CORRELATIONS BETWEEN HIP ABDUCTOR'S PERFORMANCE WITH HIP BONE MINERAL DENSITY IN ELDERLY WOMEN
(Rwahita Satyawati, Imam Subadi, Damayanti Tinduh Utama, Bayu Santoso)

14.5 kDa PROTEIN OF PLASMODIUM FALCIPARUM IS A SPECIFIC ASEXUAL STAGE ANTIGEN RECOGNIZED BY POOLED OF MOUSE IMMUNE SERA
(Heny Anwar, Kusnartoawati, Yoes Priyotna Dachlan)

THE EXPRESSION OF MITOCHONDRIAL HEAT SHOCK PROTEIN 10 IN ORAL LESIONS WITH HPV POSITIVE
(Adi Prayitno, Widya Asmara, Ambar Mudigdo, Mandjojo Rukmo, Suhartono Taet Putra)

NOSOCOMIAL INFECTION MONITORING USING URINE CATHETER
(Puspa Wardhani, Djoko Sinuwanto, Prihatini)

PATTERN OF COMMUNITY ROLE DEVELOPMENT AS AN EFFORT TO INCREASE TUBERCULOSIS PATIENTS COVERAGE WITH PASSIVE CASE FINDING
(Atika, Djohar Nuswantoro)

EFFECTIVENESS OF CIGARETTE BUTTS AS AN ALTERNATIVE MATERIAL FOR FORENSIC DNA IDENTIFICATION WITH POLYMERASE CHAIN REACTION (PCR) IN SHORT TANDEM REPEAT (STR) LOCI
(Ahmad Yudianto)

EFFECT OF FRICTION TECHNIQUE MASSAGE FOR LEG AFTER MAXIMAL EXERCISE ON THE REMOVAL RATE OF BLOOD LACTATE
(Yudik Prasetyo, Elyana STP Asnari)

PHYSIOLOGICAL EFFECTS OF MUSIC DURING EXERCISE SECRETION OF HORMONES CORTISOL AND ENDORPHINS
(Suharto)

EXPRESSION OF P53 ONCOPROTEIN IN HUMAN BREAST DUCTAL CARCINOMA (IN SITU, INVASIVE AND METASTATIC)
(Imam Susilo)

Review Article:
CONGENITAL HEART DISEASE
The Holistic Approach, Now and in The Future in Indonesia
(Teddy Onoseno)

Review Article:
MANAGEMENT OF SUBCLINICAL VENTRICULAR DYSFUNCTION
(Rochmad Romdani)

Review Article:
EXERCISE AND BRAIN HEALTH IN ELDERLY
(Muchsin Doewos)

Review Article and Clinical Experience:
EMERGING MULTIPLE PROPERTIES OF HIGH DOSE THIAMINE AND B6-B12 VITAMINS Therapeutic Possibilities for Diabetic Vascular Complications
(Askandra Tjoengprowiro)
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CORRELATIONS BETWEEN HIP ABDUCTOR’s PERFORMANCE WITH HIP BONE MINERAL DENSITY IN ELDERLY WOMEN</td>
<td>88 - 92</td>
</tr>
<tr>
<td>2</td>
<td>14.5 kDa Protein of Plasmodium falciparum is a Specific Asexual Stage Antigen Recognized by Pooled of Mouse Immune Sera</td>
<td>93 - 96</td>
</tr>
<tr>
<td>3</td>
<td>The Expression of Mitochondrial Heat Shock Protein 10 in Oral Lesions with HPV Positive</td>
<td>97 - 101</td>
</tr>
<tr>
<td>4</td>
<td>Nosocomial Infection Monitoring Using Urine Catheter</td>
<td>102 - 107</td>
</tr>
<tr>
<td>5</td>
<td>Pattern of Community Role Development as an Effort to Increase Tuberculosis Patients Coverage with Passive Case Finding</td>
<td>108 - 111</td>
</tr>
<tr>
<td>6</td>
<td>Effectiveness of Cigarette Butts as an Alternative Material for Forensic DNA Identification with Polymerase Chain Reaction (PCR) in Short Tandem Repeat (STR) Loci</td>
<td>112 - 114</td>
</tr>
<tr>
<td>7</td>
<td>Effect of Friction Technique Massage for Leg After Maximal Exercise on the Removal Rate of Blood Lactate</td>
<td>115 - 120</td>
</tr>
<tr>
<td>8</td>
<td>Physiological Effects of Music during Exercise Secretion of Hormones Cortisol and Endorphins</td>
<td>121 - 129</td>
</tr>
<tr>
<td>9</td>
<td>EXPRESSION OF P53 ONCOPROTEIN IN HUMAN DUCTAL BREAST CARCINOMA (IN SITU, INVASIVE AND METASTATIC)</td>
<td>130 - 144</td>
</tr>
<tr>
<td>10</td>
<td>Review Article: Congenital Heart Disease. The Holistic Approach, Now and the Future in Indonesia</td>
<td>145 - 154</td>
</tr>
<tr>
<td>11</td>
<td>Review Article: Management of Subclinical Ventricular Dysfunction</td>
<td>155 - 160</td>
</tr>
<tr>
<td>12</td>
<td>Review Article: Exercise and Brain Health in Elderly</td>
<td>161 - 164</td>
</tr>
<tr>
<td>13</td>
<td>Review Article and Clinical Experience: EMERGING MULTIPLE PROPERTIES OF HIGH DOSE THIAMINE AND B6-B12 VITAMINS Therapeutic Possibilities for Diabetic Vascular Complications</td>
<td>165 - 173</td>
</tr>
</tbody>
</table>
Physiological Effects of Music during Exercise Secretion of Hormones Cortisol and Endorphins

Abstract

This is a randomized experimental design with control group pre test - post test design, which aims to uncover the physiological effects of listening to music during exercise on the secretion of the hormone cortisol and endorphins. The sample is 24 students majoring in Sport Science chosen at random based on the criteria established, and then divided into three groups consisting of sports, without listening to music, sports by listening to slow music (slow music) and sports by listening to loud music (hard music). Data collecting was done by pedaling a bicycle ergometer exercise for 10 minutes with sub maximal intensity while listening to music. Listening to music during the workout use five multiplayers (MP5) and headsets. Blood sampling for hormone cortisol and endorphins examination performed before and after exercise. The analysis data using ANOVA, with significance level 5%. Results of data analysis revealed that there is no significant difference between the exercise without music, sports by listening to music, whether slow or music on loud music on the secretion of the hormone cortisol and endorphin (p <0.05). Sports without the music tends to have increased secretion of the hormone cortisol and also hormone endorphin, contrary to the exercise by listening to loud music and there is a tendency slow decline in secretion of the hormone cortisol, whereas the hormone endorphin in both groups are still fluctuative. It can be concluded that sub maximal intensity exercise, by listening to music for 10 minutes tends to decrease hormone cortisol and increases endorphins, which can inhibit the stress and make sense of music as well. Therefore it is advisable to inhibit the increase in cortisol during exercise can be done by listening to music, which according to the intensity of exercise.

Keyword : Exercise, stress, Cortisol, Endorphin, loud, music, (hard, music), slow, music,

Daftar Pustaka :