

Table of Contents

Glossary.....	7
1. Introduction	9
1.1Chemotherapy-induced peripheral neuropathy (CIPN)	9
1.2. Neurotoxic agents and mechanism of damage	11
1.2.1Platinum compounds.....	15
1.2.2. Vinca-Alkaloids	18
1.2.3. Taxans	19
1.2.4. Proteasom Inhibitors	20
1.2.5. Immunomodulatory drugs	20
1.2.6. Epitheliones.....	21
1.3. PNP treatment	23
1.3.1. Pharmacological prevention and treatment of CIPN.....	23
1.4 Role of exercise in PNP treatment	37
1.4.1 Exercise in general.....	37
1.4.2. Sensorimotor training (SMT).....	38
1.4.3. Whole body vibration (WBV)	41
1.5. Hypothesis	47
2. Patients and Methods	48
2.1 Patient characteristics	48
2.3. Study design.....	51
2.4. Randomization	51
2.5. Training intervention.....	54
2.5.1. Sensorimotor-intervention	54
2.5.2. Whole body vibration	57
2.6. Assessments.....	59
2.6.1 Standardized questionnaires	60
2.6.2. Motor assessment	61
2.6.3. Neurological assessment	62
2.7. Statistical Analysis	64
2.7.1. Questionnaires	65
2.7.1.2. FACT/GOG-Ntx.....	65
2.7.1.3. PainDETECT	65

2.7.2. Motor assessment	66
2.7.3. Neurological assessment	67
3. Results	68
3.1. Primary end point.....	69
3.1.1. Sensory function.....	69
3.1.2. Motor function	74
3.2. Secondary end points	77
3.2.1. EORTC	77
3.2.2. FACT.....	79
3.2.3. PainDETECT	80
3.10. Healthy comparison group	84
4. Discussion	86
5. Summary	100
6. Zusammenfassung	101
7. References	103
8. Appendix.....	109
8.1. Results; Tables	109
8.2. Figures	117
8.3. Tables	117
8.4. Training intervention.....	118
8.4.1. Progression SMT.....	118
8.4.2. Progression WBV	122
8.4. Questionnaires.....	125
9. Lebenslauf	135