation within 5 years	33% reamputation within 1 year Unknown within 5 years		At one year, reamputation rates appear similar in people with partial foot or below knee amputation.
Same	Same		Limited research suggests quality of life is similar for people with partial foot or below knee amputation.
35% of people regain pre illness mobility after 1 year	41% of people regain pre illness mobility after 1 year		Limited research suggests mobility is similar in people who have partial foot or below knee amputation.
Unknown	Unknown		Psychosocial problems, such as depression, are common in people living with lower limb amputation, but these outcomes have not been compared to people with partial foot or below knee amputation.
Unknown	Unknown		Problems with pain are common in people living with lower limb amputation but these have not been compared in people with partial foot or below knee amputation.
17% die within 1 year 41% die within 5 years	34% die within 1 year 55% die within 5 years		There is a higher death rate for people with below knee amputation than for those with partial foot amputation. This may not be due to amputation level as people usually die from conditions such as heart disease or kidney failure.



WOUND HEALING

- Delayed wound healing is a common complication after partial foot amputation.
- About half of partial foot amputations heal at 3-months after amputation surgery and about three quarters heal at 1-year after amputation surgery.

Healing rates after partial foot amputation

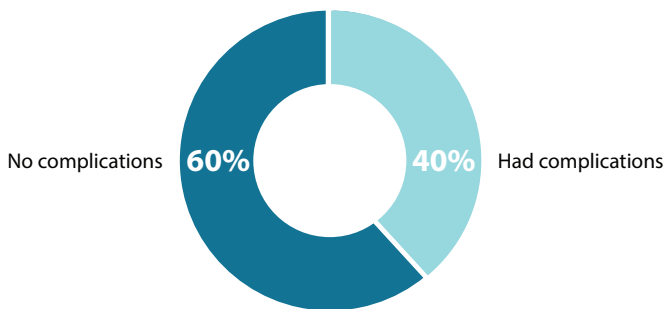


- Some amputations may take a long time to heal. During this time, you may need to attend regular clinics to have dressings changed and the wound checked.
- There is not enough research to know whether the rate of wound healing differs between levels of partial foot amputation.
- One quarter of surgical wounds do not heal after partial foot amputation. If this happens to you, more surgery will be needed. Sometimes people need a debridement, where a doctor will remove any dead or damaged tissue around the wound so that the healthy tissue can heal. Some people have another amputation at a higher level.
- We do not know how the rates of wound healing compare between people with partial foot or below knee (transtibial) amputation because these studies have not yet been done.

COMPLICATIONS

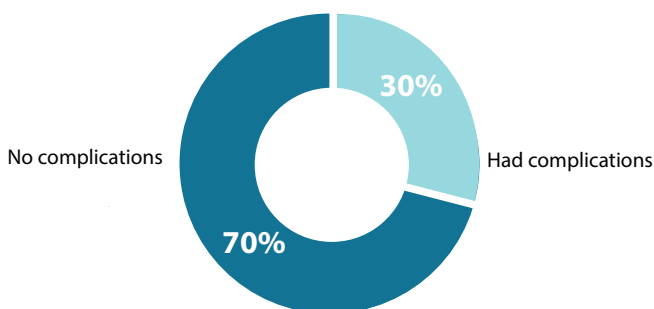


Partial foot amputation complications



- About half of all people will not experience any major surgical or wound complications after a partial foot amputation.
- Common complications include the wound splitting open (dehiscence), infection, or the wound never healing. Most of these complications occur in the first few weeks or months after surgery.
- There is no way to predict if you will have complications or not.
- We do not know if there are differences in complication rates for different levels of partial foot amputation.

Below knee (transtibial) amputation complications



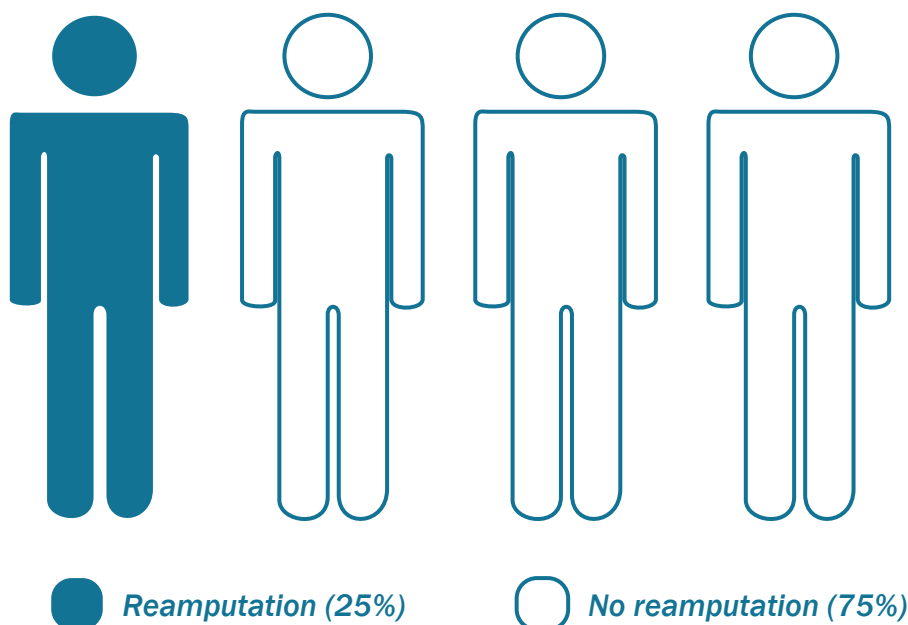
- The rates of complications are similar for people with partial foot and below knee amputation.



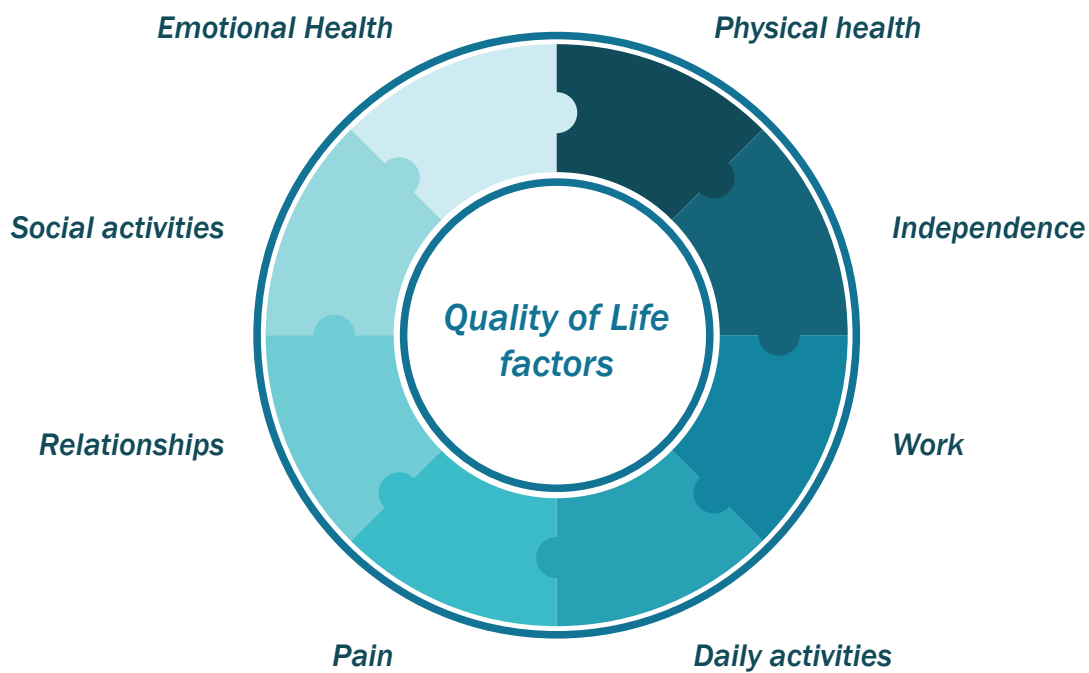
REAMPUTATION

- One in four people with partial foot amputation will need another amputation within 1 year of their first amputation.
- Some people may need more than one reamputation. Sometimes people need another partial foot amputation, and sometimes a below knee (transtibial) amputation is required.
- The number of people who need another amputation increases over time. After 5 years, about half of all people with partial foot amputation will have had another amputation.
- There does not seem to be any difference in reamputation rates for people with different levels of partial foot amputation.
- The rates of reamputation are similar in people with partial foot and below knee (transtibial) amputation 12 months after initial amputation.

Reamputation rates 12 months after partial foot amputation



QUALITY OF LIFE

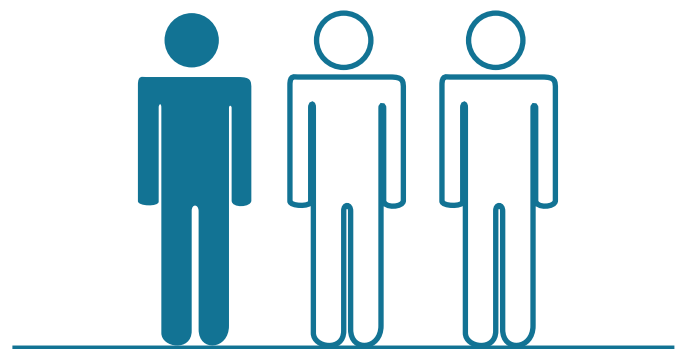


- Quality of life refers to your ability to enjoy everyday activities.
- No studies have compared quality of life in people with different levels of partial foot amputation.
- Quality of life is similar in people with partial foot and below knee (transtibial) amputation. As Quality of life is similar for people with partial foot and below knee (transtibial) amputation, differences between levels of partial foot amputation are unlikely.

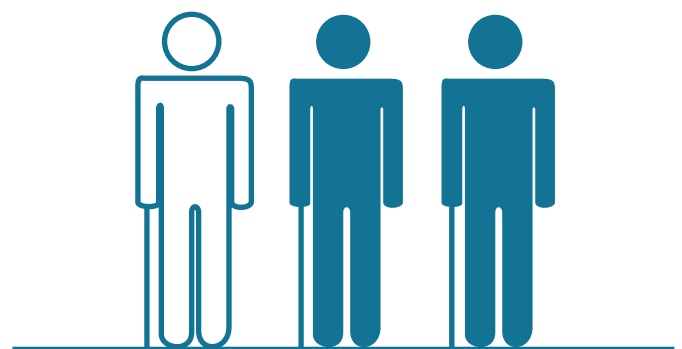
MOBILITY



- Mobility describes how easily you can get around using your prosthesis in a variety of everyday activities such as walking indoors, outside in bad weather, going down stairs or while carrying an object.
- Following partial foot amputation, most people lose some mobility but still remain independent. You may need to use a mobility aid, like a walking stick.
- We do not know if different levels of partial foot amputation (e.g., toe amputation) result in better or worse mobility because most research has focused on people with amputation through the middle of the foot (transmetatarsal amputation).
- Mobility appears to be similar for people with partial foot and below knee (transtibial) amputation.



1/3 same mobility as before illness and amputation



2/3 reduced mobility compared to before illness and amputation

PSYCHOSOCIAL



- Following amputation, some people experience depression, anxiety and changes in their body image (psychosocial outcomes).
- No studies have investigated psychosocial outcomes in people with partial foot amputation. Because of this, we do not know whether there are differences due to the level of partial foot or below knee amputation.
- A number of studies including people with different types of lower limb amputation describe that experiences such as depression and anxiety are common after amputation. It is reasonable to think that people with partial foot amputation may have these experiences too.
- You may not experience any of these outcomes, but it is a good idea to have a plan in case you do. You may want to talk with your healthcare provider for more information.

PAIN

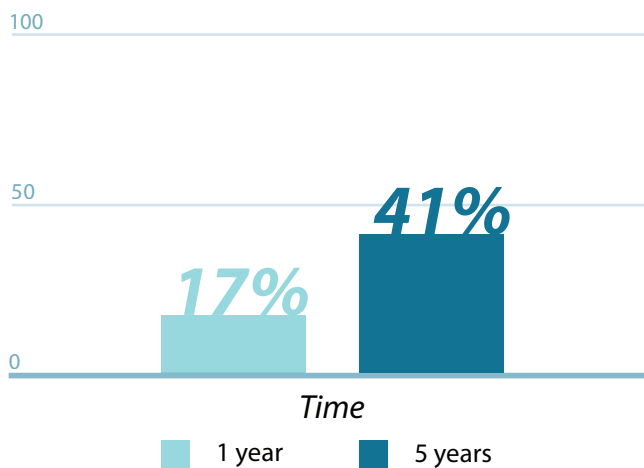


- There is no research that has reported on pain in people with partial foot amputation, or whether pain is different in people with below knee (transtibial) amputation.
- Studies involving people with lower limb amputation report problems with different types of pain. Some people experience pain in the remaining foot. You may experience pain where your foot used to be (phantom limb pain).
- You may not have any problems with pain. But if you do, you should talk with your doctor or healthcare provider for more information.

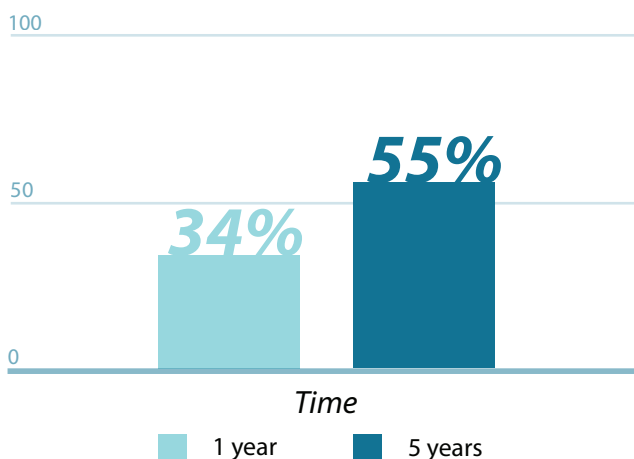


DEATH

Deaths after partial foot amputation



Deaths after below knee (transtibial) amputation



- Many people are not aware of the risk of dying after partial foot amputation.
- We are not sure if there are differences in rates of death for different levels of partial foot amputation because there has not been enough research.
- People who have a below knee (transtibial) amputation may have a greater risk of dying because of worse health at the time of their amputation than people who have partial foot amputation.
- People who die after lower limb amputation often have many other serious health issues such as heart disease, lung disease or kidney disease (renal failure). We think these are the main causes of death, not the choice of amputation level.

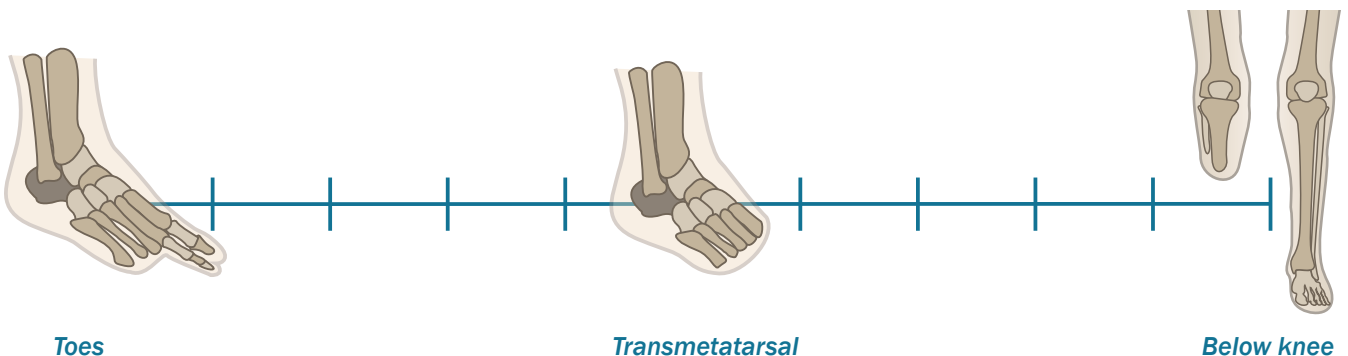
YOUR DECISION

What is important to you?

Q: What are your greatest concerns about surgery?

Q: What are your greatest concerns about life with amputation?

Q: Based on what you have read, do you have a preferred option?



Q: *Do you feel like you have enough information to make a decision?*



A horizontal scale consisting of a grey bar with two circular buttons. The left button is white with a blue border and contains the word "YES" in blue. The right button is blue with a white border and contains the word "NO" in white.

Q: *Do you have other questions which have not been answered?
What are these?*



A series of ten horizontal light blue lines for writing.



Life after amputation

- Following amputation surgery, many people will need to see a specialist, such as:

A **podiatrist** or **pedorthotist**, for advice on care of the remaining foot or help in choosing appropriate footwear or insoles

An **orthotist** or **prosthetist** to assist in providing devices to help you walk, such as artificial legs (prostheses)

A **wound care specialist** to help with healing



**amputee
coalition**TM

A donor-supported nonprofit

Contact:

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

Toll-free: 888/267-5669

- Many people find it helpful to contact an amputee organization, which may be able to put you in touch with support groups or provide further information. Such assistance often helps people adjust to life after amputation.
- Many people find it helpful to talk with someone that has already had an amputation and lived the experience. This kind of peer support and specialist advice is available in many states.
- The Amputee Coalition is a national organization that helps to provide education, support and advocacy to those affected by limb loss.



About this decision aid

- This decision aid was developed using guidelines from the International Patient Decision Aid Standards Collaboration^{1,2}.
- Research included in this decision aid comes from a systematic review (a type of literature review that collects and appraises multiple research studies to identify the best evidence) that included studies of people with partial foot and/or below knee amputation³.
- This shared decision making resource was funded by a grant from the American Orthotic and Prosthetic Association (RFP-04012015).

- *If you have questions, please contact:*

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References:

1. International Patient Decision Aids Standards Collaboration. IPDAS 2005: Criteria for Judging the Quality of Patient Decision Aids. 2005. Retrieved 12/10/15 from http://ipdas.ohri.ca/IPDAS_checklist.pdf
2. International Patient Decision Aids Standards Collaboration. What are patient decision aids? 2012. Retrieved 12/10/15 from <http://ipdas.ohri.ca/what.html>
3. Dillon, M.P. Fatone, S., Quigley, M. Outcomes of dysvascular partial foot amputation and how these compare to transtibial amputation: a systematic review. In review.

