

DIABETIC FOOT

SCOPE OF THE PROBLEM

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Agenda

- Definition of DF
- Diabetic Foot among Diabetes complication
- Risk factors for amputation
- Risk Categorization
- Prevention of amputation
- Barriers / Some suggested solutions



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DF Definition

The foot of a diabetic patient that has the potential risk of pathologic consequences including infection, ulceration and or destruction of deep tissues associated with neurologic abnormalities, various degrees of peripheral vascular disease and/or metabolic complications of diabetes in the lower limb

WHO definition

DF Definition



Any foot pathology that results directly from diabetes or its long-term complications

(Boulton 2002), Diabetes, 30 : 36, 2002.



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DF among other Diabetic Complications

- Fundus Exam for Diabetic retinopathy
- Microalbuminuria for Diabetic Nephropathy
- Annual screening for DF !!

Low Tech High touch

Easiest to detect

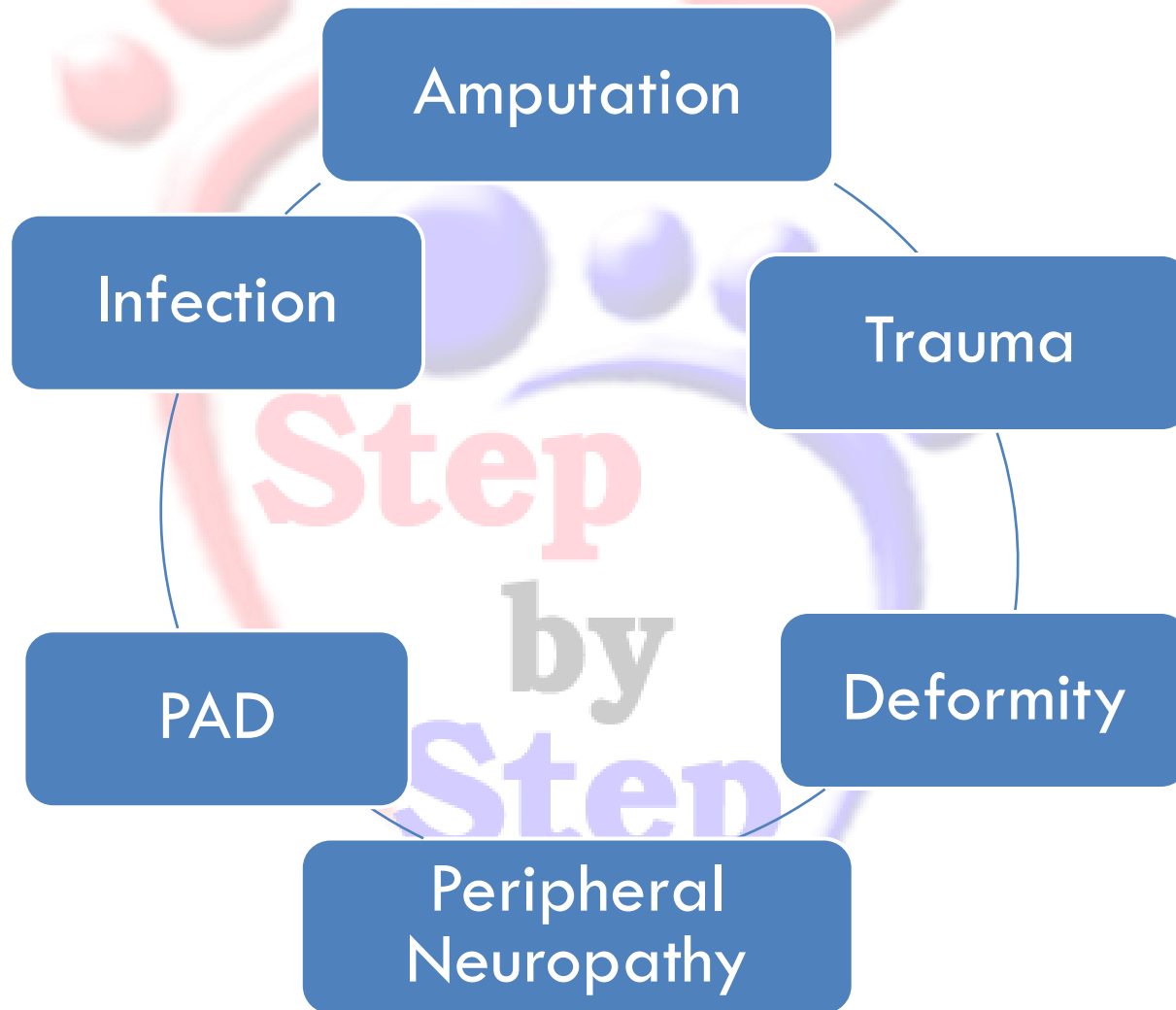
Truly Preventative



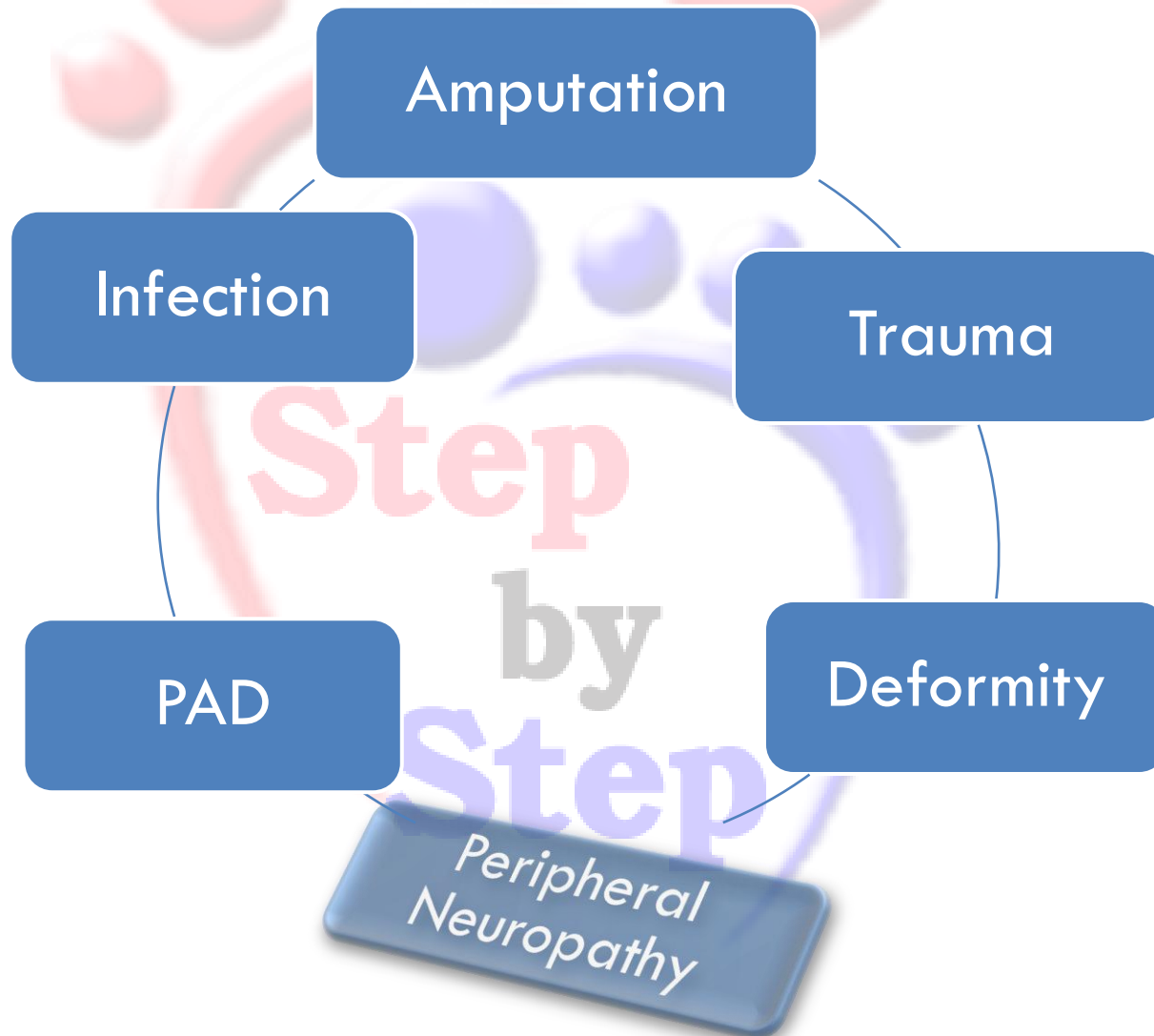
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Risk Factors for Amputation



Risk Factors for Amputation



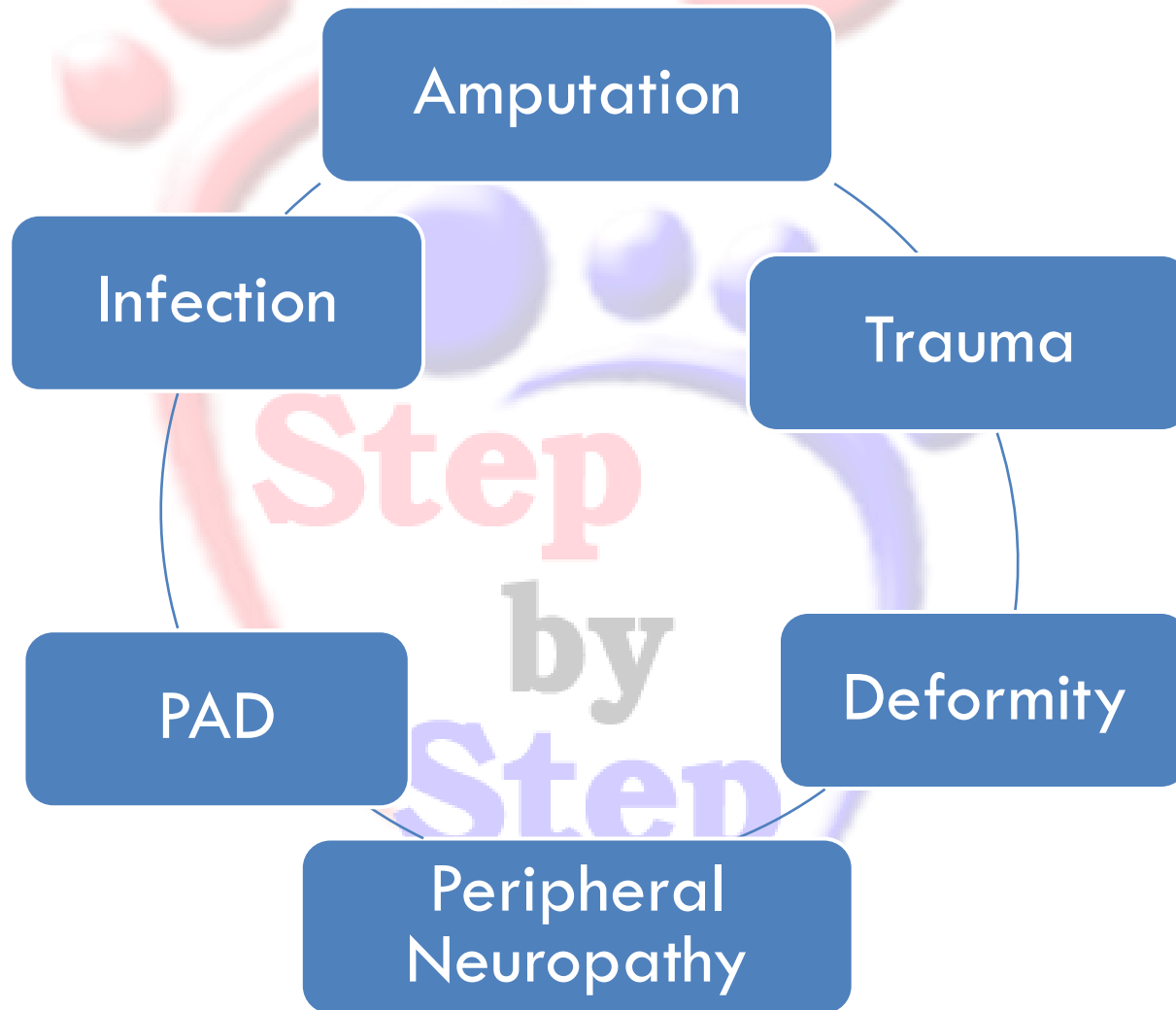
Peripheral Neuropathy

- Variable prevalence according to the diagnosis; based on ?? symptoms, signs, tuning fork, monofilament or nerve conduction studies
- Neuropathy related to 50-75% of non traumatic amputation
- Physicians miss the diagnosis of DPN in 61% of patients
- Management of Neuropathy/ Beyond Pains

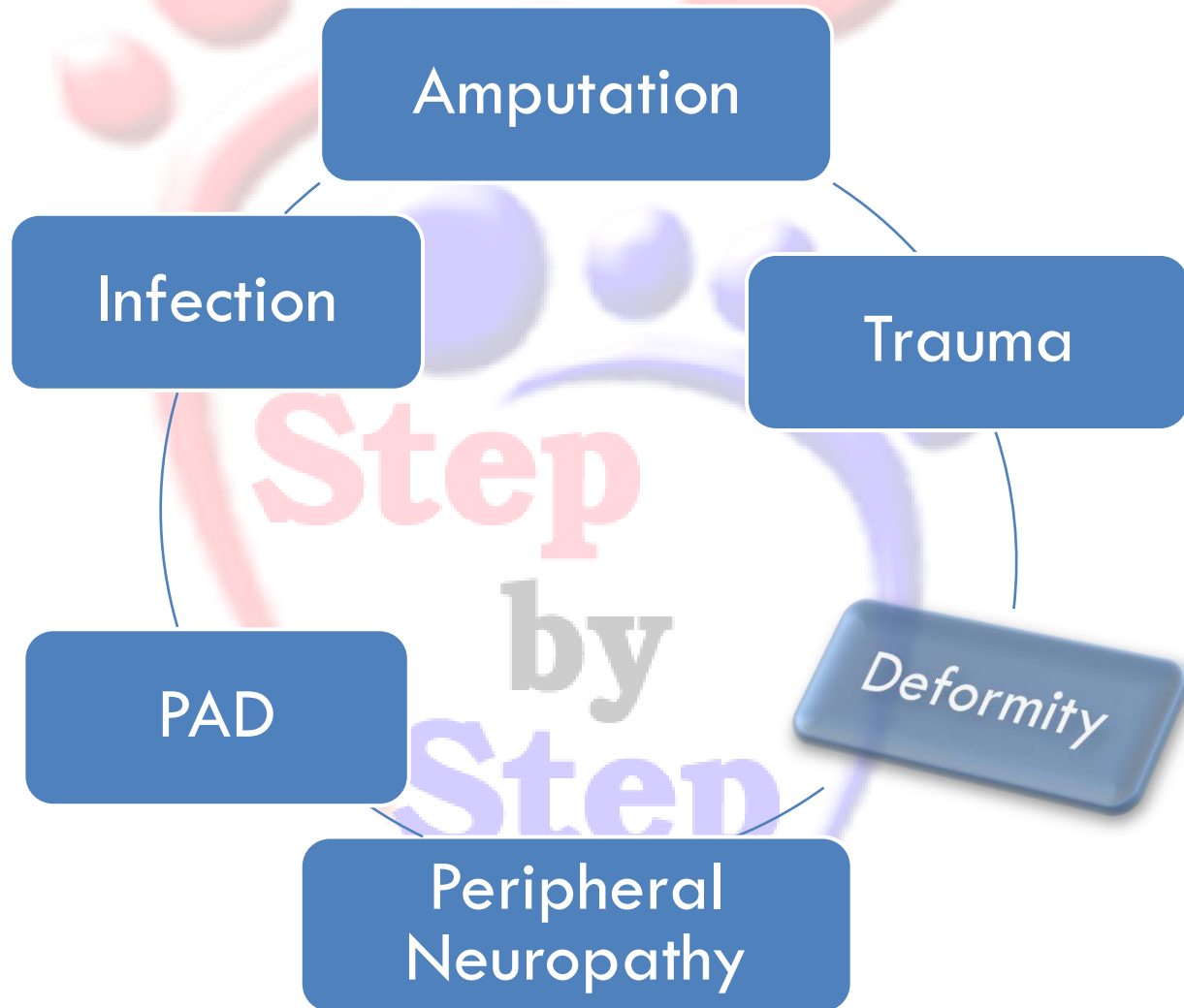
Screening for Neuropathy



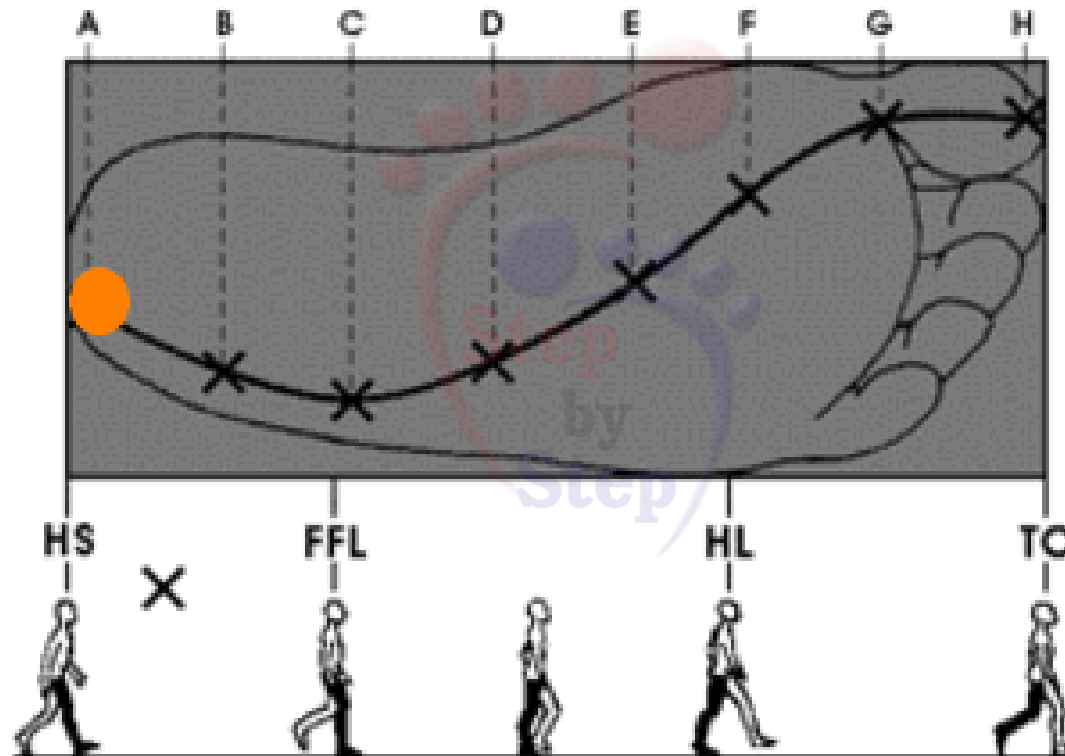
Risk Factors for Amputation



Risk Factors for Amputation



Foot Deformity





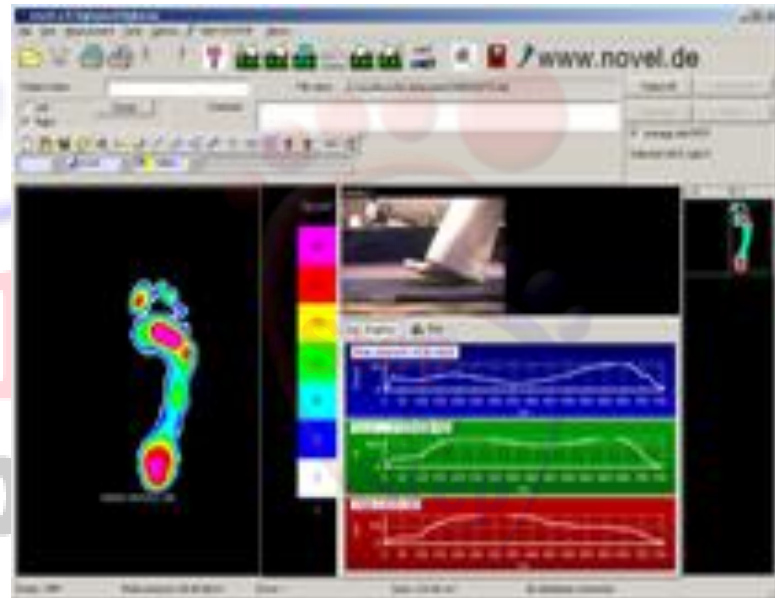
Normal Flat High-Arch

Foot Deformity

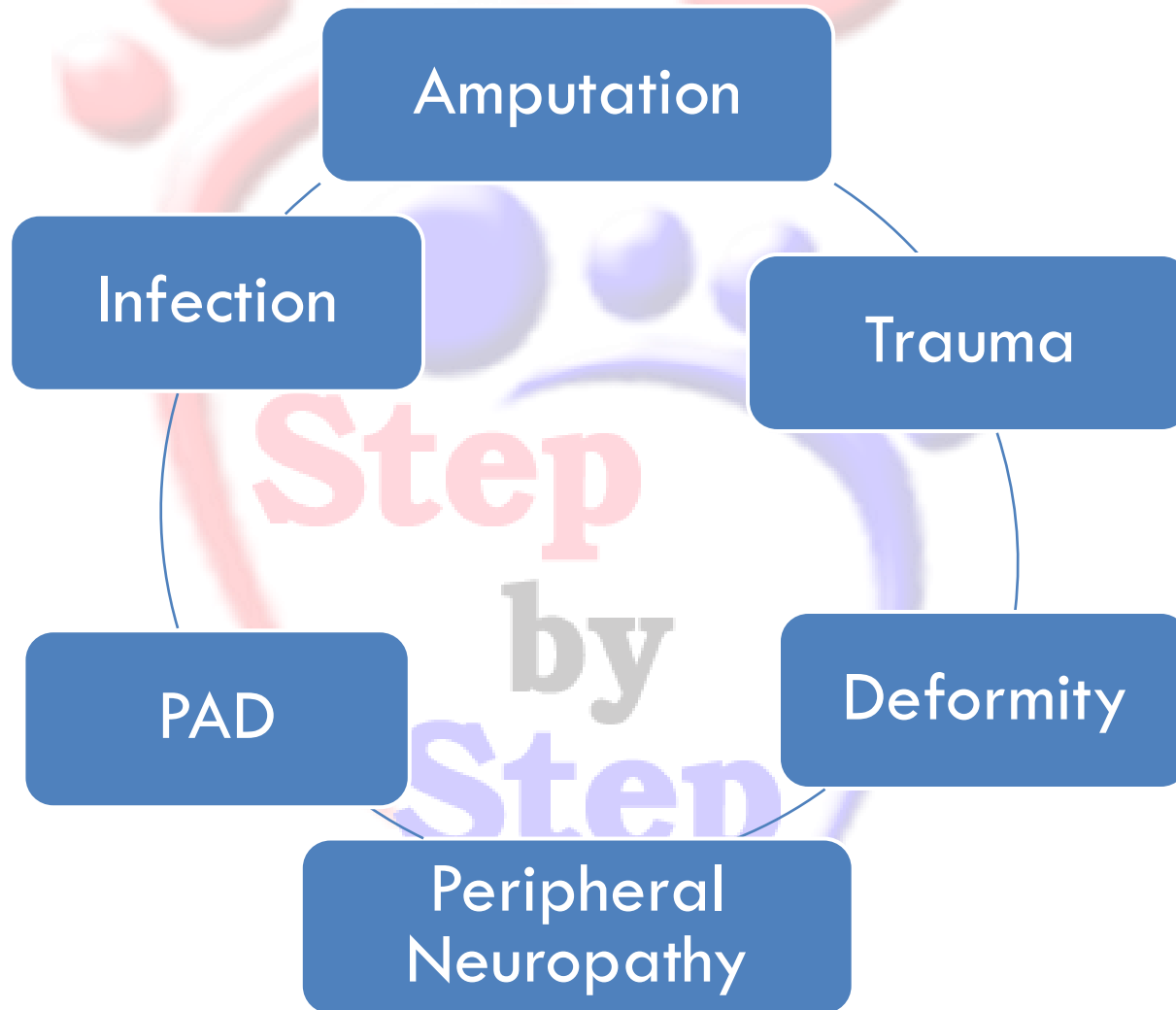


Step

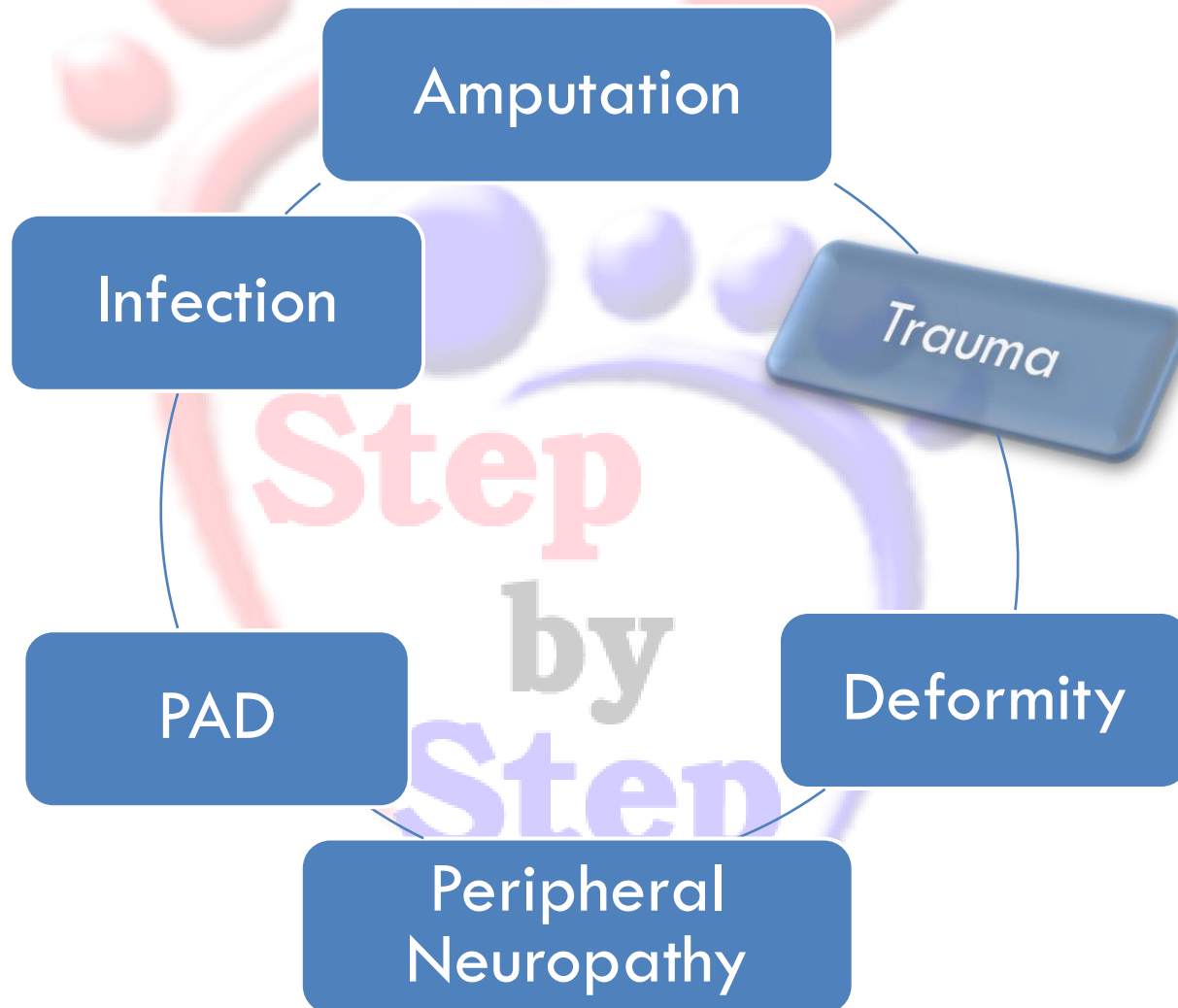
Plantar Pressure Assessment



Risk Factors for Amputation



Risk Factors for Amputation



Trauma

- ❑ Intrinsic : Deformity / Callus
- ❑ Extrinsic : Poor Footwear/ foreign bodies inside the shoes/ Previous surgery
- ❑ Behavioral:
Changing the Level of activity

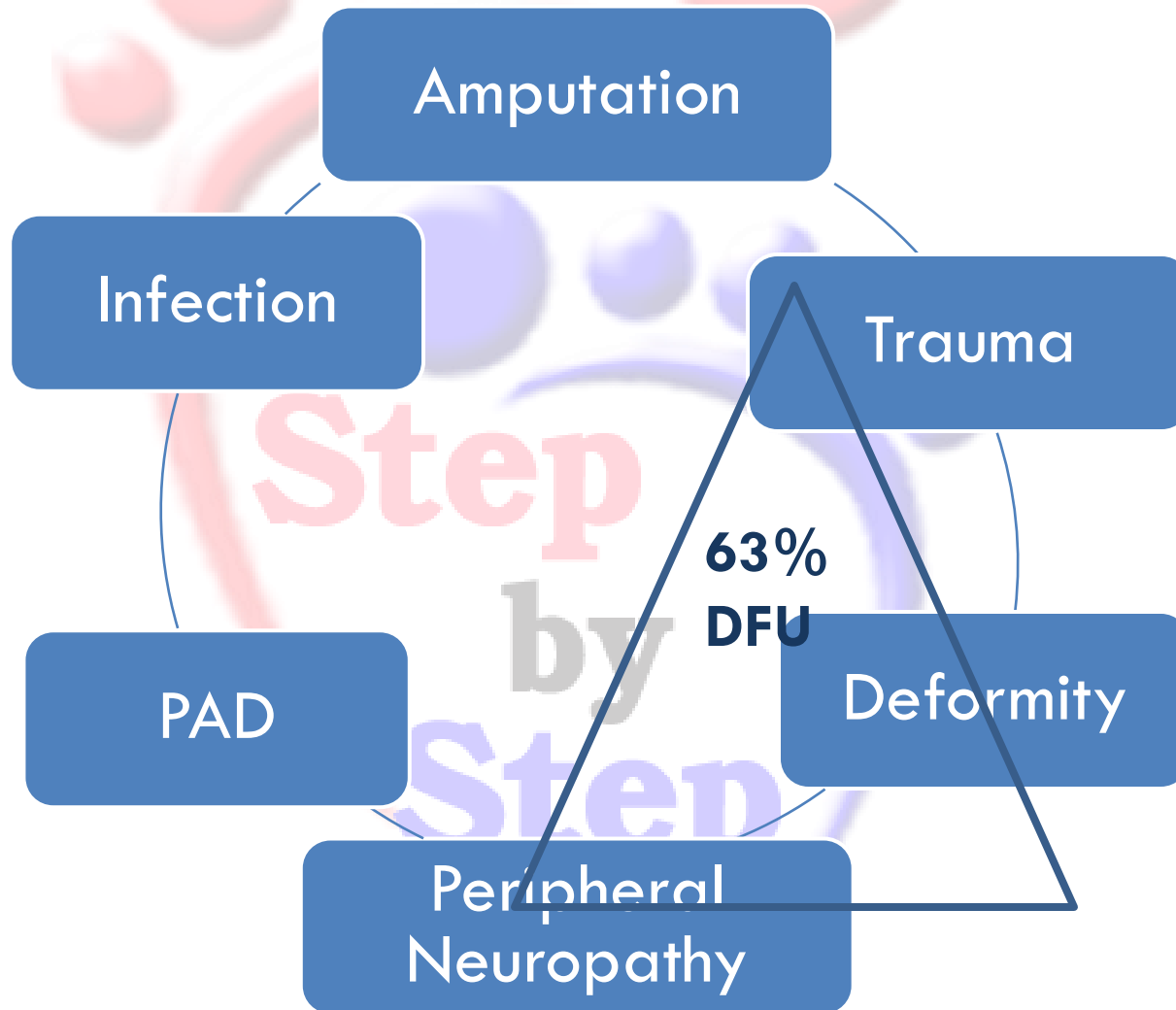




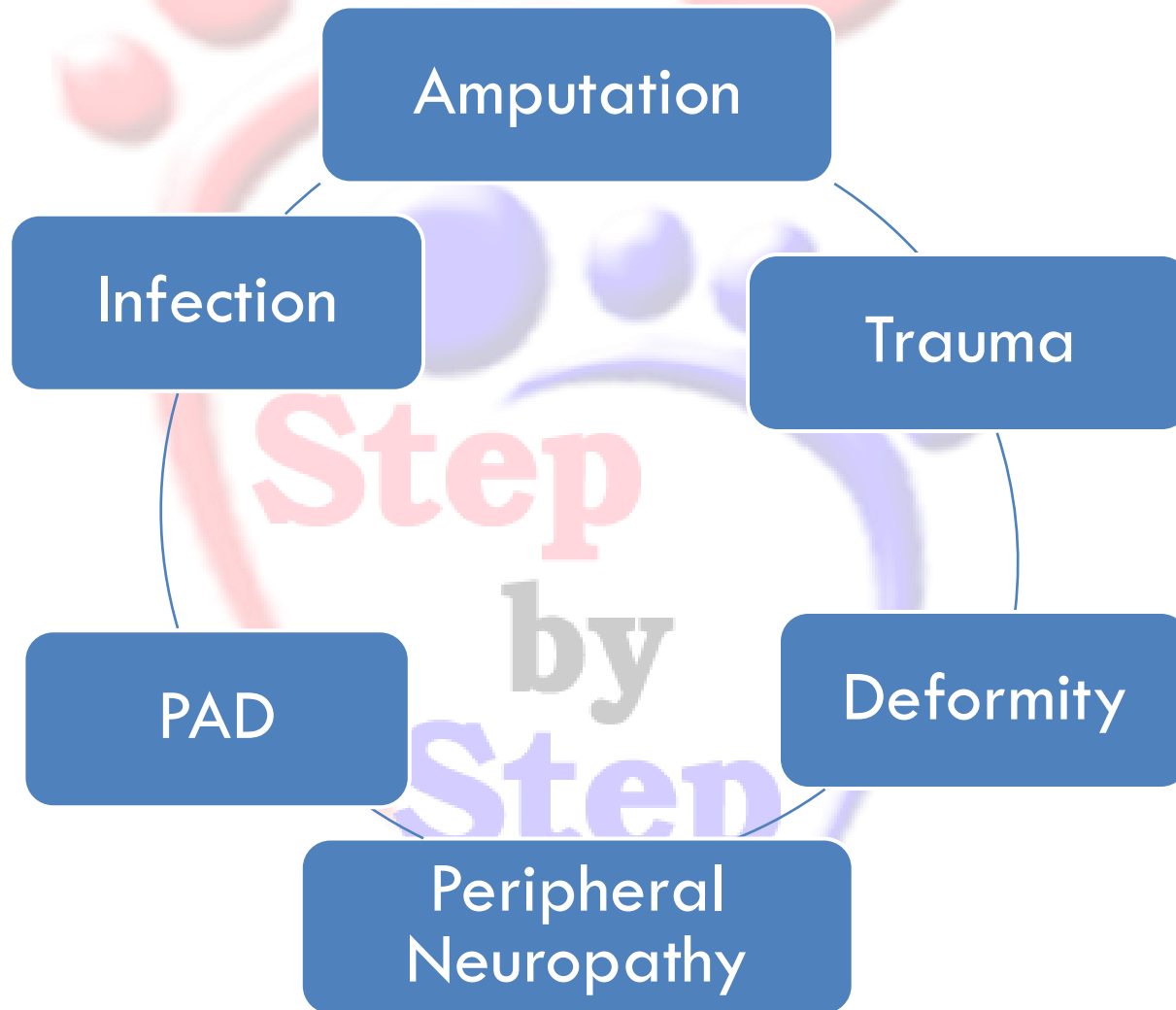


Step
by
Step

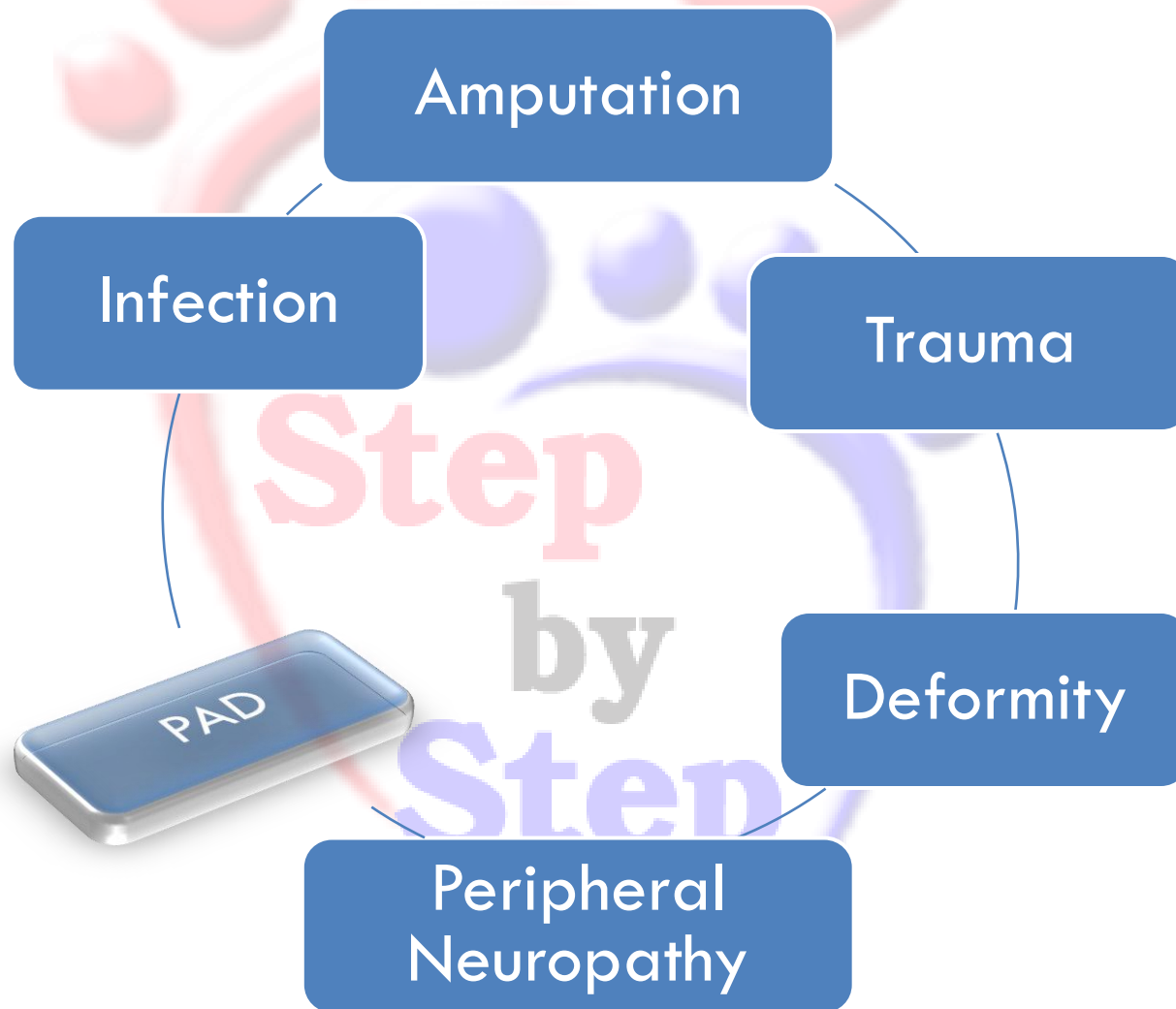
Risk Factors for Amputation



Risk Factors for Amputation

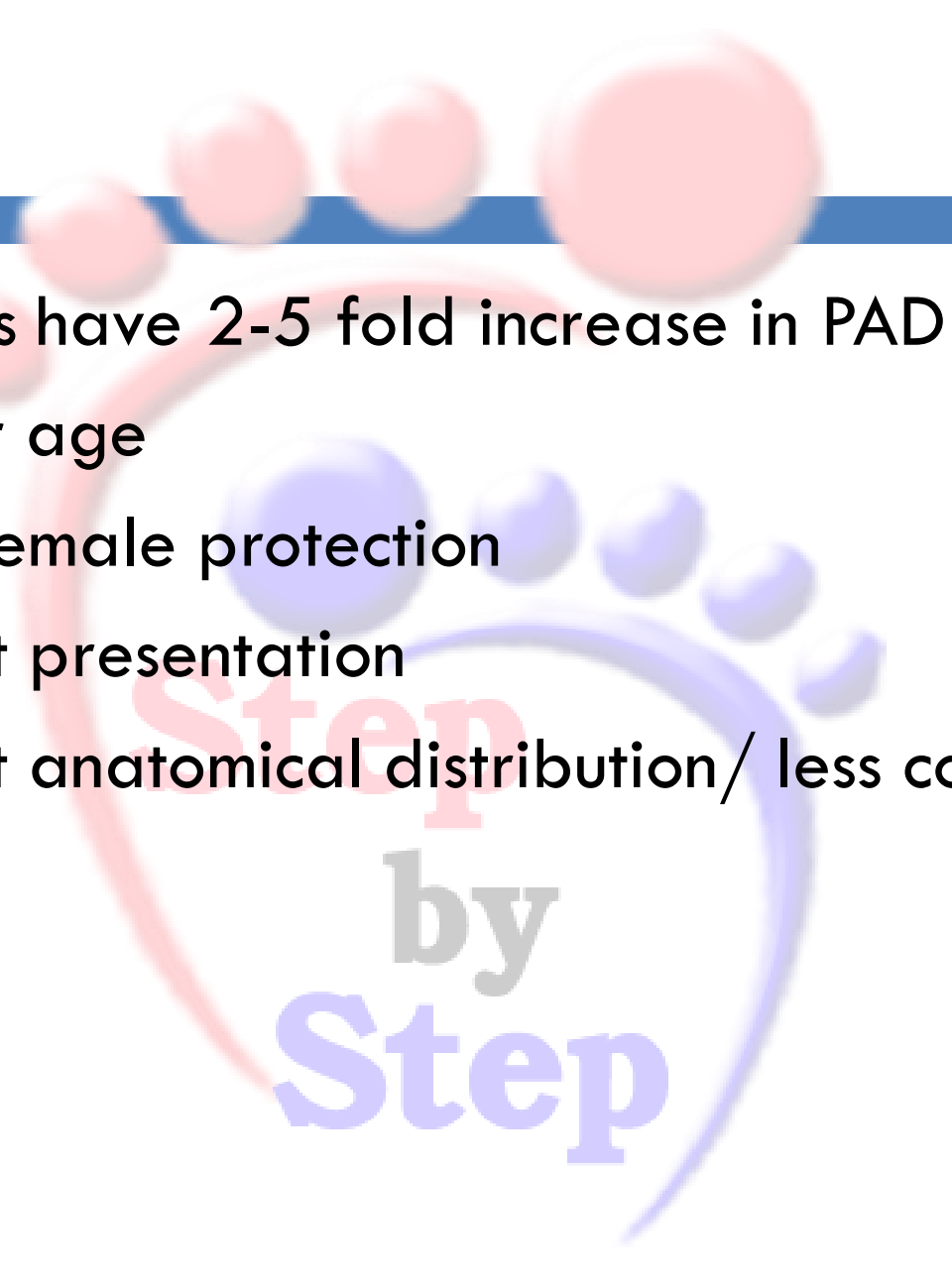


Risk Factors for Amputation

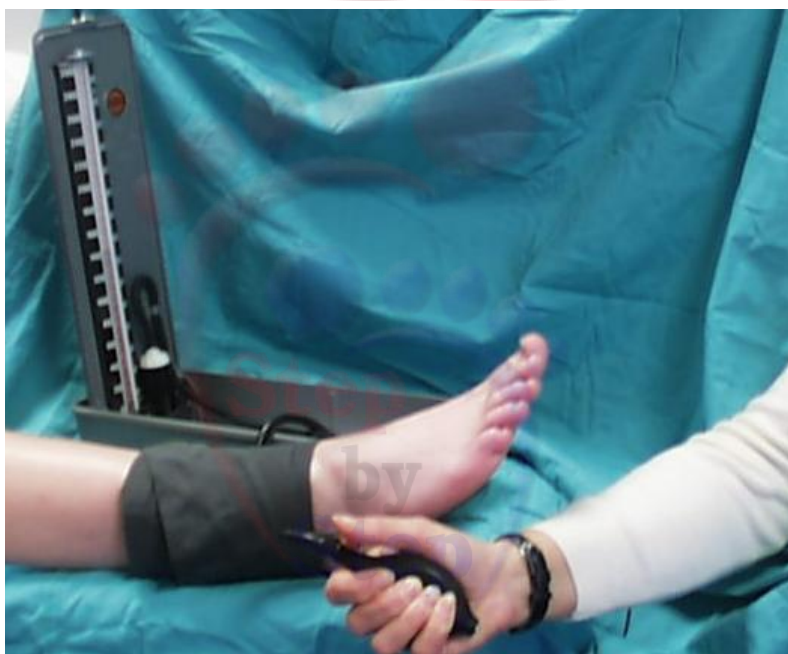


PAD

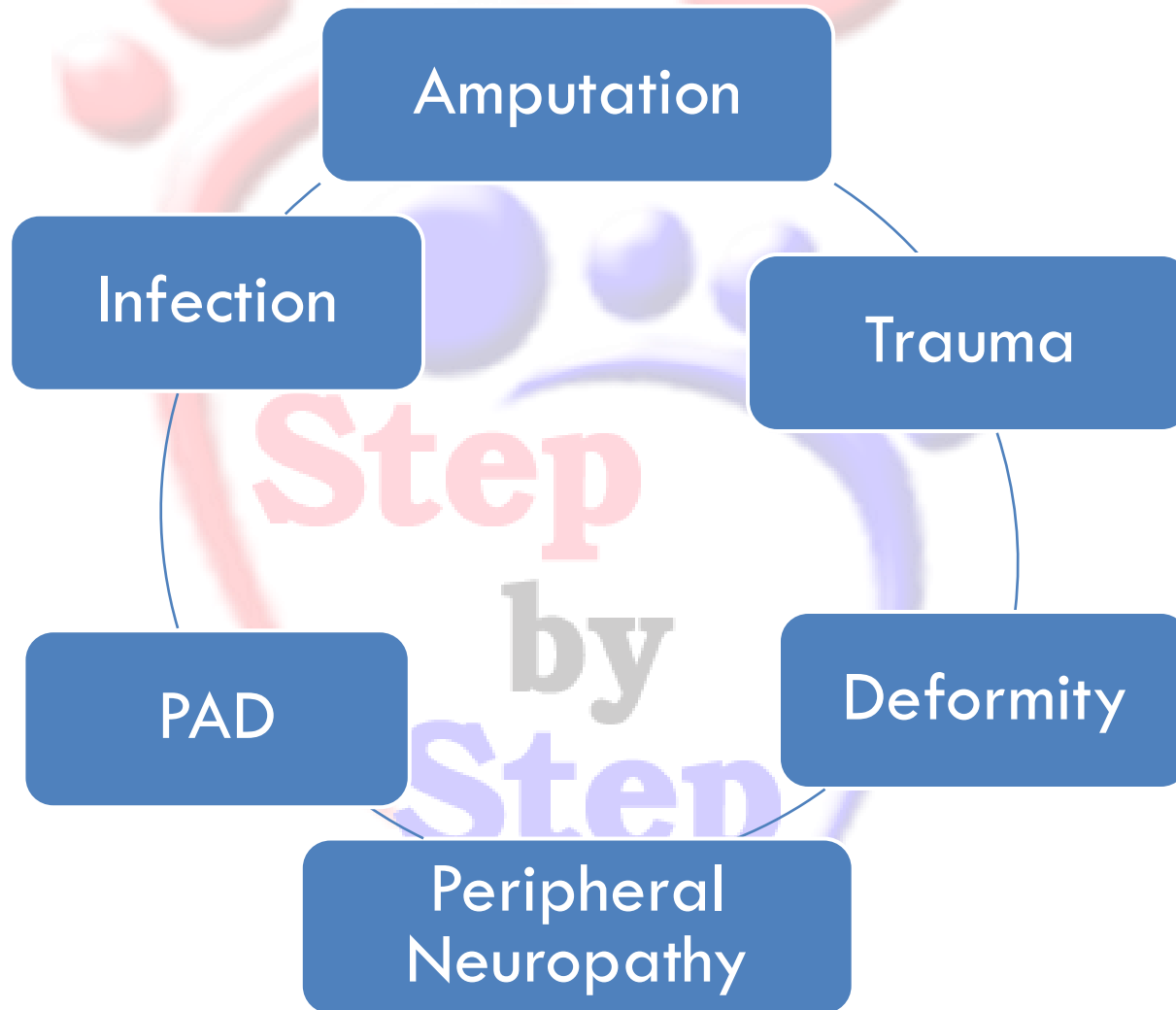


- ❑ Diabetics have 2-5 fold increase in PAD
 - ❑ Younger age
 - ❑ Loss of female protection
 - ❑ Different presentation
 - ❑ Different anatomical distribution/ less collaterals
- 

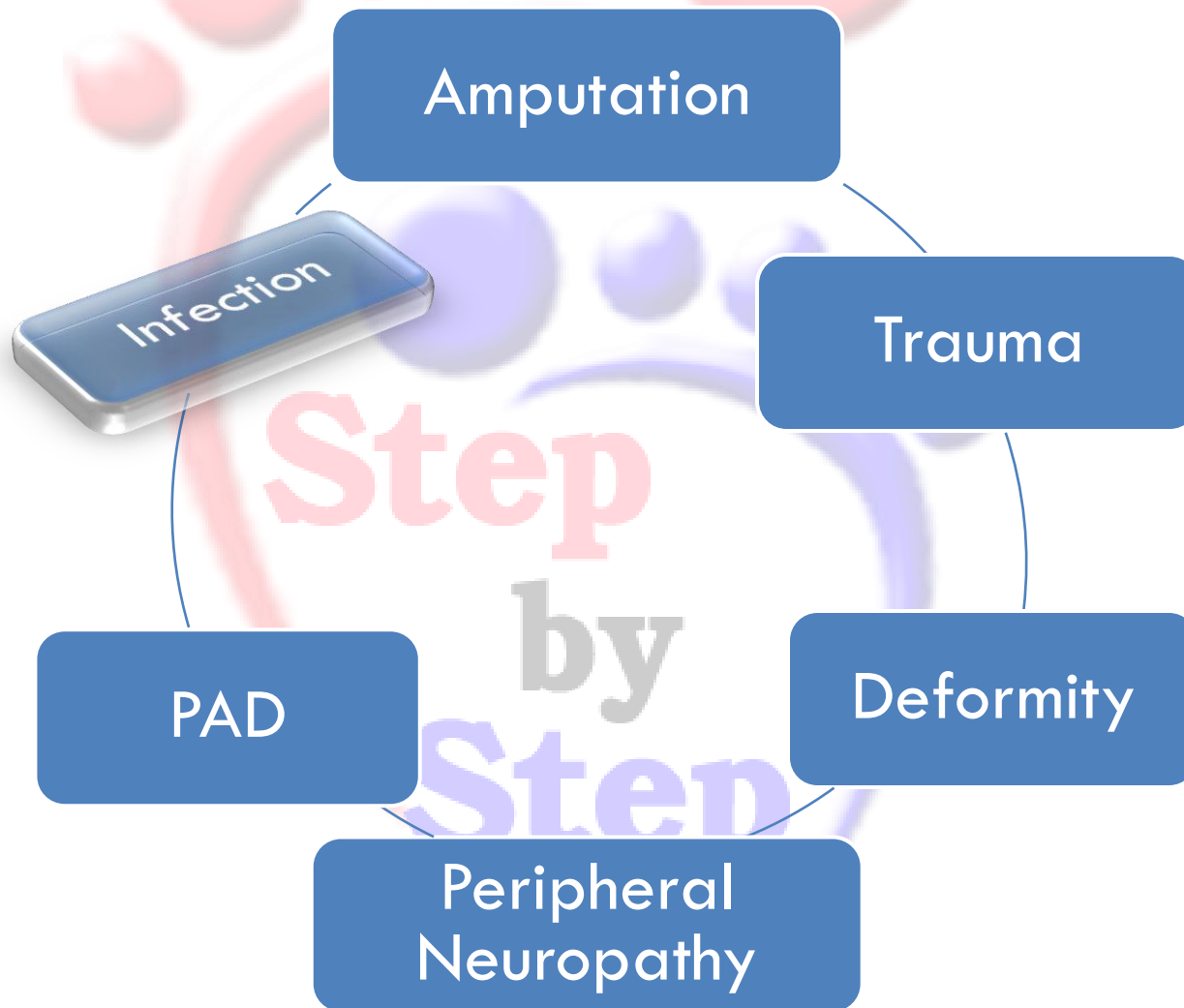




Risk Factors for Amputation



Risk Factors for Amputation



Infection



“The germ is nothing. It is the terrain in which it is found that is everything”

Pasteur, L. (1880) De l'attenuation virus du cholera des poules. CR Acad. Sci. 91: 673-680.

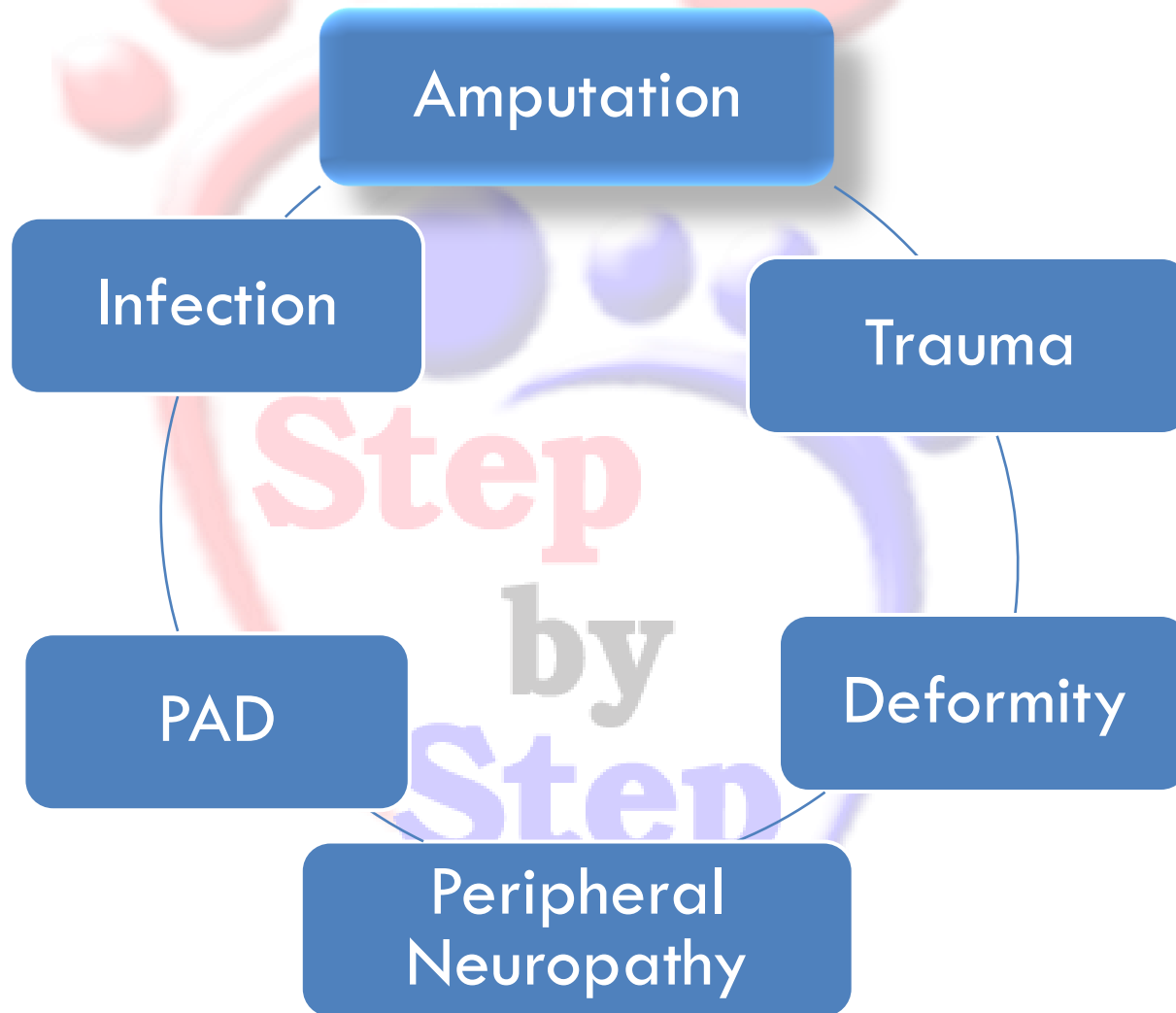
Infection



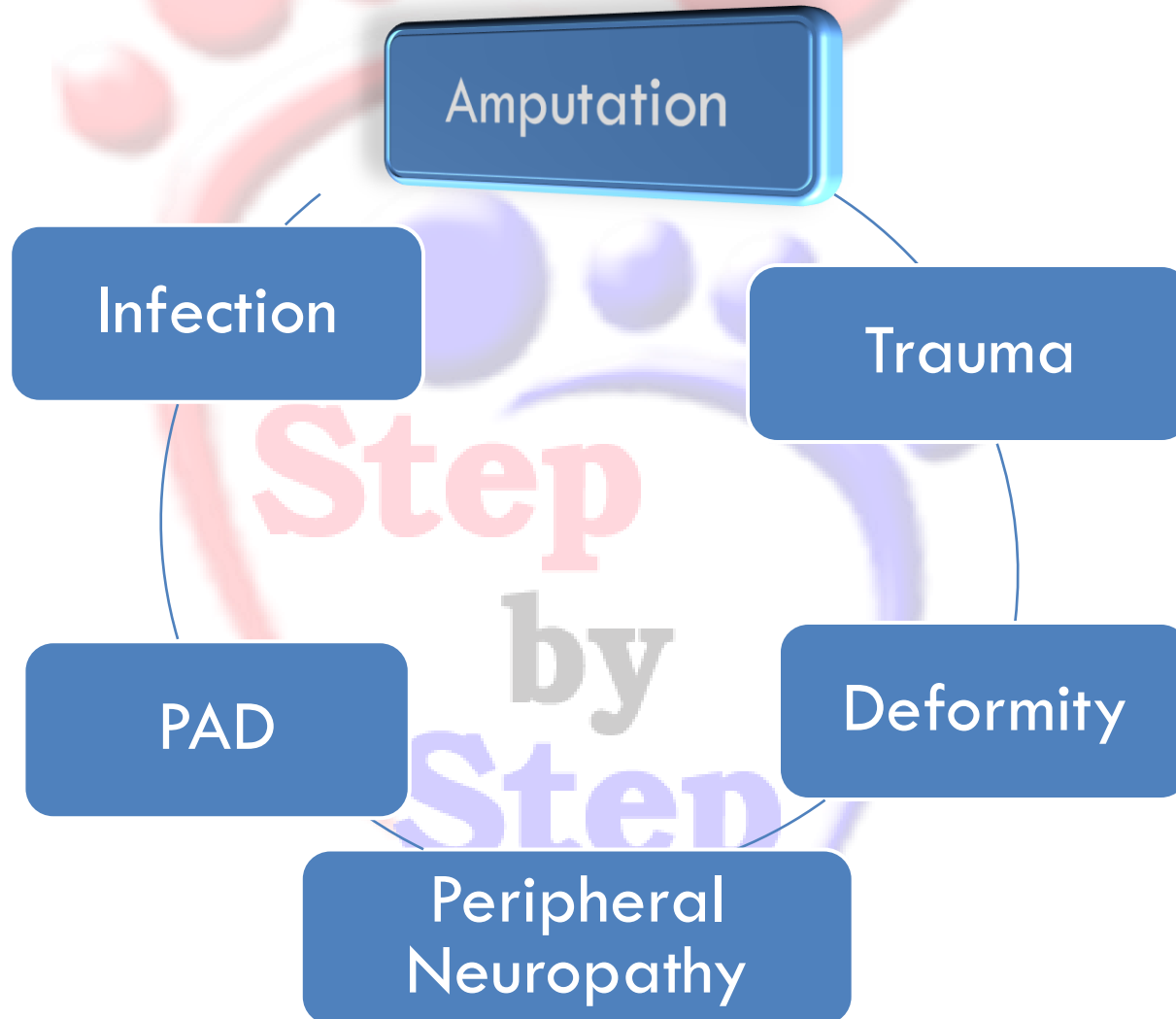
- ❑ Common serious complication of Diabetics
- ❑ Proper clinical assessment allow prompt management



Risk Factors for Amputation



Risk Factors for Amputation



Amputation never solves the problem

	1 yr	3yrs	5 yrs
Re-ulceration:	34%	61%	70%
Primary healing			
Amputation:	3%	10%	12%
Mortality:	8%	27%	42%
Healing with amputation			
Amputation:	13%	35%	48%
Mortality:	20%	41%	73%

Apelqvist, 1993, J Intern Med.





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Risk Categorization

Category	Risk profile	Check up frequency
0	No sensory neuropathy	Once a year
1	Sensory neuropathy(DN)	Once/ 6 month
2	DN and PAD and/or foot deformities	Once /3 month
3	Previous ulcer/Amputation	Once 1month



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- Barriers against Foot care implementation

ABC (1-2-3) of the DF team:

- Education of patients and health care providers
- Regular check up and identification of the foot at risk
- Prompt intervention for active foot problems, including ulcers, infection, Charcot and ischemia

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Barriers against implementation of DF program/ how to overcome ?

- ❑ Structural Health care system and referral guidelines/ Meetings/ Medical recording system
- ❑ Multidisciplinary Team/ Done
- ❑ Lack of time/ Specialist foot team
- ❑ Podiatrist/ DFCA
- ❑ Orthotist and scarce orthotics



Thank you